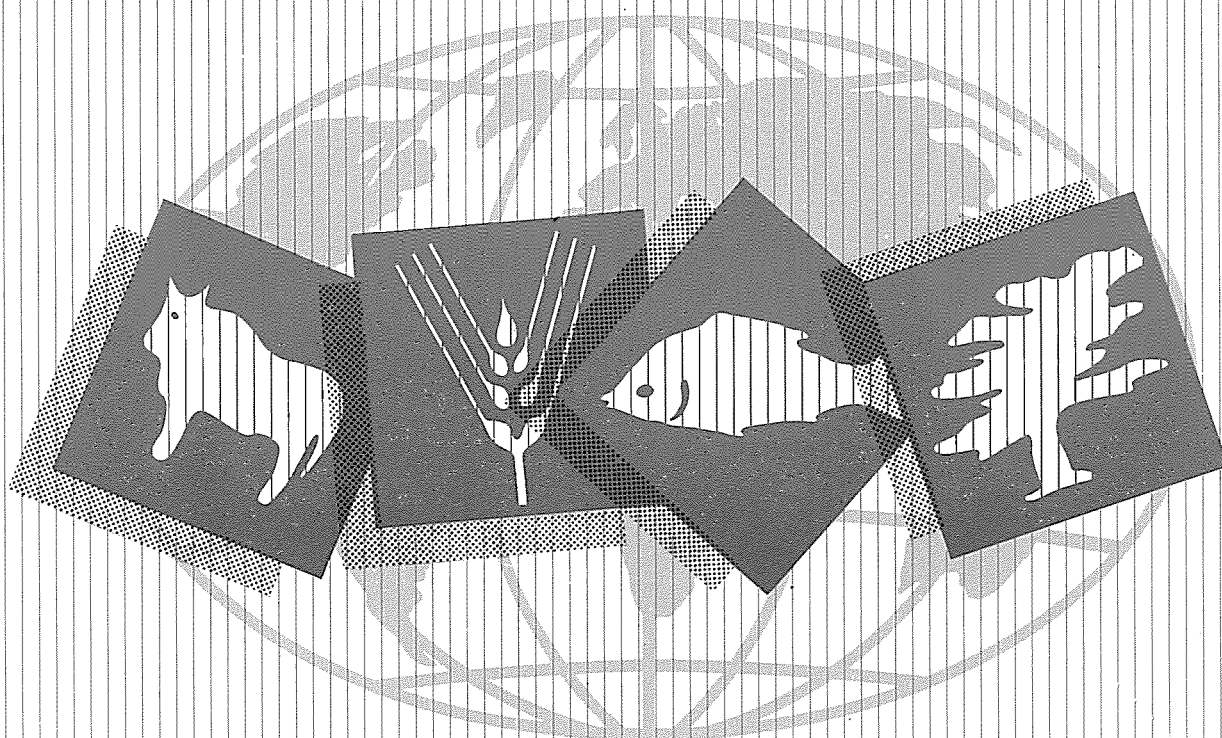


1990

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THE STATE OF FOOD AND AGRICULTURE

World and regional reviews
Structural adjustment
and agriculture



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Special chapters

In addition to the usual review of the recent world food and agriculture situation, each issue of this report from 1957 has included one or more special studies of problems of longer-term interest. Special chapters in earlier issues have covered the following subjects:

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| <p>1957
Factors influencing the trend of food consumption
Postwar changes in some institutional factors affecting agriculture</p> | <p>1968
Raising agricultural productivity in developing countries through technological improvement
Improved storage and its contribution to world food supplies</p> | <p>1981
Rural poverty in developing countries and means of poverty alleviation</p> |
| <p>1958
Food and agricultural developments in Africa south of the Sahara
The growth of forest industries and their impact on the world's forests</p> | <p>1969
Agricultural marketing improvement programmes: some lessons from recent experience
Modernizing of institutions to promote forestry development</p> | <p>1982
Livestock production: a world perspective</p> |
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THE STATE OF FOOD AND AGRICULTURE 1990

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 1991

The statistical material in this publication has been prepared from the information available to FAO up to October 1990.

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 designations "developed" and "developing" economies are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process.

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Foreword

After the extraordinary sequence of momentous events that made 1989 such a turning point in the course of history, 1990 has been a year of optimism and hope but also, in several respects, a year of frustration.

Optimism and hope because barriers between countries and political and economic systems continued to fall. A new atmosphere of *rapprochement* developed in international relationships that replaced ideological and political confrontation. Radical changes in Europe, in particular, transformed, and continue to transform, the world political and economic scene, but we should also not forget such significant events in the developing world as the unification of Yemen and the attainment of independence by Namibia. Despite the complexity of the problems involved in the process of economic and political reform, I believe its direction is essentially toward improved prospects for peace, international cooperation and prosperity.

This has also been a year of frustration, however, because old problems and injustices persist. Events in the Near East have somewhat shrouded our optimism. After only a few months of hopeful expectation, the benefits of the long-awaited "peace dividend" already appear illusory. Prospects still remain uncertain for global economic growth, trade, and the solution of the grave economic and social problems affecting much of the developing world.

Another reason for frustration is the continuation of the disappointing economic and agricultural performance of many developing countries, more particularly in 1990 in Africa and Latin America and the Caribbean.

Deteriorating terms of trade and weak markets for their non-oil commodity exports, critical financial problems linked to external debt and mounting inflation have all combined to depress incomes and wages, and thus to impoverish the populations of many developing countries. Sharply higher oil prices have only further darkened the economic and social prospects for most of them.

On external debt, I welcome the progress achieved in implementing a strengthened debt strategy and the various promising new initiatives reported in this document. Nonetheless, the problem remains critical. Only slow and partial progress has been made in reducing debt and debt-service costs and the economies of many indebted developing countries are still far from reaching a stage of sustained recovery. As in every year since 1984, net transfers continue to flow from developing to creditor industrialized countries, an anomaly that derides both the principle of equity and the process of development. These net transfers have amounted to almost \$43 billion in 1989, and totalled \$168 billion between 1984 and 1989.

Whatever the value of the ongoing efforts to help developing countries reduce their economic imbalances and debt, no viable solution to these problems can exist in the absence of an international economic environment providing adequate opportunities to expand their export trade. Of equal importance is to provide developing countries with remunerative prices for their agricultural commodity exports. However, it is disturbing that, as the deadline approaches, the necessary political will seems to be still lacking to maintain the momentum of the Uruguay Round of multilateral trade negotiations through to their successful conclusion, which is essential to improve the agricultural trade outlook in the 1990s.

Turning to the current world food and agricultural situation, I must express once again my deep concern that one out of five persons of the populations of nearly 100 developing countries remains undernourished. Also, we cannot be oblivious of, nor indifferent to, the fate of the millions of people who are threatened by starvation as soon as a season of insufficient rainfall, or any other natural or man-made event, disrupts the normal supply of food or hinders their access to it. It is this concern that has prompted FAO, together with the World Health Organization, to sponsor a major International Conference on Nutrition, to be held in Rome in December 1992. This important intergovernmental conference should define the terms of a coordinated strategy for national and international action to eradicate hunger and malnutrition, mobilize the necessary resources and set up a world information system to monitor human nutrition status.

Recent performance of the global food and agriculture sector has been uneven and prospects remain somewhat uncertain. Growth in world agricultural production in 1990 is expected to be lower than in 1989 but significantly above the depressed growth rates of 1986-88. However, such global expansion would still be unevenly distributed. As in 1989, the increase is expected to occur mainly in developed countries, particularly North America, Eastern Europe and the USSR. Agricultural performances are likely to be less satisfactory for much of the developing world.

Indeed, in both Africa and Latin America and the Caribbean, food production is expected to fall below population growth in 1990, a highly unsatisfactory feature in view of the already disappointing performance of these two regions in recent years.

World cereal output is expected to reach record levels in 1990. As in the previous year, developed countries, in particular North America and the USSR, would account for most of the increase, although production is also forecast to rise in developing countries in the aggregate. With world output of

cereals exceeding global utilization for the first time in four years, cereal stocks by the end of 1990/91 are likely to increase a little and, as a consequence, the outlook for world food security to improve slightly.

Growth in agricultural trade slowed in 1989, not only well below that of 1988, but also below the average growth of the 1980s. Moreover, the modest global expansion of agricultural exports reflected largely the stronger performance of the developed countries. Agricultural export earnings of developing countries in 1989 rose only marginally, and at an even slower pace than the sluggish average growth rate of the 1980s.

The continuation of such unsatisfactory trends for developing countries is of great concern because of the serious balance-of-payments difficulties already faced by many of them, particularly those that predominantly export agricultural products. In both Africa and Latin America and the Caribbean, the two developing regions currently facing the largest economic and financial imbalances, and depending more on agricultural exports for correcting them, export earnings from agriculture fell in 1989.

The deterioration in the terms of trade of agricultural exports of developing countries in recent years is another disquieting feature. A further strong decline is also to be feared in 1990 and possibly in 1991 as well, in view of the higher prices of energy and oil-related production costs. Against this trend, prices of some of the developing countries' main export commodities such as sugar, tea and rubber have fallen sharply in the past year, and those of others such as coffee and cocoa have continued to be severely depressed.

At this juncture, when the globalization of interests is becoming more widely appreciated, the need for enhanced solidarity and partnership between North and South, rich and poor, is greater than ever before. The need for closer cooperation and collaboration has been reiterated at the 18th Special Session of the UN General Assembly devoted to international economic cooperation, in particular to the revitalization of economic growth and development of the developing countries. Yet the record shows that net disbursements of official development assistance from developed countries declined in 1989, both in real terms and in relation to the aggregate size of their economies. Commitments to agriculture have recently increased in real terms, but thanks to the effort of one country alone — Japan. Furthermore, multilateral commitments on concessional terms have continued their downward trend in 1989, as did the proportion allocated to agriculture out of total multilateral lending. I must therefore once again urge donor countries to contribute fully to the common objective of spurring

and sustaining growth in developing countries, with particular attention to the least developed among them. However serious the budgetary constraints of developed countries, and however necessary the financial effort required to help Eastern European countries overcome their current difficulties, the development needs of the poorest countries must remain as a first priority. The Programme of Action for the 1990s defined at the Second United Nations Conference on the Least Developed Countries in September 1990 is a valuable instrument to translate awareness of the special requirements of the poorest countries into concrete results.

Against this mixed picture of accomplishments, uncertainties and frustrations, the magnitude of the development task in front of us as we enter a new decade needs no highlighting. Nevertheless, a valuable framework for action is provided by the International Development Strategy (IDS) for the Fourth United Nations International Development Decade, which examines the challenges and opportunities for the 1990s and defines the main objectives to be pursued. The IDS identifies food and agriculture as one of the main priority aspects of development, and policies for achieving objectives in food and agriculture are closely interlinked with those appropriate for the other priority areas.

As a contribution to the IDS, FAO has defined the elements of a long-term strategy for the food and agricultural sector which, if successfully implemented, can be instrumental in achieving the primary objectives of growth with equity, poverty alleviation, improved nutrition, health and education, enhanced status of women and people's participation. Among the matters of most direct interest to FAO is the additional objective of environmentally sound and sustainable agricultural development, the theme of the FAO/Netherlands Conference on Agriculture and Environment which is scheduled to be held in April 1991 and which will provide important inputs for the United Nations Conference on Environment and Development in 1992.

This year's special chapter in *The State of Food and Agriculture* is devoted to structural adjustment and agriculture. Although the process of structural adjustment has been at the centre of the attention of analysts, international institutions and policy-makers for at least a decade, it has gained, rather than lost, prominence among the main current issues of the global economic environment.

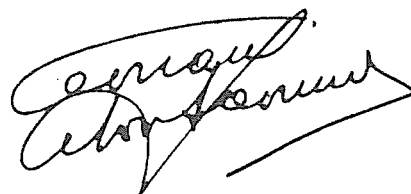
What emerges from this review is an uneven, and often disappointing, picture of accomplishments in structural adjustment so far. What also emerges, however, is the generally positive and in many cases irreplaceable role of agriculture in helping economies overcome external shocks and providing a basis for recovery and sustained growth. With the proper

incentives and relatively small investment, agriculture can play a major positive role at whatever stage of a country's economic cycle — growth, crisis, adjustment or recovery. Its inherent qualities enable it to act as a buffer to external shocks as well as an engine for economic recovery.

This document shows that agriculture has been, and continues to be an important net earner of foreign exchange and a positive contributor to the debt financing of developing countries throughout the 1980s. Also, unlike other sectors, agriculture has maintained a positive net transfer position. It has also helped hold down inflation in many cases, and remained an important contributor to growth and employment in periods when economic activity was slackening and labour opportunities dwindling. Such a positive contribution of the sector to the overall recovery effort and to welfare renders all the more unjustified a neglect of agriculture on the part of some governments.

While the past experience with structural adjustment programmes indicates possible areas for improving some of their conceptual and operational aspects, structural adjustment remains an inescapable necessity for many countries to foster economic recovery and growth. At the same time, however, the effort and sacrifice involved in structural adjustment programmes has fallen on the debtor countries and their populations in a disproportionate way, emphasizing the need for a more balanced

sharing of the burden. Also within debtor countries, there is now a well-documented tendency for the incidence of the programme of financial austerity to fall unevenly on the economically weak segments of the population. Thus, an extremely careful evaluation is needed of the social effects of these programmes, that must be designed, phased and sequenced in a way that would minimize hardship for the poorer and more vulnerable population groups, and involve them actively in the development process. In this context, the poorest of the poor are the rural poor in many countries undergoing structural adjustment. FAO is actively participating with the countries concerned, as well as other technical agencies within the UN system, in providing the benefit of its expertise and experience in food and agriculture to ensure that structural adjustment programmes attain their primary economic objectives while protecting the welfare needs of the most destitute population groups.



Edouard Saouma
DIRECTOR-GENERAL

Main events relating to food and agriculture

March 1989

Inter-American Development Bank (IDB) funding

In March 1989 the IDB Board of Governors finally approved the proposal for the Seventh General Increase in Resources by \$26.5 billion to a total of \$61 billion. Based on past trends, about 30 percent of these resources may be expected to be allocated to agriculture over the coming four years.

10 March 1989

Brady Plan initiative (Washington)

The United States Secretary of Treasury, Mr N. Brady, in a statement to the Brookings Institute and the Bretton Woods Committee Conference on Third World debt, launched a plan that encouraged debt and debt-service reduction on a voluntary basis, while recognizing the importance of continued new lending. The IMF and World Bank were called upon to provide support, as part of their policy-based lending programmes, for debt or debt-service reduction purposes.

3-4 April 1989

IMF spring meeting (Washington)

The meeting reached a decision to provide additional resources for debt-reduction operations to member countries undertaking "sound" economic reforms, by setting aside a portion of members' purchases under fund-supported arrangements.

5-8 April 1989

Mid-Term Review of Uruguay Round (Geneva)

The meeting of the Trade Negotiations Committee (TNC) completed the Mid-term Review of the Uruguay Round begun in Montreal in December 1988. Participants adopted four decisions: on agriculture; textiles and clothing; safeguards; and trade-related aspects of intellectual property rights. Specifically in the area of agriculture, a "framework approach" was agreed, covering interrelated long- and short-term elements and arrangements on sanitary and phytosanitary regulations, tropical products, natural resource-based products, and stabilization of markets and export earnings.

19 April 1989

Agreement on the Global System of Trade Preferences (GSTP) among Developing Countries

The agreement set out a framework of rules based on "most favoured nation treatment" among participants covering tariff, paratariff and non-tariff measures on all types of products, direct trade measures and sectoral agreements. Following the signature of the agreement by 15 countries representative of the Group of 77, discussions began on the issues of widening and deepening the scope of the System, by expanding the accession of a larger number of Group of 77 countries and by expanding the trade coverage.

22-25 May 1989

Meeting of World Food Council (Cairo)

At their 15th ministerial session, the member states of WFC adopted the Cairo Declaration and Programme of Cooperative Action. While recognizing that each country must take its own initiatives in the fight against hunger and poverty, the Cairo Declaration places a premium on cooperative actions among countries.

20 June 1989

Agreement establishing the Common Fund for Commodities (New York)

The Common Fund for Commodities finally entered into force on 19 June 1989, about 13 years after the proposal was made. Since July 1989, it has been functioning as an independent international organization with its headquarters in Amsterdam. The Fund's general objective is to enhance the stability and growth of commodity export earnings of developing countries through two accounts: one for financing buffer-stocking under international commodity agreements, unlikely to be used in the near future; and one for financing commodity development measures aimed at improving structural conditions in commodity markets.

27 June 1989

Group of Ten Industrialized Countries (G-10) Meeting of Finance Ministers (Spain)

The Dini Report endorsed the G-10's support for the new approach to the debt crisis, which places greater emphasis on accelerating the reduction of debt and the debt-service burden in the developing world.

14-16 July 1989

15th World Economic Summit of the Group of Seven (G-7) (Paris)

The leaders of the Group of Seven cited the main challenges to the current world economic situation to be: the maintenance of growth, the development and integration of developing countries into the world economy and the safeguarding of the environment for future generations. Countries with fiscal and current account deficits were urged to take action to reduce these deficits, while countries with external surpluses were advised to pursue policies conducive to non-inflationary growth of domestic demand.

22-23 July 1989

Agreement Mexico-creditor banks (Washington)

A major package agreement was reached, between Mexico and representatives from 500 creditor banks, applying to \$53 billion of Mexico's \$107 billion total debt. Creditor banks had three options: cut the principal of old loans; swap old for new loans at fixed and interest rates lower than current market rates; or provide new loans. Creditworthiness of new bonds were to be enhanced by additional resources from the IMF, the World Bank, the Government of Mexico and Japan.

24-27 July 1989

OAU Summit (Cairo)

At the OAU summit meeting, the African Alternative Framework for Structural Adjustment Programmes was considered and adopted by the African states. The resolution recommended that African governments use the framework for preparing their country programmes and for negotiating assistance.

11 September 1989

Conference on Global Environment (Tokyo)

The Conference, sponsored by the World Bank, announced a series of measures by the Bank which would make available \$1.3 billion in loans to the developing countries, over the next three years, to combat pollution and protect the environment. Moreover a new Gas Development Unit would be established to promote production, consumption and export of natural gas. The Bank was also to triple its lending to forestry in the context of the Tropical Forestry Action Plan.

26 September 1989

Annual Meeting of IMF/World Bank (Washington)

The meeting acknowledged the spread of market-oriented policies throughout the world and a new industrial revolution linked to the use of computer technology, leading to a sustained growth of 3 percent for the developed world, but a growing gap between North and South. The developed countries were unwilling to extend the so-called Toronto Terms of official debt relief to poor countries outside Africa, and the United States blocked a replenishment of funds for the IDA, a soft loan affiliate of the World Bank.

15 October 1989

Meeting of Antarctic Treaty Signatories (Paris)

The 39 signatories of the Treaty reached agreement at the 15th meeting of the consultative parties to hold a special round of negotiations in 1990 to set up a "comprehensive" protection system for the continent's environment. Parallel negotiations on liability for environmental damage under the Wellington Convention are also to be held.

11-30 November 1989

25th Session of the FAO Conference (Rome)

At the 25th Session of the FAO Conference, the major trends and policies in food and agriculture were discussed including: the world food and agriculture situation; progress report on the GATT multilateral trade negotiations; International Code of Conduct on the Distribution and Use of Pesticides; a plan of action for the integration of women into agriculture and development; and preparation for and FAO's contribution to the International Development Strategy for the Fourth UN Development Decade.

22 November 1989

The European Community (EC) and the European Free Trade Association (EFTA) meet to try to establish Common Economic Zone (Brussels)

The European Community announced that negotiations for a common economic zone between the European Community and the six states of EFTA will commence in 1990. The aim would be to extend to EFTA the Community's single market benefits of free movements of goods, resources, capital and people, without jeopardizing the autonomy of EC decision-making.

15 December 1989

Signature of Fourth Lomé Convention (Lomé IV)

The new Convention was concluded between the 12 countries of the European Economic Community, 68 countries of Africa, the Caribbean and the Pacific (ACP) (including Haiti and the Dominican Republic, which also acceded to the new pact). Namibia was also to join the Convention later in 1990. Significant features included an increase in the financial resources from ECU 8.5 billion in Lomé III to ECU 12 billion for the 1990-95 period; more favourable conditions for the STABEX and SYSMIN regulatory mechanisms, made available as grants and thus no longer debt-creating; and aid provisions for structural adjustment programmes in associate countries.

8 January 1990
New funding for IDA

Thirty-two nations agreed to provide SDR 11.68 billion over the next three years to the world's poorest countries. Negotiations were completed for the ninth replenishment of the resources of the International Development Agency (IDA), a World Bank affiliate that provides concessional loans to low-income developing countries. Priority areas for IDA funds were poverty reduction; support for sound macro-economic and sectoral policies and programmes, including further emphasis on institutional strengthening; and environmental programmes. The funds covered operations in the three years from 1 July 1990 to 30 June 1993.

5 February 1990
Meeting of EC Foreign Affairs Ministers (Brussels)

The future of relations between the European Community and countries in Eastern Europe was the main theme of the meeting of EC Foreign Affairs Ministers on 5 February 1990 in Brussels. Member countries came out in favour of a European Community proposal on establishing agreements of association with East European countries, which implement programmes for political and economic reform and which were geared toward a market economy.

9 February 1990
US Government unveils 1990 Farm Bill

The United States Government's latest proposals on the 1990 Farm Bill were sent to Congress as the 1985 Farm Bill was due to expire at the end of 1990. The Administration's new proposals aimed at giving the forthcoming bill more flexibility in adapting to changes on the world market, while pursuing the positive aspects of the 1985 bill.

23 February 1990
EC proposal to GATT on trade, monetary and financial policies

The EC submitted a proposal for a joint declaration on coherence between trade, monetary and financial policies, to be adopted at the ministerial level by GATT. The proposed joint declaration set out a number of guiding principles as regards trade policy, the international monetary system and finance linked to development.

12-16 March 1990
20th FAO Regional Conference for the Near East (Tunis)

The conference discussed, *inter alia*, regional economic cooperation for agricultural development in the Near East, a balanced diet as a way to good nutrition and the status of agricultural research in the region.

3 April 1990
17th FAO European Regional Conference (Venice)

The possible socio-economic impacts on agriculture of environmental policies, food quality, and the consequences of the changing situation in Eastern Europe were the main topics for discussion. FAO has offered to contribute to the reform process in Eastern Europe through technical assistance, specialized advice and experience gained from agricultural and rural development and modernization in other countries.

7 April 1990
Group of Seven Meeting of Finance Ministers (Paris)

The finance ministers and Central Bank governors of Canada, France, the Federal Republic of Germany, Italy, Britain, Japan and the United States met for an exchange of views on current global economic issues. The ministers and governors expressed the need for continued close coordination of their macro-economic and structural policies to obtain sustained growth, low inflation and greater stability of exchange rates.

9 April 1990
Formation of the European Bank for Reconstruction and Development

The EC, 14 other developed countries and eight East European states formally established a European Bank for Reconstruction and Development with its headquarters in London. The bank will concentrate its lending on the private sector and on productive investment.

17 April 1990
Trade Ministers meet to discuss progress of GATT (Mexico)

Trade ministers from 30 major trading countries met in Puerto Vallarta, Mexico, to examine the progress of GATT Uruguay Round negotiations. A deadline of July has been set for establishing a package of agreements to help complete the Round on schedule in December 1990.

23-27 April 1990
20th FAO Regional Conference for Asia and the Pacific (Beijing, China)

The conference discussed, *inter alia*, action programmes to overcome specific nutritional deficiencies in the region, and progress and prospects of biotechnology for crop and livestock production in Asia and the Pacific.

28 April - 1 May 1990
18th Special Session of the UN General Assembly (New York)

The session was devoted to international economic cooperation, in particular to the revitalization of economic growth and development of developing countries.

2 May 1990
Conference on the Environment (Bergen, Norway)

The conference, gathering participants from 35 industrialized countries, sought agreement on economic measures to reduce pollution and avert global warming — the greenhouse effect. The conference, sponsored by the UN Economic Commission for Europe, provided a forum for future East-West environmental cooperation. Western countries agreed to set measures to stabilize emissions of carbon dioxide and to bring the Third World into international environmental negotiations.

2-4 May 1990
European Agricultural Forum (Austria)

The role of the agricultural sector in the united and integrated Europe of tomorrow, the problems facing the farming industries in the new democracies of Central and Eastern Europe and the search for a common European approach in the GATT Uruguay Round of multilateral trade negotiations, were the main themes of the forum.

21 May 1990
World Bank and OECD release studies on effects of subsidies to farmers

A series of studies released by the World Bank and the Organisation for Economic Cooperation and Development state that cutting subsidies to farmers would save a considerable part of the \$200 billion they cost consumers and taxpayers in 24 industrial countries every year. The studies assessed the damage inflicted on the developing countries by the cost of these farm programmes — in terms of distorted markets, depressed commodity prices and underdeveloped farm economies.

11-15 June 1990
16th FAO Regional Conference for Africa (Marrakech)

The main themes of the conference were strategies for combating malnutrition in Africa and a programme for soil preservation.

27 June 1990
Proposal for economic partnership between the United States and Latin America

President George Bush launched proposals for a new economic partnership between the United States and Latin America. The proposals included the launching of a process aimed at a hemisphere-wide free trade zone; measures for enhancing capital flows toward Latin American countries involved in IMF adjustment programmes and receiving World Bank loans, through the creation of a five-year multilateral investment fund run by the IDB (and providing grants to assist specific reforms toward a market-oriented system); and a reduction of the \$12 billion debt owed to the United States Government.

28 June 1990
IMF quotas increased

Following recommendations from the Interim Committee, the IMF's Board of Governors approved a 50 percent increase in quotas. Member countries have until 31 December 1991 to ratify the decision according to national legislative or other procedures.

9-11 July 1990
Summit Meeting of the seven main western industrial countries (Houston, USA)

The communiqué rejected trade protectionism and stated that the successful outcome of the GATT negotiations on agriculture required substantial and progressive reductions in support and protection to agriculture in all its forms. It stated that help would be provided to Central and Eastern European nations that were firmly committed to economic and political reform, but reiterated that the commitment to assist developing countries, particularly the poorest of them, would not be weakened by support to Central and Eastern Europe. It encouraged commercial banks to conclude promptly agreements on financial packages including debt and debt-service reduction and new money, in favour of indebted countries implementing courageous reforms. It agreed that, in the face of threats of irreversible environmental damage, lack of full scientific certainty was no excuse to postpone adequate action.

9-13 July 1990
21st FAO Regional Conference for Latin America and the Caribbean (Santiago, Chile)

The conference discussed, *inter alia*, sustainable rural development in fragile ecosystems in Latin America and the Caribbean and causes and prevention of malnutrition in the region.

23-26 July 1990
Meeting of Trade Negotiations Committee of the Uruguay Round of Multilateral Trade Negotiations within GATT (Geneva)

The Trade Negotiations Committee (the governing body of the Uruguay Round) set down a timetable for final negotiations leading to the planned conclusion of the Uruguay Round at a ministerial meeting in Brussels from 3 to 7 December 1990. The deadline for submission of offers concerning negotiations on agriculture was set at 15 October 1990.

2 August 1990
Persian Gulf crisis

The Iraqi invasion of Kuwait and the ensuing trade embargo of Iraq decided upon by the UN Security Council caused substantial increases in world oil prices. Countries most directly affected by the crisis are those in the Near East and Asia with a large number of migrant workers in Iraq and Kuwait. But the increase in oil prices seriously circumscribed growth prospects particularly of non-oil exporting developing countries and reform-pursuing countries in Eastern Europe.

3-14 September 1990
Second UN Conference on the Least Developed Countries (LDCs) (Paris)

The conference discussed new development strategies for the 1990s. Industrialized countries undertook to increase development assistance to the poorest developing countries centred on a target of 0.15 percent of their GDP. This was matched by a commitment from the least-developed countries to implement appropriate national development policies.

19 September 1990
Commonwealth Finance Ministers' Meeting

The United Kingdom's Chancellor of the Exchequer launched the "Trinidad and Tobago Terms" which are a development of the existing Toronto debt-relief terms for poor countries undergoing economic adjustment programmes. The plan, which concerns middle- and lower-middle-income countries, would cut the stock of debt of 17 African and two South American debtors already benefiting from the Toronto Terms arrangements.

24-28 September 1990
Tenth Session of FAO's Committee on Forestry (Rome)

The session considered, *inter alia*, biodiversity and the review of the Tropical Forestry Action Plan.

27 September 1990
Annual Meeting of IMF/World Bank (Washington)

A major theme of the meeting was the response to the negative economic effects of the events in the Near East, including aid strategies for the countries hard hit by the crisis. But the World Bank president also urged the international community to make as big an effort combating poverty as it had in dealing with the Gulf crisis and outlined ways in which countries could cooperate in reducing poverty.

29 October-7 November 1990
Second World Climate Conference (Geneva)

The conference considered the report of the Intergovernmental Panel on Climate Change (IPCC). The scientific and technical session recommended that although uncertainties remained, nations should take steps toward reducing emissions of greenhouse gases through national and regional actions and negotiations for a global convention on climate change. The ministerial session was not willing to adopt quantitative targets to stabilize emissions of greenhouse gases, but welcomed the commitments of many developed countries to do so.

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Glossary

AAF	African Alternative Framework	EEP	Export Enhancement Programme
ACC	Arab Cooperation Council	EMS	European Monetary System
ACP	African, Caribbean and Pacific States	FOR	Farmer-owned reserve
AfDB	African Development Bank	FSAS	Food Security Assistance Scheme
AMS	Aggregate measure of support	FY	Fiscal year
AMU	Arab Maghreb Union	GATT	General Agreement on Tariffs and Trade
ARPs	Acreage Reduction Programmes	GDP	Gross domestic product
AsDB	Asian Development Bank	GNP	Gross national product
BMR	Basal metabolic rate	GOSAGRO-PROM	State Agro-industrial Committee (USSR)
CAP	Common Agricultural Policy	GOSPLAN	State Planning Committee (USSR)
CARICOM	Caribbean Common Market	GSP	Generalized System of Preferences
CBI	Caribbean Basin Initiative	HL	Hybrid lending
CGEs	Computable general equilibrium models	IBRD	International Bank for Reconstruction and Development
COCOBOD	Cocoa Marketing Parastatal	IDA	International Development Association
COMECON	(CMEA) Council for Mutual Economic Assistance	IDB	Inter-American Development Bank
CPEs	Centrally planned economies	IEFR	International Emergency Food Reserve
DAC	Development Assistance Committee	IFAD	International Fund for Agricultural Development
DES	Dietary energy supply	ILO	International Labour Organisation
DRS	Debt Reporting System	IMF	International Monetary Fund
EC	European Communities	IPCC	International Panel on Climate Change
ECA	Economic Commission for Africa	ITTO	International Tropical Timber Organization
ECLAC	Economic Commission for Latin America and the Caribbean	LDCs	Least-developed countries
ECOSOC	Economic and Social Council of the United Nations	LIBOR	London inter-bank borrowing rate
ECU	European Currency Unit	MCAs	Monetary compensatory amounts
EEC	European Economic Community		

MFA	Multifibre arrangement	STABEX	Système de stabilisation des recettes d'exportation
MLAR	Ministry of Lands, Agriculture and Resettlement	SYSMIN	Système de stabilisation des recettes d'exportation des produits minéraux
MTN	Multilateral trade negotiations		
NAEs	Newly agro-industrialized economies	TFAP	Tropical Forestry Action Plan
NAMBOARD	National Agricultural Marketing Board	UDI	Unilateral Declaration of Independence
NCA	Normal Crop Acreage	UNCTAD	United Nations Conference on Trade and Development
NERP	New Economic Recovery Programme	UNDP	United Nations Development Programme
NIEs	Newly industrialized economies	UNICEF	United Nations Children's Fund
OAU	Organization of African Unity	VAT	Value added taxes
OECD	Organisation for Economic Cooperation and Development	WFC	World Food Council
OPEC	Organization of the Petroleum Exporting Countries	WFP	World Food Programme
PAAERD	UN Programme of Action for African Economic Recovery and Development	WHO	World Health Organization
PAMSCAD	Programmes of Action to Mitigate the Social Costs of Adjustment	ZCF	Zambian Cooperative Federation
PSE	Producer subsidy equivalent		
SADCC	Southern African Development Coordination Conference		
SALs	Structural adjustment loans		
SAPs	Structural adjustment programmes		
SDA	Social dimensions of adjustment		
SDR	Special drawing right		
SECALs	Sectoral adjustment loans		
SECAP	Sectoral adjustment programme		
SSAPs	Sector structural adjustment programmes		

Explanatory note

The following symbols are used in the tables:

- = none or negligible
- ... = not available
- 1988/89 = a crop, marketing or fiscal year running from one calendar year to the next
- 1987-89 = average for three calendar years.

Figures in statistical tables may not add up because of rounding. Annual changes and rates of change have been calculated from unrounded figures. Unless otherwise indicated, the metric system is used throughout. The dollar sign (\$) refers to US dollars. "Billion", used throughout, is equal to 1 000 million.

Production index numbers

FAO index numbers have 1979-81 as the base period. The production data refer to primary commodities (e.g. sugar cane and sugar beet instead of sugar) and national average producer prices are used as weights. The indices for food products exclude tobacco, coffee, tea, inedible oil-seeds, animal and vegetable fibres and rubber. They are based on production data presented on a calendar-year basis.¹

Trade index numbers

The indices of trade in agricultural products also are based on 1979-81. They include all the commodities and countries shown in the *FAO Trade Yearbook 1989*. Indices of total food products include those edible products generally classified as "food".

All indices represent changes in current values of exports (f.o.b.) and imports (c.i.f.), all expressed in US dollars. If some countries report imports valued at f.o.b. (free on board), these are adjusted to approximate c.i.f. (cost, insurance, freight) 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 unit values of products traded between countries. The weights are respectively the price and quantity averages of 1979-81, which is the 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.²

Definitions of "narrow" and "broad"

The OECD definitions of agriculture are generally used in reporting on external assistance to agricul-

ture. The *narrow* definition of agriculture, now referred to as "directly to the sector" includes the following items:

- Appraisal of natural resources
- Development and management of natural resources
- Research
- Supply of production inputs
- Fertilizers
- Agricultural services
- Training and extension
- Crop production
- Livestock development
- Fisheries
- Agriculture (subsector unallocated)

The *broad* definition includes, in addition to the above items, activities that are defined as "indirectly to the sector". These activities are:

- Forestry
- Manufacturing of inputs
- Agro-industries
- Rural infrastructure
- Rural development
- Regional development
- River development

Regional coverage

Developing countries include: i) developing market economies (Africa, Latin America, Near East,³ Far East and other) and ii) Asian centrally planned economies or Asian CPEs (China, Cambodia, Democratic People's Republic of Korea, Mongolia and Viet Nam).

Developed countries include⁴: i) developed market economies (North America, western Europe including Yugoslavia, Oceania, Israel, Japan and South Africa) and ii) Centrally planned economies of Eastern Europe and the USSR (Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania and the USSR).⁵

Country designations used in this publication remain those current during the period in which the data were prepared.

³ The *Near East* includes: Egypt, Libyan Arab Jamahiriya, the Sudan, Afghanistan, Bahrain, Cyprus, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Kingdom of Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates and Yemen Arab Republic and Democratic Yemen.

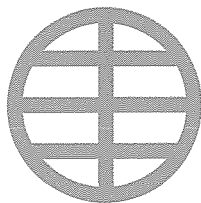
⁴ Note that "industrial countries", as defined by the International Monetary Fund (IMF) (see Figures 1.1, 1.3 and 1.4), include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany (Fed. Rep. of), Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, the United Kingdom and the United States. (They do not include Yugoslavia, Greece, Israel, South Africa, the centrally planned economies and some other smaller countries.)

⁵ Albania is omitted in this report for insufficient data.

¹ For full details, see *FAO Production Yearbook 1989*.

² For full details, see *FAO Trade Yearbook 1989*.

PART ONE
WORLD REVIEW



WORLD REVIEW

OVERALL ECONOMIC ENVIRONMENT

Recent events in the Near East have made prospects more uncertain for the global economic environment surrounding agriculture. What is certain is that prices of oil-based products and the costs of energy in all its forms, will significantly rise and negatively affect most countries for an indefinite period of time.¹ The likely consequences for oil-importing countries are a slowdown in economic activity, reinforced inflationary pressures and a worsening in fiscal and external imbalances. Related effects are the likelihood of more restrictive monetary and fiscal policies in many countries and tighter conditions for external financing in international markets. Within the OECD countries, the risk of introducing potentially recessionary measures — in particular raising interest rates — is politically more acceptable than promoting economic growth at the potential cost of higher rates of inflation. Indeed international interest rates already were rising in several industrial countries during the first half of 1990 in response to inflationary fears; following the events in the Near East, the increase has tended to be more accentuated.

Equity prices have fallen sharply in all the major markets, particularly those of countries more dependent on imported oil. By contrast, exchange rate movements have been relatively orderly, with a continuing depreciation of the US dollar only briefly interrupted in early August.

The extent of these influences can only be tentatively quantified in the current fluid situation, although they are likely to affect the short- rather than the medium-term outlook. Barring the outbreak of a major conflict, and assuming no further major oil price increases, most OECD member countries should be able

to absorb the shock without entering into what can be technically defined as a recession. Several tentative estimates have been made for the short term, pointing to variable degrees of reduction in the rate of economic growth in industrial countries, higher inflation rates, and a deterioration in their external balances. IMF economic estimates for 1982-90 and forecasts for 1991 are shown in Figures 1.1 to 1.4.²

For industrial countries, the main features in the IMF's estimates for 1990/91 are:

- Real GDP would rise 2.5 percent in both 1990 and 1991, sharply down from an average of nearly 4 percent in 1988-89. Relatively high growth is projected in the Federal Republic of Germany and Japan, but in North America and the United Kingdom growth in 1990 and 1991 would barely exceed 1 percent.
- Employment growth in 1990 is projected to slow to 1.2 percent, the smallest increase since 1985. Should the crisis be protracted and lead to increased unemployment, stronger protectionism is to be feared.
- With higher energy prices and rates of industrial capacity utilization still high, inflation would rise to 4.8 percent in 1990 and slightly fall in 1991.
- Lower levels of economic activity and higher interest rates would worsen the fiscal position of most industrial countries.
- Adjustment in the current account imbalances among the main trading countries is expected to continue, although such imbalances are still unsustainably large.
- The overall trade deficit of developed countries is expected to decline, despite the negative effect of higher oil prices on the trade balance of net oil importers. For the

¹ From a low of \$16 per barrel in July 1990, oil prices were fluctuating around \$30-40 per barrel in September/October.

² *World Economic Outlook*. IMF, October 1990. Projections presented in this report assume oil prices averaging \$26 per barrel for the remainder of 1990, and declining gradually to \$21 per barrel in the fourth quarter of 1991. In the light of September/October prices ranging up to \$40 per barrel, these projections may be optimistic.



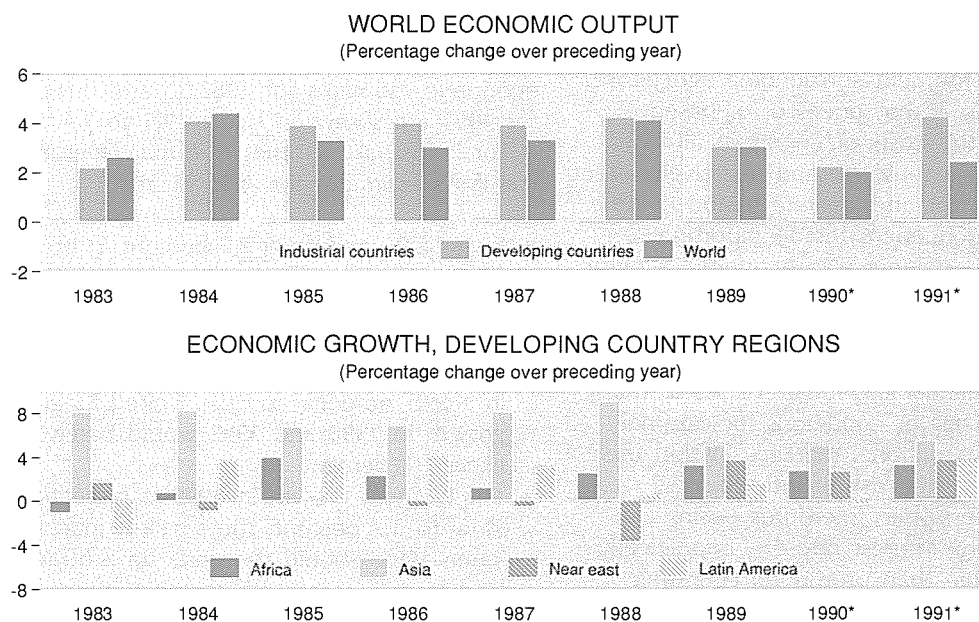
major industrial countries the trade balance is expected to shift from a deficit in 1989 to a surplus in 1990. However, higher oil prices are expected to cause a worsening in the trade deficit of other industrial countries in 1990.

- Exports and imports of industrial countries are estimated to expand by approximately 6 percent in 1990, about one percentage point less than previously estimated. The

terms of trade of these countries are now expected to deteriorate slightly in 1990.

In sum, unlike the situation that followed the oil crisis of the mid-1970s, or that of 1979-82, the industrial world would be spared recession and growth could resume at a relatively strong pace in 1992. What makes the difference between the current and previous oil price shocks, and permits a relatively optimistic

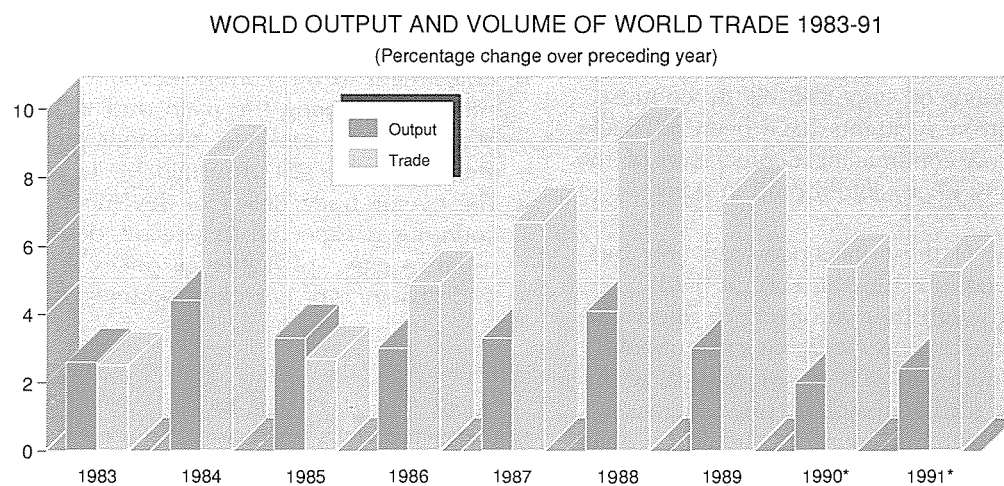
Figure 1.1



Source: IMF

* 1990: Estimate - 1991: Forecast

Figure 1.2



Source: IMF

* 1990: Estimate - 1991: Forecast

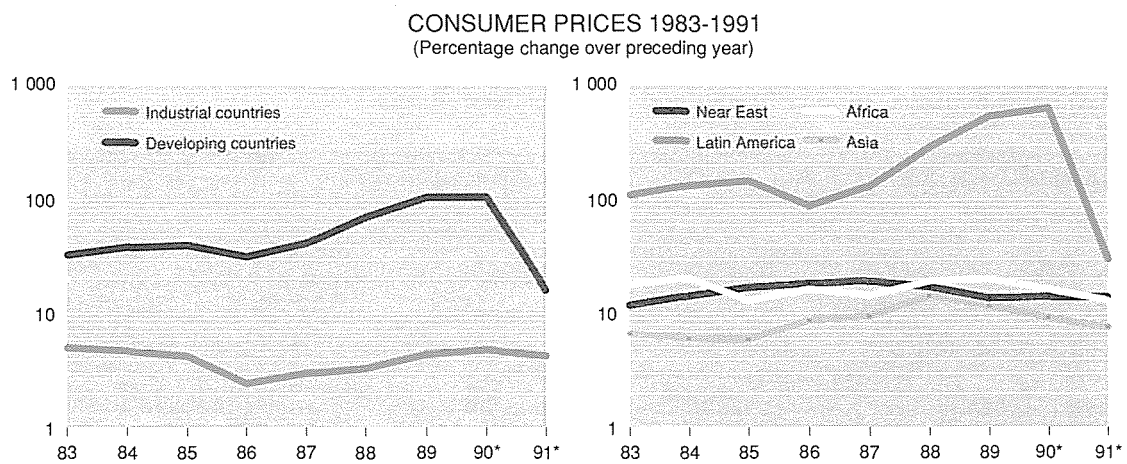


forecast for OECD countries, is the remarkable reduction in these countries' dependence on imported oil.³ Another reason for optimism is

³ Conservation efforts and the development of alternative sources of energy enabled OECD countries to reduce oil consumption as a share of GDP by almost one-third since the early 1980s. Moreover, current OECD emergency reserves are ample, their volume being sufficient to cover demand for three months.

that, unlike the situation in the early 1980s when the major OECD economies were in a similar position *vis-à-vis* their business cycles — close to full employment — and adopting a similar policy stance — restrictive measures to control inflation — the situation in recent years has been characterized by a diversity in cyclical positions. This makes the generalized adoption of potentially recessive policies unlikely. Also, countries which are still growing fast, such as

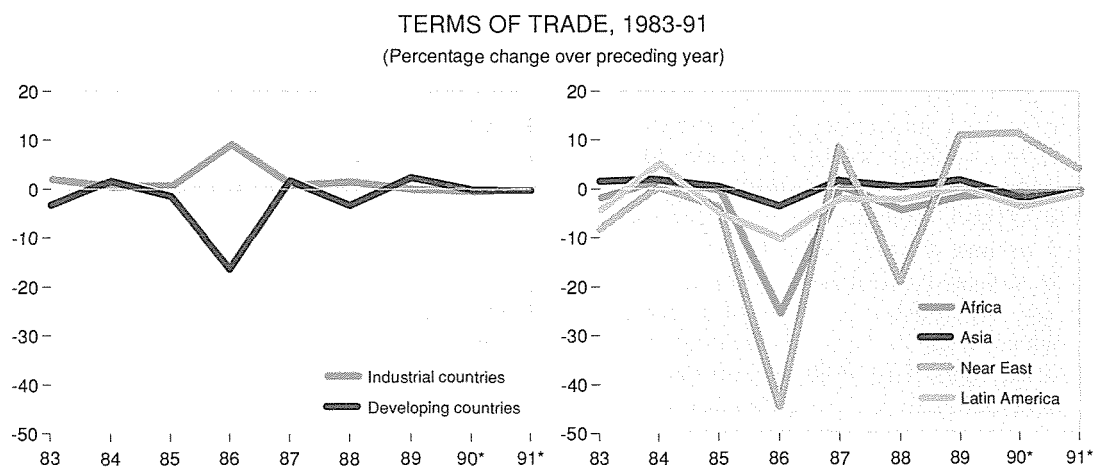
Figure 1.3



Source: IMF

* 1990: Estimate - 1991: Forecast

Figure 1.4



Source: IMF

* 1990: Estimate - 1991: Forecast



the Federal Republic of Germany and Japan, should provide strong demand for the exports of slower-growing countries.

A particularly difficult period is to be feared for the Eastern European countries. They were already facing grave problems in restructuring their economies, they are generally highly dependent on imported sources of energy, and they will have to pay hard currency for their oil imports from the USSR following the breakdown of barter arrangements of COMECON. They are also relatively inefficient users of energy, their energy use per unit of output being about twice the average levels of the OECD countries. Finally, trade sanctions against Iraq imply significant market losses for some Eastern European countries. Thus, for Yugoslavia and Romania, exports to Iraq and

Kuwait accounted for about 2.5 percent of their total exports. For the USSR, on the other hand, the oil price rise could provide major economic benefits as long as the windfall gain is well managed and allocated.

Contrasting situations would be faced by developing countries according to their net trade position in oil. Varying gains from higher oil prices would be realized by the relatively small number of net oil exporters, some of which have also announced a substantial expansion in the volume of their oil exports.⁴ Among the main highly indebted countries of this group, only Venezuela, Ecuador, Algeria,

⁴ The World Bank estimates that only 11 non-Gulf oil-exporting developing countries would directly benefit from higher oil prices.

BOX 1.1

Recent developments in debt reduction and debt relief

Slow and uneven progress has been achieved in recent years in debt and debt-service reductions due to the complex negotiation process required, the divergence of interests among creditors and uncertainties about the adjustment efforts of some debtors. Such uncertainties appear even greater now. For many developing countries the deteriorating economic environment may undermine their capacity and resolve to pursue efforts toward stabilization and structural reform. However, the recent past has been fertile in promising new initiatives and developments, including those described below.

The "Toronto Terms", announced at the Toronto summit of the seven most industrialized countries in June 1988, are targeted on rescheduling official debt of sub-Saharan Africa. Since late 1988, 18 countries have obtained rescheduling on these terms through the Paris Club. Under the "Toronto Terms", creditors can

choose from a menu of rescheduling options, including a significant writing-off of the amount rescheduled, a reduction in the interest rate on the rescheduled amount and an extension of the grace period and maturity.

The Brady Plan, launched in March 1989, is aimed at lowering the debt burden of 19 middle-income debtor countries with predominantly commercial debt. The main mechanisms are various forms of debt and debt-service reduction, including debt buy-backs, exchange of old debts at a discount for new collateralized bonds, policies to encourage repatriation of capital flight and foreign direct investment. Commercial banks are expected to provide debt reductions and new loans. The IMF and the World Bank are expected to provide up to \$20 to 15 billion of financial resources. These measures should reduce annual debt service of the severely indebted middle-income countries by approximately \$6 billion per year between 1990 and 1993. By mid-1990, four countries (Mexico, the Philippines, Costa Rica and Venezuela) reached

agreement with creditor banks. The Moroccan Government and creditor banks have also agreed in principle to reschedule Morocco's bank debt under the Brady Plan. A major problem in the implementation of the Brady Plan has been the inadequacy of funds available to the World Bank and IMF for including debt reduction in their programme of operations — although the agreement reached in May 1990, that IMF quotas should be increased by 50 percent, was a positive development in this context. Moreover, the use of World Bank and IMF funds to replace commercial bank debt envisaged in the Brady Plan means less flexibility for developing countries involved because loans from the IMF and World Bank cannot be rescheduled. Also, debt-reduction borrowing reduces a country's access to other loans from these agencies.

The Paris Club of Creditors, which brings together creditor countries for the rescheduling of developing countries' official debt, launched a new strategy of offering more favourable terms for lower middle-income countries. Four countries (Morocco, Honduras,



Indonesia, Nigeria and Mexico should benefit, although in the case of Mexico, the expected gains would be largely offset by the negative effects of the reduction in economic activity in the United States. As regards net oil importers, many of them are likely to suffer serious economic hardship, according to their dependency on external sources of energy. Other than the direct impact of higher oil prices on their balance of payments and domestic production costs, the economies of the oil-importing developing countries are also likely to face indirect depressing effects from higher petroleum prices. Their trade and growth prospects, already grim for many, particularly those predominantly exporting agricultural products, would suffer further from a slow-down in economic activity in industrial countries. For

the many indebted countries among them, tighter financial and monetary policies, involving in particular higher interest rates in creditor countries, is a potentially disastrous perspective. Finally, several countries in the Near East and Asia are expected to face major difficulties in view of the massive repatriation of workers from Iraq and Kuwait, which represented for some of them major sources of income in the form of remittances; and in view of the reduced trade and trans-shipment activities in the zone more directly affected by the trade embargo: Jordan, Turkey and Egypt. Jordan's losses from higher oil prices, lost remittances and lost trade with Iraq and Kuwait could amount to 35 percent or more of its GDP in 1991. The losses should represent less than 5 percent for Egypt and Turkey.

El Salvador and the Congo) have benefited from rescheduling packages which will be spread over a period of 15 years, five years longer than was previously allowed by the Paris Club.

Besides the Toronto and the Brady measures, certain other steps have been taken to assist low-income countries. There has been a sharp increase in the forgiveness of official development assistance (ODA) loans to sub-Saharan Africa. The United States announced that it would forgive \$1 billion of these loans beginning 1 October 1989; France has indicated that it will forgive \$2.3 billion, the Federal Republic of Germany has already cancelled \$1.5 billion and Canada plans to write off more than \$425 million.

In June 1990, the United States President announced a plan to boost economic reform and development in Latin America; the "Enterprise for the Americas Initiative" including a reduction in part of the \$12 billion debt owed to the United States Government, conditional to undergoing reforms with the IMF/IBRD.

At the Commonwealth Finance Ministers' meeting in September

1990, Mr John Major, the then UK Chancellor of the Exchequer, launched the "Trinidad and Tobago Terms", which are a development of the existing Toronto debt-relief terms for poor countries undergoing economic adjustment programmes. The plan, which concerns middle-income and lower-middle income countries, will cut the stock of debt of 17 African and two South American debtors already benefiting from the Toronto Terms arrangements. The plan provides for writing off up to \$18.3 billion of official debts, rescheduling the countries' whole stock of debt; providing additional cash flow benefits of \$2.7 billion by capitalizing interest during its first year of operation; and extending repayment periods to 25 years. The Trinidad Terms would eventually be extended to other low-income countries not included in the original Toronto Terms.

Concerns about the possible negative effects of events in the Near East and the changed economic environment on efforts to resolve the debt problem and the capacity of many developing countries to pursue stabilization and structural reform policies were

voiced at the second United Nations Conference on Trade and Development (UNCTAD) Conference on the Least Developed Countries (LDCs). The conference, held in Paris from 3 to 14 September 1990, considered the poorest countries to be the first victims of the crisis. It is to be hoped that the welcome aid initiatives announced at the conference in favour of LDCs were signs of a resolve by richer countries to pursue, and even strengthen, their overall aid efforts in favour of less developed countries despite the current difficulties in the global economic environment.



Such worsened prospects for a majority of developing countries can be seen from the following IMF estimates.

- Growth in real GDP in the developing countries as a group is estimated to fall from 3 percent in 1989 to 2.2 percent in 1990. At the regional level, growth in 1990 would be: Africa 2.7 percent; Asia 5 percent; Near East 2.6 percent; and Latin America and the Caribbean -0.4 percent. However, all regions are forecast to achieve significantly higher growth rates in 1991.
- The increase in consumer prices in 1990 is now estimated as follows: Africa 16 percent; Asia 9 percent; Near East 14 percent; and Latin America and the Caribbean 626 percent. Much lower rates are expected in 1991 in all regions except the Near East.
- For non-oil exporting developing countries, the growth in the volume of exports is estimated to fall to about 6 percent in 1990, the lowest rate since 1985, and decelerate further to 5.6 percent in 1991. Their terms of trade are expected to deteriorate 3.3 percent in 1990, and by a further 1.5 percent in 1991, reflecting a sharp fall in the prices of non-fuel primary commodities (-8 percent in 1990).
- The aggregate current account deficit of non-oil exporting developing countries is estimated to increase by \$12 billion to \$22 billion in 1991. The financing of these deficits is expected to be provided largely by official creditors.
- Total external debt of developing countries (excluding IMF credit) is expected to increase by 9 percent in 1990-91 and reach \$1,354 billion by the end of 1991. Latin America and the Caribbean is the only region where external debt is projected to remain broadly unchanged (at \$415 billion).

The possible disruptive effect of the situation in the Near East on the continuing efforts to resolve the problem of debt is cause for concern.

The debt-service ratio (payments on interest and amortization as a share of exports of goods and services) of developing countries is forecast to increase from 19 percent in 1990 to 20 percent in 1991. The situation, however, differs between regions. Thus in Latin America and the Caribbean, the debt-service ratio is expected to increase from 37 percent in 1990 to 43 percent in 1991 (compared to 33 percent in 1989). In Asia the debt-service ratio is

forecast to decline slightly to 9 percent in 1991, down from 10 percent in 1990 and 11 percent in 1989. In Africa it should stabilize at 27 percent in 1990 and 1991, up from 25 percent in 1989, whereas in the Near East a ratio of 26 percent is forecast for both 1990 and 1991, compared to a ratio of 25 percent in 1989.

Consequences for agriculture

Agriculture's sensitivity to the macro-economic environment varies according to the sector's position in the different countries and its exposure to external influences.

In industrial countries, while the importance of agriculture is limited in terms of its direct contribution to income and employment,⁵ its indirect impact on economic activity is considerable — as a provider of inputs for downstream activities such as food manufacturing, processing, retailing, etc., and as an outlet for upstream industries such as agricultural inputs, machinery and services. However, policy-induced rigidities and distortions have prevented economic signals from being fully transmitted to the agricultural sector in many of these countries. These policies have: attracted resources into the sector that could have been more cost-effectively used elsewhere; artificially raised domestic prices, negatively affecting consumers and distorting competitive relationships throughout downstream and upstream activities; insulated agriculture from world markets by border protection; and rendered excess production spuriously competitive in world markets through widespread use of export subsidies. To the extent that the exchange rate is also influenced by agricultural support, these policies have also indirectly affected the competitive position of non-agricultural activities. Despite awareness of the undesirable effects of these policies and their heavy costs to budgets and taxpayers, political and social considerations have only permitted partial and uneven progress toward greater market orientation.⁶

⁵ Gross value added in agriculture accounts for about 3 percent of GDP in the OECD area. Employment in agriculture accounts for about 8 percent of civilian employment in Japan and the EEC, and 3 percent in the United States.

⁶ According to a recent World Bank/OECD compendium of studies, the current annual cost of farmer subsidies to consumers and taxpayers in 24 industrial countries is about \$200 billion.



For developing countries' agriculture, the overall economic environment and policy developments in industrial countries assume a particular significance. Non-oil developing countries typically rely on agriculture for 20 to 40 percent of their GDP, 60 to 80 percent of their employment and 50 to 70 percent of their total export earnings. At the same time, developing countries offer the highest potential for demand-based agricultural development in a long-term worldwide perspective.

However, recent economic and market developments have not moved toward the realization of this potential. At the current levels of per caput income growth, domestic demand for food cannot be expected to exceed 2 to 2.5 percent in 1989-90 in much of Africa and Latin America and the Caribbean — hardly the kind of impulse required to stimulate production growth. Nor can agricultural trade be expected to contribute significantly to economic recovery given current prospects for import demand from industrial countries, low prices for several key agricultural export commodities, high oil prices and market instability caused by higher interest rates. This is shown for the 40 developing countries defined by the IMF as predominantly agricultural exporters, by the following estimates:

- For the predominantly agricultural exporter developing countries, per caput GDP fell 1.1 percent in 1989 and was expected to fall 0.8 percent in 1990. By comparison, per caput GDP is estimated to have increased 1.1 percent in 1989 and 0.2 percent in 1990 in developing countries with a developed — more diversified — export base.
- Gross capital formation for these countries fell from about 17 percent of GDP in the early 1980s to less than 14 percent in 1989 and 1990 — compared to a relatively constant 20 percent of GDP for developing countries with a diversified export base.
- Inflation was significantly higher in predominantly agricultural exporter developing countries than in those with diversified exports throughout the 1980s.
- Export volumes rose at a significantly lower rate in predominantly agricultural exporter developing countries than in manufactured goods exporters during most of the 1980s, with the terms of trade of the former estimated to have declined by almost one-third between 1985 and 1990.

- Import volumes declined by an aggregate 11 percent during 1982-90 with prospects for a further contraction in 1991.

These developments raise a number of important issues. Trade is assumed to be the transmission belt by which economic growth in industrial countries produces growth elsewhere. In the 1980s, however, despite the long period of expansion in industrial countries, the impact of this transmission has been uneven between different groups of developing countries. On the one hand, a number of countries, particularly in Southeast Asia, have not only succeeded in overcoming external shocks and constraints on their markets but have succeeded in basing their rapid growth on export expansion. On the other hand, a large number of other countries that primarily rely on agriculture as a source of foreign exchange and growth have recorded poorer performances and are facing grimmer prospects than most other developing countries on almost every economic measure. What has differentiated the former group of countries has been their ability, or inherent capacity, to turn into labour-intensive, export-oriented, and increasingly broad-based manufacturing economies.

For the latter group the fact of being primarily agricultural exporters in a hostile economic environment may not totally explain their negative experience. There have been cases when such inimical external influences have coincided with unsound growth and trade-supportive government policies, and with unsustained domestic efforts as a consequence.

It can also be argued that, as development proceeds and market prospects for agriculture are reduced, the sector must lose relative importance as a primary source of foreign exchange and should, instead, be increasingly regarded as a generator of domestic supply, a source of labour and as a market for local industry. Whatever the merit of this argument in a long-term perspective, many countries cannot afford to let agricultural exports become but a marginal source of growth before exports from other sectors have grown sufficiently. For most of them the sector must remain the main source of export earnings for a long time to come and so the external environment will remain a dominant influence in their development performance, domestic policies and efforts. Often the success of domestic policy reforms depends on improvements in the external environment, a fact which calls for



specific action. Measures should include providing these countries with better access to international markets; granting differential and more favourable treatment for their exports; ensuring non-automatic reciprocity of concessions granted by industrial countries; and ensuring continuity and improvement in existing preferential trade and aid arrangements.

TRENDS IN FOOD AND AGRICULTURAL PRODUCTION IN 1986-89

At the world level, the second part of the 1980s was a period of faltering agricultural output growth. This was especially the case for developed countries, North America in particular, where output declined by a yearly average of 0.7 percent during 1986-89, reflecting three consecutive years of decline not fully compensated by a recovery in 1989 (Figure 1.5). Output also declined during 1986-89 in Oceania, virtually stagnated in western Europe and rose only moderately in Eastern Europe and the USSR amid large year-to-year fluctuations.

Growth in food and agricultural production varied widely in developing countries in the latter half of the 1980s. At the regional level, the overall pattern was one of sustained growth in Asia, although the pace of growth slowed from the 1981-85 average; mediocre performances in Latin America and the Caribbean where production lagged behind population growth; marked instability in the Near East with virtually no progress overall; and a disquietingly poor record in Africa where production growth fell below the already inadequate levels of the early 1980s.

The commodity composition of the main groups of food products is shown in Table 1.1. Outstanding features are:

- World *cereal* production only marginally increased in 1986-89 reflecting an overall decline in developed countries and a slow-down in growth in developing countries to half the average rate of 1981-85. The shortfall in developed countries resulted from the prolonged drought of 1988 in North America, a sharp decline in production in Oceania, particularly of coarse grain, and overall stagnation in western Europe. On the other hand, cereal production reportedly rose nearly 3 percent yearly in Eastern Europe and the USSR, as a result of bountiful harvests in 1986 and a production recovery in the USSR and Bulgaria in 1989 after two years of setbacks.
- Among developing country regions, cereal production was favourable only in the Far East, despite the poor monsoon in 1986 and 1987 which caused growth in paddy output in 1986-89 to fall markedly below previous

TABLE 1.1. Agricultural production, by commodity

Item	Developed countries		Developing countries		World	
	Average annual change		Average annual change		Average annual change	
	1981-85	1986-89	1981-85	1986-89	1981-85	1986-89
	(..... %)					
Total cereals ¹	3.3	-0.5	3.8	1.6	3.4	0.4
Wheat	0.4	1.3	6.4	2.3	2.5	1.7
Rice, paddy	2.3	-0.9	3.6	1.9	3.4	1.7
Coarse grains	5.5	-1.1	2.6	0.6	4.1	-1.0
Root crops	3.5	-1.4	0.6	1.6	1.6	0.5
Pulses	9.6	6.8	2.9	2.0	4.6	3.3
Vegetable oils	3.9	2.2	4.8	6.8	4.4	4.9
Sugar, centrifugal (raw)	-0.4	1.1	2.8	1.7	1.4	1.4
Cocoa beans	—	—	3.5	6.3	2.9	5.9
Coffee	—	—	-0.8	3.8	-0.8	3.8
Tea	1.3	-0.9	5.8	3.0	5.2	2.6
Cotton lint	3.9	4.1	6.9	—	5.3	1.5
Tobacco	1.1	-2.5	9.4	3.1	6.3	1.4
Total meat	1.3	1.8	4.4	4.3	2.4	2.8
Total milk	1.4	0.3	3.8	3.3	2.0	1.1
Hen eggs	0.9	0.5	8.2	4.4	3.6	2.2

NOTE: Percentage changes have been calculated from unrounded figures.

¹ Including rice in terms of paddy.

Source: FAO, Statistics Division (ESS), Commodities and Trade Division (ESC).

high rates. For all other developing regions, the period was characterized by generally mediocre or poor cereal harvests, both in terms of their domestic requirements — none of them succeeded in increasing per caput cereal production — and in relation to the average levels of 1981-85.

- The *vegetable oils* sector has been among the most dynamic despite a slow-down in production growth in developed countries in the second half of the 1980s which reflected, on the one hand, policy measures to reduce the incentive to production resulting from high support prices in some importing countries and, on the other hand, farmers' response to depressed world market prices in some exporting countries. Faster growth in developing countries more than offset the slow-down in developed countries and resulted in the former increasing their stake in the sector to nearly two-thirds of the total. At the regional level, growth was particularly strong in the exporting countries of Southeast Asia and Latin America as well as, among importing countries, in China and, more recently, in India, reflecting increased

policy incentives. Production growth continued to lag well behind population growth in Africa and the Near East.

- Among other food products, growth of *root crop* production was inadequately low in Latin America and Africa, but moderately accelerated in the other major producing and consuming region, the Asian CPEs. Production of *pulses* rose close to population growth in the Far East, with dry bean and chickpea output expanding significantly in India in 1986 and 1989. Pulse production also increased strongly in the Near East and Africa but rose only slightly in Latin America and actually fell in the Asian CPEs. Sugar production moderately expanded in 1986-89 in both developed and developing countries, with declines in Latin America and the Caribbean, the Asian CPEs and the Near East more than offset by increases in the other regions.
- Growth in output of *animal products*, particularly milk, slowed in developed countries in recent years reflecting relatively high feed prices as well as efforts to reduce structural surpluses in the EC and some



other European countries. However, developing countries, more markedly the Asian CPEs, achieved significant increases in both milk and meat production.

- Tropical beverages showed disparate trends, with *cocoa bean* production strongly recovering in some main producing countries in Africa, but remaining stagnant in Latin America and the Caribbean since 1986; *coffee* production showing large fluctuations in Latin America and the Caribbean, mainly as a consequence of weather-based shortfalls in 1986 and 1988 in Brazil, but no actual trend in either direction worldwide; and *tea* expanding at a sustained rate on a global level with strong growth in Kenya and the Asian CPEs.

Food production lagged behind population growth in 49 out of 72 developing countries (68 percent) that recorded significant changes in per caput food production (above or below 1 percent) in 1985-89 (Figure 1.6). Out of these 72 countries, per caput food production fell significantly in about 80 percent of the total number of countries in Africa, about 65 percent of those in the Near East and Asia and the Pacific, while in Latin America and the Caribbean about the same number of countries experienced increases and declines in per caput production. However, food production exceeded population growth in several of the most populous developing countries, e.g. China, India, Indonesia, Brazil and Colombia. By contrast in Africa, countries with declining per caput

production accounted for an overwhelming majority of the region's population.

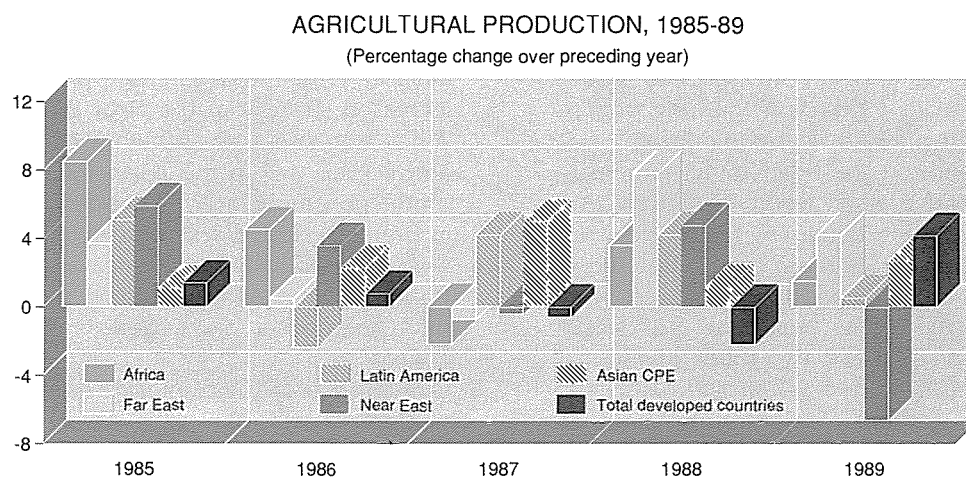
Food and agricultural production in 1990

The first estimates of world agricultural production in 1990 indicate an increase of around 2.4 percent (2.6 percent for food), a smaller expansion than in 1989, but significantly above the depressed average growth rates of 1986-88 (Table 1.2).

As in 1989, though less pronouncedly, the global increase in food and agricultural production in 1990 is expected to occur mainly in developed countries, particularly North America and Eastern Europe and the USSR. Production in Oceania and the EEC may only moderately increase.

For much of Africa and Latin America and the Caribbean, 1990 is likely to be another disappointing agricultural year. In both regions food production is expected to fall below population growth for the second consecutive year. In Latin America and the Caribbean, the overall shortfall largely reflected severely reduced crops in Brazil and some Andean and Caribbean countries which more than offset the average or good harvests in most other countries in the region. In Africa, particularly poor food output levels are expected in Liberia, Zambia, Morocco, Botswana and Senegal. Furthermore, while food output in the Sudan is forecast to significantly rise from the depressed 1989 levels, the increase will be inadequate to compensate for the heavy production setbacks of earlier years. A similar situation is faced by

Figure 1.5



Source: FAO, Statistics Division (ESS)

TABLE 1.2. Changes in world and regional food, agricultural, crop and livestock production, 1988-1990

Country groups	Food		Agriculture		Crops		Livestock	
	1988 to 1989	1989 to 1990*	1988 to 1989	1989 to 1990*	1988 to 1989	1989 to 1990*	1988 to 1989	1989 to 1990*
	(.....) % (.....)							
Developing market economies	1.6	1.4	1.5	1.4	1.3	1.7	2.7	1.7
<i>Africa</i>	1.1	1.4	1.5	1.5	1.4	—	2.7	2.1
<i>Far East</i>	4.4	1.1	4.2	1.0	5.2	0.7	4.1	3.5
<i>Latin America and Caribbean</i>	0.9	0.6	0.5	0.8	-0.1	1.2	2.1	—
<i>Near East</i>	-6.9	5.3	-6.6	5.4	-9.6	9.3	1.2	1.7
Asian centrally planned economies	2.9	4.5	2.7	4.2	2.4	3.3	4.0	1.2
All developing countries	2.0	2.3	1.9	2.3	1.7	2.2	3.1	1.5
Developed market economies	4.6	2.2	4.1	2.3	9.5	2.5	-0.7	1.2
<i>North America</i>	11.6	3.4	10.3	3.6	18.9	6.1	0.3	1.3
<i>Oceania</i>	-2.7	0.9	-2.6	1.2	1.5	2.5	-3.0	2.3
<i>EEC (12)</i>	—	1.8	—	1.8	1.8	-0.5	-1.5	1.1
<i>Other western Europe</i>	2.0	1.1	2.0	1.1	8.1	-1.1	-1.5	0.5
Eastern Europe and the USSR	2.7	4.5	4.1	2.9	4.6	5.3	1.2	—
All developed countries	4.1	2.9	4.2	2.5	7.8	3.4	—	0.7
World	2.9	2.6	2.8	2.4	3.9	2.7	1.1	1.1

* Preliminary.

Source: FAO. Based on information available up to 31 August 1990.

Ethiopia, where domestic food supply prospects give rise to serious concern (see the section, Food shortages and emergencies).

Expectations for Asia are for a significant decline in the growth rate of food and agricultural production relative to recent trends. Food production is expected to slightly exceed population growth in India but may significantly fall in per caput terms in Nepal, Bangladesh, Thailand and the Republic of Korea. On the other hand, growth in production is forecast to be well above both population growth and recent trends in Myanmar, Laos, Sri Lanka, Malaysia, Viet Nam, and Pakistan.

In China, prospects for 1990 are varied, ranging from bountiful crops for some commodities, in particular oil crops and sugar, some recovery in pulse output, but slow growth in livestock production mainly caused by feed shortage. In the case of cereals, the outlook is generally favourable and the record output level achieved in 1989 is likely to be exceeded.

As regards individual commodities, world *cereal* output is currently forecast at a record level of 1 941 million tonnes in 1990, approximately 66 million more than in 1989 (Table 1.3). Developed countries, in particular North America and the USSR, would account for most of the increase, although production is also forecast to rise in developing countries in

the aggregate. The most significant increase is in *wheat*, expected to rise 27 percent in North America and reach record levels in the USSR. Among the main producer developing countries, wheat crops are likely to be significantly larger than in 1989 in China, Pakistan, Egypt and Argentina; close to the 1989 peak in India; markedly improved from the severely drought-reduced 1989 harvest in Turkey; but smaller in Mexico and Brazil. World production of *coarse grain* is forecast to rise 12.7 million tonnes (1.5 percent), the bulk of the increase being again in North America, the USSR and Turkey. Coarse grain production is estimated to decline in both western and Eastern Europe, Oceania, Africa and South America, however. The overall expansion in developing country coarse grain production would mainly reflect larger crops in Asia, particularly China and India, and in Turkey. At over 515 million tonnes, world *rice* (paddy) production in 1990 would exceed the extremely high level of 1989 by about 1 percent, with bountiful crops in Asia again accounting for most of the increase.

Among other commodities the following features stand out:

- *Vegetable oil* production in 1990 is expected to fall slightly in industrial countries, and grow at a lower, if still appreciable, rate in



Figure 1.6

ANNUAL CHANGES IN PER CAPUT FOOD PRODUCTION, 1985-89

	DEVELOPING COUNTRIES	DEVELOPED COUNTRIES
MORE THAN 5 %	CAPE VERDE, CYPRUS (2)	
3.01 % TO 5 %	BHUTAN, CHILE, MALAYSIA, PARAGUAY, TRINIDAD AND TOBAGO (5)	
1.01 % TO 3 %	BRAZIL, CHINA, COLOMBIA, BENIN, ECUADOR, INDIA, INDONESIA, MOROCCO, NAMIBIA, NEPAL, PERU, GUINEA-BISSAU, SAUDI ARABIA, URUGUAY, YEMEN ARAB REPUBLIC, ZAMBIA (16)	BELGIUM+LUXEMBOURG, CZECHOSLOVAKIA, HUNGARY, NORWAY, SOUTH AFRICA, USSR (5)
0.01 % TO 1 %	BOLIVIA, CENTRAL AFRICAN REPUBLIC, CUBA, DOMINICAN REPUBLIC, EGYPT, GHANA, GUATEMALA, HONDURAS, KENYA, KAMPUCHEA DEM., KOREA DEM., MACAU, MALI, NIGER, PAKISTAN, PUERTO RICO, THAILAND, TOGO, VIET NAM, SAMOA (20)	AUSTRIA, BULGARIA, NETHERLANDS, SPAIN (4)
-0.01 % TO -1 %	ARGENTINA, BANGLADESH, BELIZE, CAMEROON, CHAD, CONGO, COSTA RICA, ETHIOPIA, GAMBIA, HONG KONG, CÔTE D'IVOIRE, LIBYA, MALAWI, MAURITANIA, MEXICO, PHILIPPINES, REUNION, SOMALIA, TONGA, TURKEY, BURKINA FASO (21)	YUGOSLAVIA, ALBANIA, DENMARK, FRANCE, GERMANY DEM.REP., GERMANY FED.REP., ITALY, POLAND, PORTUGAL, ROMANIA (10)
-1.01 % TO -3 %	ANGOLA, BARBADOS, BOTSWANA, MYANMAR, BURUNDI, EL SALVADOR, GABON, GUINEA, JORDAN, KOREA REP., LAOS, LESOTHO, LIBERIA, MADAGASCAR, MAURITIUS, MONGOLIA, MOZAMBIQUE, GUADALOUPE, PAPUA NEW GUINEA, SENEGAL, SIERRA LEONE, ZAIRE, SINGAPORE, SUDAN, SWAZILAND, TANZANIA, UGANDA, YEMEN DEM. (28)	AUSTRALIA, CANADA, FINLAND, GREECE, IRELAND, ISRAEL, JAPAN, NEW ZEALAND, SWITZERLAND, UNITED KINGDOM, UNITED STATES OF AMERICA (11)
-3.01 % TO -5 %	ALGERIA, SOLOMON ISLANDS, BRUNEI, SRI LANKA, FIJI, GUYANA, HAITI, MARTINIQUE, VANUATU, NIGERIA, PANAMA, ZIMBABWE, VENEZUELA (13)	MALTA, SWEDEN (2)
BELOW -5 %	IRAN, IRAQ, JAMAICA, NICARAGUA, RWANDA, SURINAME, SYRIA, TUNISIA (8)	ICELAND (1)

Source: FAO



developing countries. Production is likely to change little from 1989 levels in North America and western Europe, and fall about 4 percent in Eastern Europe and the USSR. By contrast, all developing country regions may be expected to raise their oil crop production, more significantly Asia (large gains in China, Malaysia and the Philippines more than offsetting reductions in India and Thailand). In Latin America, bumper crops are expected in Argentina and Paraguay. In contrast, output in Brazil is likely to fall significantly below the exceptionally high levels of 1989, though still representing a second all-time record.

- Prospects for world *sugar* production are for an increase to 108 million tonnes in 1990 (beet sugar 39.4 million tonnes, up 4.5 percent; and cane sugar 68.9 million tonnes, up 1.7 percent), a record for the third year in succession. Most of the increase in production would occur in Asia, crop expectations being particularly favourable in India and China and, among developed countries, in Eastern Europe and the USSR. In Latin America, a decline of nearly 6 percent in sugar output in 1990 may result from production shortfalls in Brazil, Mexico and the Dominican Republic which more than offset larger crops in Cuba, Colombia and Argentina. The global increase in sugar production would be inadequate to satisfy consumption, however, with stocks expected to fall in 1989/90 for the fifth consecutive year. Nevertheless, with another record crop anticipated in 1990/91, consumption and production could come into closer balance.
- Production of *roots and tubers* may rise over 5 percent in Latin America and the Caribbean, a significantly improved performance compared to recent trends for the region. In Africa, however, production is expected to continue stagnating.
- A significant expansion in world *pulse* production is expected in 1990, mainly reflecting continued favourable performances in Asia where production is expected to hit a new record. India's production of pulses is forecast to exceed 14 million tonnes, implying a cumulative 20 percent increase during 1989 and 1990. Pulse production may also largely recover in the Near East from the 1989 setback, though remaining below previous years' levels. On the other hand, performances are likely to remain at best mediocre in most pulse producing and

consuming countries in Africa. In Latin America, severely reduced crops in Brazil are expected to be more than offset by bumper harvests in several other countries including Mexico and Argentina.

- Production prospects for *animal products* are for a continuation of recent trends, with slow growth in the main producing industrial countries, but fairly dynamic performance in developing countries. *Milk* production would remain virtually unchanged from the previous year in western Europe and only slightly increase in North America, Eastern Europe and the USSR. By contrast milk production in developing countries is likely to rise 4 percent, close to 1980s trends, although much of the increase would accrue to a limited number of large producing countries in Latin America (in particular Mexico, Brazil and Argentina) and the Far East (mainly India). *Meat* production may only slightly increase in North America, remain broadly unchanged in western Europe (although EEC countries have been facing market difficulties arising from supply in excess of sluggish demand and mounting stocks of meat) and fall below 1988 and 1989 levels in Eastern Europe and the USSR. Among developing regions, meat production in Africa may rise 3.7 percent, the best performance in many years, but fall slightly short of the high levels of the previous year in Latin America.
- *Green coffee* production in Africa may fall by 2.5 percent to its lowest level since 1985, with all main producers except Ethiopia and Uganda sharing in the decline. In Central America and the Caribbean and Brazil, slight increases are expected in coffee production, while in Colombia coffee output is expected to expand to the highest levels since 1984. World *cocoa bean* production is forecast to change little from 1989, despite significantly reduced output levels in Côte d'Ivoire, Nigeria and Brazil. While the cocoa crop in Ghana will remain stable, a spectacular growth in production is expected in Malaysia where cocoa output in 1990 is likely to increase to about twice the levels of the mid-1980s. Cocoa production is also likely to expand in Indonesia. *Tea* production is forecast to continue rapidly rising in Kenya, Sri Lanka and India, with all three countries achieving record harvests in 1990.

Supply/demand trends for cereals

The period 1986-90 was marked by a sharp



turnaround in the world market situation for cereals. In a short period of time after the abnormal drought that hit North America in 1988, world markets switched from a situation of abundance, with depressed prices and stocks reaching embarrassingly high levels, to one where stocks have fallen close to the global food security threshold. With world cereal production falling 3.5 percent in 1987 and further 3.2 percent in 1988, consumption requirements could only be met through a heavy drawdown in stocks (Figure 1.7). While production substantially recovered in 1989, growing by an estimated 7 percent, this was still insufficient to prevent a further reduction of stocks which fell to an equivalent of 17 percent of global consumption.

The favourable prospects for world output of cereals in 1990, estimated to exceed global utilization for the first time in four years, indicate that cereal stocks by the end of 1990/91 are likely to increase by more than 8 percent above their opening level (Table 1.4). The increase in global cereal stocks would result from a forecast 20 percent expansion in *wheat*, a 1.7 percent increase in *rice*, but a 2.5 percent fall in *coarse grain* stocks to their lowest level since 1983/84. At the forecast level of 324 million tonnes in 1990/91, cereal stocks would represent 18 percent of estimated world consumption, the same share as in 1988/89, slightly above the minimum level FAO considers necessary for safeguarding world food security.

While in a longer perspective the underlying production and consumption trends may be

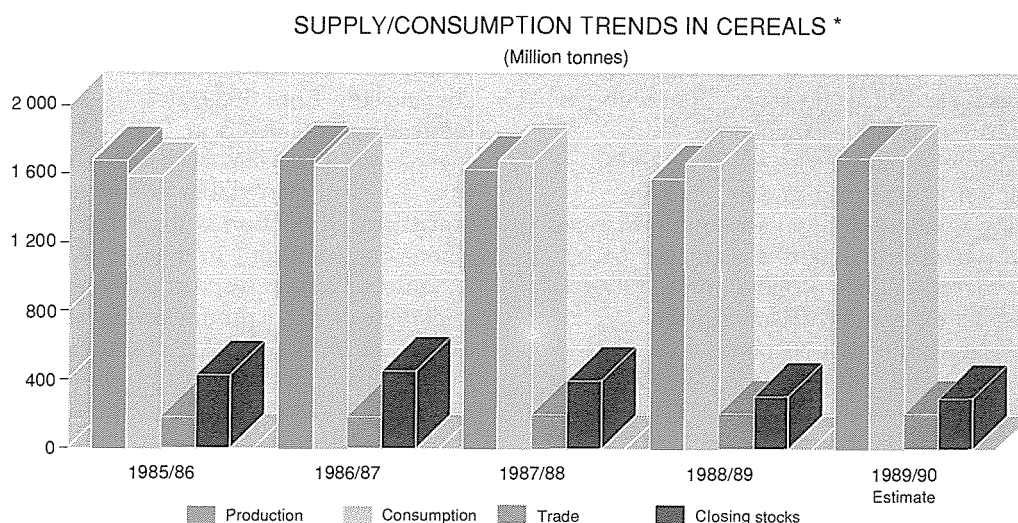
conducive to new surpluses in the main producing countries — and vice versa current conditions may be favourable for their budgets and producers — it is the immediate situation that calls for attention. The margin of world food security offered by current cereal stocks would be inadequate to prevent supply shortages and escalating prices in the event of significant production shortfalls in 1991, even if production in 1990 is relatively favourable.

Almost two-thirds of the total increase in global wheat stocks in 1990/91 is projected to be in the major exporter countries. However, the ratio of their forecast stocks (currently 54 million tonnes) to their trend utilization (domestic use plus exports) in 1991/92 would still only be 24 percent, compared to a level of around 30 percent before surplus stocks started accumulating during 1982/83-1986/87.

For coarse grains, the forecast volume of stocks in 1990/91 would only represent 14 percent of the trend level of global utilization in 1991/92. The ratio was on average 22 percent in the early 1980s. In addition, the stocks held by major exporters (currently forecast at 61.5 million tonnes) would be the second lowest since the world food crisis in the early 1970s, representing only 16 percent of their total trend utilization for 1991/92, compared with an average of 22 percent during the more typical period of the early 1980s.

Although forecasts for rice carryover stocks are still highly tentative, a marginal increase may be expected in 1991 ending stocks of rice after the strong recovery of the previous year.

Figure 1.7



Source: FAO, Commodities and Trade Division (ESC)

* Rice, milled



As regards developments in the distribution of cereal stocks, major exporting developed countries accounted for most of the decline between 1986/87 and 1989/90. The slight forecast increase in 1990/91 would mainly stem from higher inventories in countries other than major exporters, including the USSR. Stocks held by developing countries are estimated to have recovered somewhat from levels of the previous year but are not forecast to change significantly in 1990/91. Nevertheless, inventories held in many developing countries continue to remain at unsatisfactorily low levels particularly when viewed in the light of rising consumption requirements.

Fertilizers

The severe economic and financial difficulties faced by many developing countries, adversely affecting their ability to import and subsidize the prices of fertilizers for low-income farmers,

had resulted in a sharp slow-down in the growth of their fertilizer consumption in the early 1980s. The negative impact of this trend on output is difficult to assess but is bound to be considerable. On average, fertilizers have contributed 50 percent of the increase in crop yields. It has been estimated, for example, that in the Philippines the value of cereal production foregone as a result of reduced fertilizer imports may be ten times greater than the cost of these imports. Since 1985 the trend has been for a relative recovery in the use of fertilizers, particularly potash and phosphate, although the situation varied according to regions. China and the other Asian centrally planned economies, the developing region where fertilizer use was already highest relative to arable land (140 kg/ha in the early 1980s) recorded the highest and more sustained increases in fertilizer use throughout the 1980s. As a consequence, the Asian CPEs' consumption rose

BOX 1.2

Cereals and food security

Recent developments in cereal markets should be assessed in the light of the prominent position of these staples in developing countries' food production, consumption and trade — and hence food security. No less than 30 percent, and up to 75 percent, of total calorie supply is cereal-based in developing countries. Cereals account for about one-third of their total volume of food production (16 percent in Africa and Latin America, over 40 percent in Asia); and cereal imports in many of these countries have gained importance in domestic diets and total import expenditure, accounting for over 20 percent of the total value of agricultural imports of developing countries in recent years. On the other hand the weight of developing countries in world cereal exports is relatively small (about 14 percent), with

no more than ten of these countries being normally net cereal exporters.

For a large majority of developing countries a global tightening in cereal markets and higher prices are therefore bad news. Admittedly, some of them have become excessively — and possibly unnecessarily — dependent on cereal imports, not having adequately exploited their domestic potential. From this perspective, high prices may be a blessing in disguise if they are to promote domestic farming and reduce import dependency in the long term. But there are also short-term considerations that impose priority attention. Among the many net cereal-importing developing countries, a particularly vulnerable group has been identified by FAO: the low-income food-deficit countries. It has been estimated that the increase in cereal prices in 1988/89 added about \$3 billion to the annual cereal bill of these countries — twice the value of food aid they have received. For many of these

countries even a small reduction in cereal supplies — domestic, imported or in the form of food aid — may have devastating repercussions. An increase in international prices can have a severe impact on retail markets, resulting in reduced or qualitatively impoverished diets, unless the government is prepared — and financially able — to protect consumers through subsidies. Underlying the FAO Secretariat estimate of minimum cereal stock levels required to safeguard global food security is the sharp rise in prices that would be expected to follow a fall in stocks to significantly below 17 percent of world consumption.

TABLE 1.3. Agricultural production, by commodity, 1989 and 1990

Item	Developed countries			Developing countries			World	
	1989	1990 ¹	Change 1989-1990	1989	1990 ¹	Change 1989-1990	1989	1990 ¹
	(....million tonnes....)	(....million tonnes....)	%	(....million tonnes....)	(....million tonnes....)	%	(....million tonnes....)	(....million tonnes....)
Total cereals ²	878.6	928.7	5.7	995.9	1 012.1	1.6	1 874.5	1 940.8
Wheat	316.7	357.4	12.9	225.5	232.8	3.2	542.2	590.2
Rice, paddy	25.4	26.1	2.8	484.3	489.2	1.0	509.7	515.3
Coarse grains	536.5	545.1	1.6	286.0	290.1	1.4	822.5	835.2
Root crops	203.9	206.2	1.1	387.6	389.9	0.6	591.5	596.1
Pulses	20.5	21.0	2.4	35.9	37.9	5.6	56.4	58.9
Oil-seeds	106.9	106.1	-0.7	172.5	178.7	3.6	279.3	284.8
Sugar, centrifugal (raw)	44.4	44.5	0.2	61.0	63.6	4.3	105.4	108.1
Cocoa beans	—	—	—	2.4	2.4	—	2.4	2.4
Coffee	—	—	—	5.8	5.8	—	5.8	5.8
Tea	0.2	0.2	—	2.3	2.4	4.3	2.5	2.6
Cotton lint	6.0	6.5	8.3	11.0	12.0	9.1	17.0	18.5
Tobacco	1.7	1.8	5.9	5.3	5.1	-3.8	7.1	6.9
Total meat	103.1	103.3	0.2	66.2	66.8	0.9	169.3	170.1
Total milk	384.7	388.0	0.9	150.5	155.7	3.4	535.2	543.6
Hen eggs	19.1	19.0	-0.5	16.4	16.9	3.0	35.5	35.9

¹ Preliminary.² Including rice in terms of paddy.

Source: FAO, Based on information available up to 31 August 1990.

TABLE 1.4. Carryover stocks of cereals

Country and country groups	Crop year ending in					
	1986	1987	1988	1989	1990	1991
	(..... million tonnes)					
Developed countries	289.6	319.7	276.7	184.2	165.5	185.9
<i>Canada</i>	14.4	18.5	13.5	9.7	10.8	14.3
<i>United States</i>	181.2	203.8	169.4	86.1	61.5	69.6
<i>Australia</i>	6.1	4.1	3.1	3.2	3.1	3.7
<i>EEC</i>	36.1	31.6	28.7	28.5	28.5	28.3
<i>Japan</i>	5.2	5.8	5.6	5.4	5.1	5.1
<i>USSR</i>	31.0	38.0	39.0	36.0	39.0	46.0
Developing countries	136.9	135.9	123.6	122.7	133.5	138.1
<i>Asia</i>	113.1	108.5	97.7	97.0	108.0	118.3
<i>Bangladesh</i>	1.0	0.7	1.5	1.2	1.1	1.1
<i>China</i>	52.0	46.3	47.5	42.8	42.3	44.8
<i>India</i>	17.0	15.0	5.4	4.4	11.1	13.6
<i>Pakistan</i>	2.0	3.1	1.6	2.5	2.5	2.6
<i>Turkey</i>	0.4	0.9	1.0	0.8	0.7	0.9
<i>Africa</i>	11.8	14.6	10.4	12.3	12.0	10.2
<i>Latin America and the Caribbean</i>	11.8	12.6	15.1	13.2	13.2	9.4
<i>Argentina</i>	0.7	0.7	1.3	1.3	1.1	1.1
<i>Brazil</i>	3.0	4.6	6.5	5.3	5.5	2.4
World	426.5	455.6	400.3	306.9	299.0	324.0
<i>Wheat</i>	160.2	167.1	142.3	114.5	118.9	143.0
<i>Rice</i>	58.0	54.5	45.0	46.2	52.2	56.2
<i>Coarse grains</i>	208.3	234.0	213.0	146.3	127.8	124.7
World stock as % consumption	26	27	24	18	17	18

Source: FAO, Commodities and Trade Division (ESC).

to over 200 kg/ha in recent years, second only to western Europe. Far East countries also strongly expanded nutrient use, bringing their consumption levels to 60 kg/ha. While the increase was widespread across the region it was to a large extent spearheaded by Indonesia, Thailand and India, although consumption in the latter has tended to level off in recent years. Fertilizer use in 1985-88 picked up strongly in Latin America and the Caribbean after the near stagnation of the early 1980s, and has shown a steady increase, albeit at a declining pace, in the Near East. By contrast, plant nutrient application has only very slowly increased in Africa overall, and there was even a decline in consumption in 1986-88 after the exceptionally high rise of 1985 following the breaking of the drought.

The rates of increase in fertilizer use in the 1980s fall well below those of the 1970s, when growth in consumption in all developing countries averaged nearly 10 percent a year.

Fertilizer markets were generally calm by mid-1990 with prices at levels close to those a year earlier (a notable exception being

ammonium sulphate, f.o.b. western Europe, for which prices had fallen by almost one-third). However, recent events in the Near East caused a tightening in markets and upward pressure on prices, particularly of ammonia and urea. Such tightening was caused, on the one hand, by reduced supply in world markets resulting from the trade embargo on Iraq (Iraq and Kuwait being large suppliers, producing together about 1.140 million tonnes of ammonia and 785 000 tonnes of urea); and, on the other hand, from the impact of higher prices of oil and related products on fertilizer production costs (over 90 percent of world ammonia production being derived from natural gas).

Recent increases in fertilizer prices have varied according to the market, but have been significant in some cases. For instance, increases in ammonia f.o.b. export prices between 26 July and 27 September 1990 were about 44 percent for US Gulf, 30 percent for Caribbean and 22 percent for Near East markets. For urea, price increases were of the order of 35 percent for US Gulf, 8 percent for Near East and 39 percent for Caribbean markets.



AGRICULTURAL TRADE, TRENDS IN 1985-88

The period 1985-88 was characterized by considerable buoyancy in world agricultural trade in relation to the earlier part of the decade. World trade in crops and livestock rose by a cumulative 28 percent during 1985-88, compared to an overall decline of over 5 percent in the previous four years (Figure 1.8). The upsurge in trade was particularly pronounced in developed countries in 1987 and 1988, on the side of both exports and imports. By contrast, of all developing regions, only the Far East and Asian CPEs recorded rapidly expanding trade. Africa and Latin America and the Caribbean, the two regions for which agricultural exports matter most in an overall economic context, were those where such exports were more depressed.

Even more buoyant than trade in crops and livestock was that in fishery and forestry products in recent years (see the Fisheries and Forestry sections). Also, unlike trade in crops and livestock, exports of fishery and forestry products in 1985-88 showed more dynamism in developing than developed countries.

The strong expansion in agricultural trade in developed market economies mainly reflected an intensification of intra-OECD country trade. On the contrary, developing countries lost relative importance as outlets for agricultural exports from the OECD. For instance, developing countries accounted for 40 percent of total agricultural exports of the EEC in recent years compared to about 50 percent in the early 1980s. OECD imports from developing countries barely increased throughout the 1980s (0.7 percent yearly in current value terms) after having expanded 14 percent yearly during the 1970s.

Agricultural trade balances in developing countries showed significant shifts between 1981-84 and 1985-88. Export/import ratios were as follows (percentages):

	1981-84	1985-88
Africa	85.8	107.3
Latin America	250.7	293.3
Far East	110.3	109.9
Near East	26.1	28.4
Asian CPEs	71.3	121.8

Latin America and the Caribbean consolidated its surplus position, and the Asian CPEs became significant net exporters in the latter period. However, while increasing surpluses in Latin America during the 1980s were based on import contraction rather than export expansion, the opposite was true in the Asian CPEs. Despite the heavy agricultural component of their economies, African countries alternated net deficit and surplus situations. The improvement in African trade balances in 1985-88 mainly reflected a sharp reduction in food imports in 1986 and 1987. The Far East maintained its moderate surplus position while Near East countries remained heavily dependent on food imports.

Although agricultural export prices generally firmed during 1985-88 in relation to the period 1981-84, this trend was not shared by many of the products chiefly exported by developing countries. Moreover, prices of other major traded products rose significantly faster than agricultural prices in recent years. As a result, the net barter terms of trade of agricultural products against manufactured goods and crude petroleum in developing countries as a whole deteriorated by nearly 7 percent yearly between 1985-88 after having fallen 0.3 percent yearly in the period 1981-84. All developing country regions shared in the negative trend, with Latin America and the Near East hardest hit throughout the whole 1981-88 period.

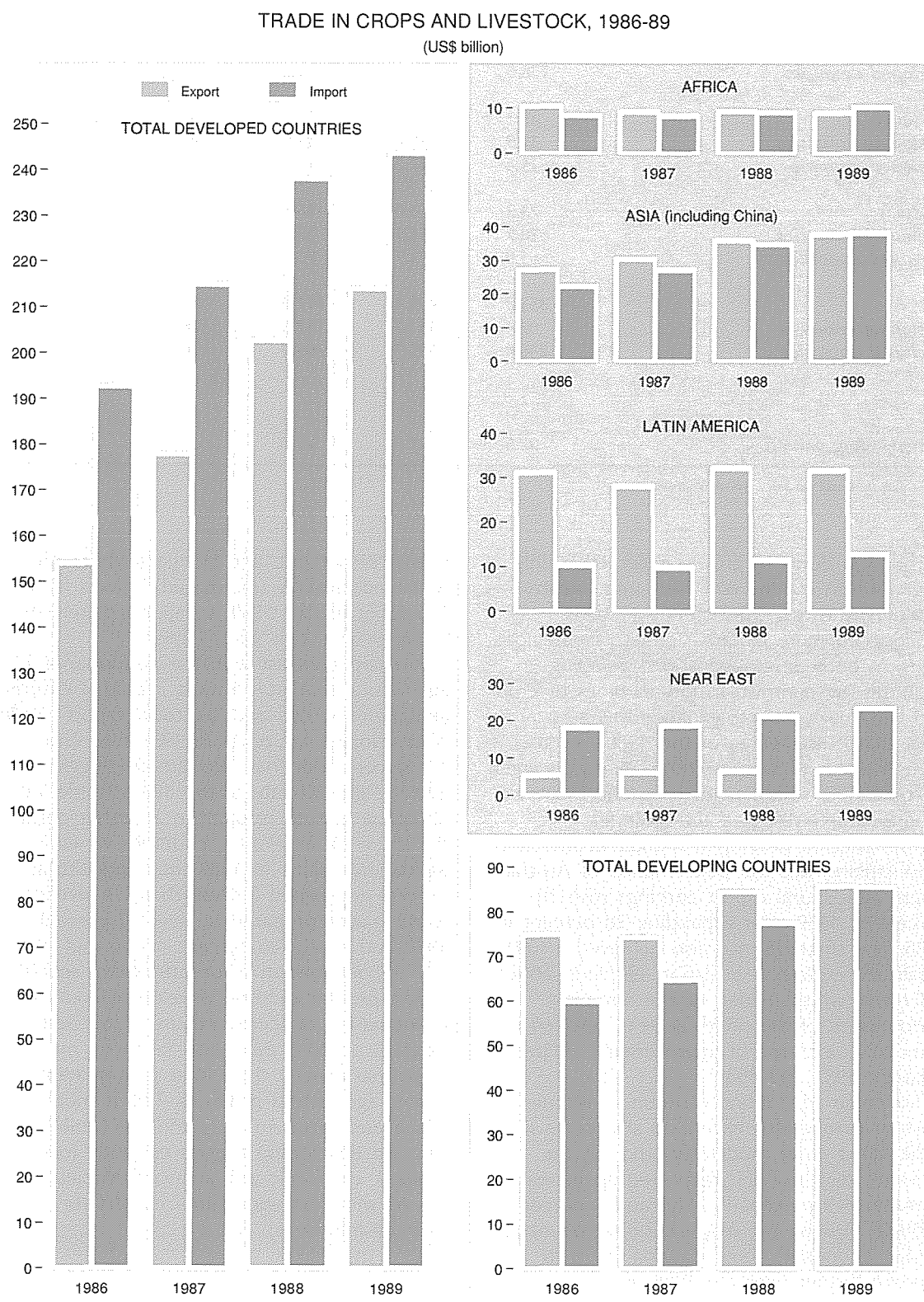
Many developing countries attempted to compensate for depressed agricultural prices through an increased export effort. However, expanded export volumes were generally insufficient to prevent a decline in the purchasing power of agricultural exports (income terms of trade) in 1985-88. Thus, while net barter terms of trade for developing market economies fell 6.1 percent yearly during this period, income terms of trade fell 4.5 percent yearly. Among developing country regions, only the Asian CPEs achieved an expansion of export volumes that more than offset the deterioration in net barter terms of trade, thereby permitting significant gains in the purchasing power of agricultural exports.

Agricultural trade in 1989

In 1989 the value of world exports of agricultural, fishery and forestry products is estimated to have increased by about 3 percent (Table 1.5). The increase was not only well below that of 1988, it was also lower than the average growth of the 1980s.



Figure 1.8



Source: FAO

TABLE 1.5. Value of world exports of agricultural (crops and livestock), fishery and forest products, at current prices, 1987-89

Item	1987	1988	1989	Change		Average of annual changes
				1987-1988	1988-1989	1980-1988
	(..... \$ '000 million.....)			(..... %		
Agricultural products	252.11	287.3	300.0	13.8	4.4	3.0
<i>Total developing countries</i>	74.3	84.5	85.7	13.7	1.5	2.1
<i>Total developed countries</i>	178.0	202.8	214.2	13.9	5.7	3.5
Fishery products	28.2	32.2	32.1	14.4	−0.5	9.1
<i>Total developing countries</i>	12.9	15.0	15.0	16.6	−0.1	11.1
<i>Total developed countries</i>	15.3	17.2	17.1	12.6	−0.7	7.6
Forest products	73.3	85.8	85.9	17.2	−	5.5
<i>Total developing countries</i>	10.2	12.1	12.1	18.6	−	4.0
<i>Total developed countries</i>	63.0	73.7	73.7	16.9	−	5.8
Total	353.8	405.4	417.9	14.6	3.1	3.8
<i>Total developing countries</i>	97.4	111.7	112.9	14.6	1.1	3.0
<i>Total developed countries</i>	256.4	293.7	305.1	14.6	3.9	4.2
	(..... %					
Share of developing countries	27.5	27.5	27.0			

NOTE: Figures may not add up because of rounding.

Source: FAO.

The slow-down of growth reflected mainly a stagnation in exports of fishery and forestry products, the two subsectors that had experienced more dynamic growth in previous years, in both developed and developing countries. By contrast, export earnings of crop and livestock products expanded at a faster pace than the average of the 1980s, even though prices of several commodities declined.

The global expansion of crop and livestock exports largely reflected the stronger performance of developed market economies. Most striking was the performance of Australia where agricultural export earnings rose 16 percent in 1989 after expanding 28 percent in 1988. The United States also achieved a further significant expansion in export earnings (about 9 percent) which, added to the booming performance of the previous year, resulted in a cumulative increase of approximately 38 percent between 1987 and 1989.

The main agricultural exporting countries in western Europe also expanded shipments in 1989, albeit more moderately than in the previous year (the EEC registered an increase in trade of 9 percent in 1988 and 5 percent in 1989). Among the major exporter developed market economies, only Canada failed to improve further over the 1988 export performance. Agricultural export earnings fell below the 1988 levels in all Eastern European countries except Poland, where exports rose

nearly 19 percent, and Hungary where they remained virtually unchanged. Exports fell about 5 percent in the USSR, to approximately the same level as two years earlier.

In sharp contrast with the performance of agricultural markets in most industrial countries, agricultural (crops and livestock) export earnings of developing countries in 1989 rose only 1.5 percent, less than the already sluggish average growth rate of the 1980s (Table 1.6). This slow growth resulted in a further decline in the share of developing countries in world agricultural trade. In 1989 their agricultural exports accounted for less than 29 percent of world trade compared to over 30 percent in 1980 and nearly 40 percent in the mid-1960s.

The continuation of unsatisfactory agricultural export performances in developing countries is of increasing concern because of the serious external account difficulties faced by many of them, particularly those that predominantly export agricultural products. This is more so in Africa and Latin America and the Caribbean, the two developing regions currently facing the greatest economic and financial difficulties, and relying more on agricultural exports for overcoming them.⁷

⁷ Agricultural exports currently account for about 21 percent of total exports in developing Africa and 29 percent in Latin America and the Caribbean compared to 14 percent for developing countries as a whole.

TABLE 1.6. Value of world agricultural trade (crops and livestock), at current prices, by region, 1987-89

Item	1987	1988	1989	Change		Average of annual changes	
				1987-1988	1988-1989	1980-1989	
						current prices	volume
	(..... \$ '000 million.....)			(..... %			
Africa							
Export	9.2	9.3	8.9	0.6	— 3.4	— 1.2	— 0.2
Import	8.2	9.0	10.3	9.6	15.4	0.3	2.0
Far East ¹							
Export	30.5	36.0	37.8	18.3	4.2	5.4	5.7
Import	27.2	34.8	38.1	28.0	9.5	5.5	4.1
Latin America							
Export	28.2	32.2	31.7	14.4	— 1.5	0.2	2.9
Import	9.9	11.6	12.9	17.7	10.5	— 0.7	— 1.5
Near East							
Export	6.0	6.5	6.7	8.5	3.7	3.4	7.7
Import	18.6	21.2	23.4	13.8	10.4	3.3	5.2
Total developing countries							
Export	74.3	84.5	85.7	13.7	1.5	2.1	3.8
Import	64.7	77.5	85.6	19.7	10.5	2.9	2.8
Total developed countries							
Export	178.0	202.8	214.2	13.9	5.7	3.5	1.2
Import	215.1	238.1	243.7	10.7	2.4	3.2	1.4
World							
Export	252.4	287.3	300.0	13.8	4.4	3.0	1.9
Import	279.8	315.6	229.3	12.8	4.4	3.1	1.9
Share of developing countries in world agricultural trade	(..... %						
Export	29.4	29.4	28.6				
Import	23.1	24.6	26.0				

NOTE: Figures may not add up because of rounding. Annual changes and their averages have been calculated from unrounded figures.

¹ Includes China.

Source: FAO.

Agricultural exports fell by over 3 percent in 1989 in Africa (with a cumulative 11 percent decline in the current value, and 1.8 percent in the volume of exports, between 1980 and 1989) and by 1.5 percent in Latin America and the Caribbean (with exports only increasing 1.8 percent in current value despite a 26 percent increase in their volume during the same nine-year period). The situation appears more favourable in the Far East and the Near East regions, with regard to both their 1989 performance and their recent trends.

Behind these general trends and features the following regional developments can be highlighted.

Africa. The decline in exports in Africa mainly reflected a deterioration in trade of tropical beverages. Notwithstanding increased volume movements by several countries, the drop in prices — particularly for coffee and cocoa —

curtailed earnings. Performances of other commodities were uneven. Sugar exports expanded in Swaziland but remained relatively unchanged in Mauritius, the largest exporter of the region. Cotton exports from the Sudan declined but this was offset by increased earnings in Côte d'Ivoire and Mali. Both Nigeria and Cameroon increased their export of rubber while earnings from this commodity remained almost unchanged in Liberia.

Latin America and the Caribbean. The overall decline in the value of agricultural exports resulted mainly from lower trade in coffee, sugar and soybean cake, three important sources of agricultural earnings in the region, which was not offset by gains in other commodities. All the major coffee exporters except Mexico recorded sharp declines in export earnings from this commodity. Sugar exports also fell in Cuba and Brazil. While



exports of soybean cake increased in Brazil, they declined in Argentina — the net result being a slightly negative growth rate for this commodity. Banana export earnings are estimated to have remained broadly unchanged at the previous year's level.

Far East (including China). A strong increase in rice export earnings in Thailand and, to a lesser extent, Viet Nam, more than offset stagnant or reduced shipments in most other rice-exporting countries. Sugar exports also expanded sharply in Thailand. Exports of rubber, which had shown considerable dynamism in 1988, deteriorated markedly in Malaysia. While export earnings for coffee remained relatively favourable, they were depressed for cocoa and for palm oil, although palm oil exports continued to expand. Exports of cotton lint from Pakistan again increased significantly.

Near East. The export performance of cotton lint compared unfavourably to that of other agricultural products (in particular hazelnuts, animal products and pulses), and the share of this commodity in total agricultural exports of the Near East continued to fall, reaching an estimated 12 percent (compared to 23 percent in the early 1980s). Cotton lint exports fell in both Egypt and Turkey in 1989.

Expenditure on food and agricultural imports in 1989 followed divergent patterns. The growth in food and agricultural imports of developed countries significantly declined in value terms compared with the average for the 1980s; but the opposite occurred in developing countries.

Among developing country regions, Africa registered the largest increase in food imports (over 15 percent in 1989, and an aggregate 25 percent during 1987-89). Such a large recourse to imports reflected the deteriorating domestic food supply conditions in several African countries. A similar consideration applied to Latin America and the Caribbean where imports expanded 10.5 percent in 1989, despite continuing financial difficulties (the region's per caput food production stagnated in 1988 and declined in 1989). In the Far East, the strong growth in agricultural imports in 1989 mainly reflected larger food purchases by China, which surpassed Egypt as the largest food-importing developing country. In the Near East, while Egypt expanded food imports only moderately, other large importing countries, including Saudi Arabia, significantly expanded their purchases.

With the growth in imports exceeding that in exports in all developing regions, agricultural trade balances markedly deteriorated in 1989, particularly in Africa and Latin America and the Caribbean. Africa and the Far East became net agricultural importers and the export/import ratio fell to 245 percent in Latin America and the Caribbean (against an average 293 percent during 1985-88).

World trade in cereals in 1990/91

The preliminary FAO forecast of world trade in cereals in 1990/91 is 202 million tonnes, down from the estimated 209 million tonnes of 1989/90. Almost all the decline would be in coarse grains. The forecast reflects a reduction in total cereal imports by developed countries to about 81 million tonnes in 1990/91 from 88 million tonnes in 1989/90, whereas the aggregate cereal imports of the developing countries are expected to remain virtually unchanged at 120 million tonnes.

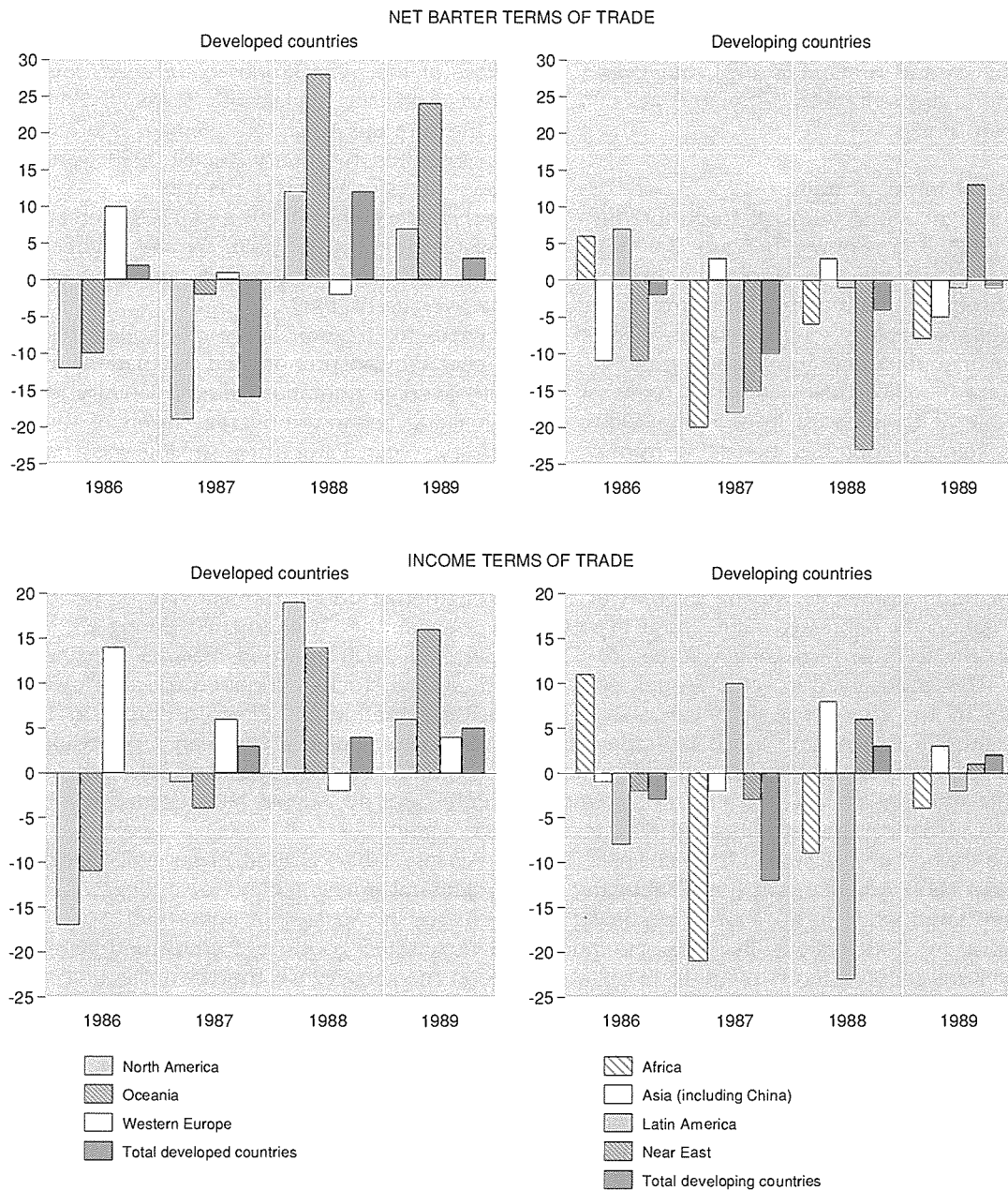
World imports of wheat are expected to remain virtually unchanged, at 96 million tonnes in 1990/91. The lack of growth in wheat imports is mainly a result of good 1990 cereal crops in a number of importing countries, stagnation in the economies of the developing countries, and no expected increase in food aid shipments. Among developed countries, a marginal reduction in wheat imports is expected for the USSR (although the forecast for this country remains highly tentative) alongside a decline in Eastern Europe. Total wheat purchases by western Europe and Japan are estimated to remain basically unchanged. A slight increase in imports is projected for developing countries resulting from an expected increase in Latin America, a reduction in Asia and an unchanged level in Africa.

For coarse grains, a major reduction in imports is forecast, from 101 million tonnes in 1989/90 to 94 million tonnes in 1990/91. The decline mainly reflects the excellent 1990 cereal crop outlook in the USSR and the competitive prices of wheat on international markets, making coarse grain imports less attractive for animal feeding. A reduction in coarse grain imports primarily reflects sharply reduced purchases by the USSR as well as lower imports by Eastern Europe. Aggregate coarse grain imports by other developed countries are expected to remain at about the same level as in 1989/90. Total imports by developing countries are expected to remain unchanged as the net result of slight declines in Asia,



Figure 1.9

TERMS OF TRADE OF AGRICULTURAL EXPORTS FOR
MANUFACTURED GOODS AND CRUDE PETROLEUM, 1986-89
(Percentages)



Net barter terms of trade refer to the relative unit prices of products.
Income terms of trade refer to the actual purchasing power of countries' exports, since they also take into account changing export volumes, and hence the total amount of foreign exchange earned by exports and available to pay for imports.



Africa and Central America, and an increase in South America.

The world rice market has entered into a phase of uncertainty with structural shifts taking place. A decline in the global rice trade is expected in the 1990 calendar year, settling at 11 million tonnes against a level of 13 million tonnes in 1989. Lower rice imports are expected in both Asia and Africa. For 1991, however, rice exports are tentatively estimated at 12 million tonnes.

Agricultural terms of trade

Trends in agricultural terms of trade for the period 1986-89 are shown in Figure 1.9. Main features include: i) for developing countries, a pronounced deterioration in the terms of trade of agricultural exports *vis-à-vis* trade-weighted prices of manufactured goods and crude petroleum. By 1989, their net barter terms of trade were at their lowest level in the 1980s; ii) for developed countries, benefiting from relatively better market conditions for temperate product exports, a comparatively more stable pattern of change, and a less pronounced deterioration of the agricultural terms of trade overall; iii) varying degrees of compensation for depressed agricultural export prices in the form of increasing volumes of exports. This is observed in most groups of countries by the comparatively better performance of the income terms of trade (or purchasing power of agricultural exports), which takes into account changes in both prices and quantities of agricultural exports; and iv) uneven performances among regions. Once again, it is Africa and Latin America and the Caribbean that have fared worst in an area of particular importance for both regions. By 1989, the index of agricultural income terms of trade (base 1979-81=100) had fallen to 72 for Africa and 82 for Latin America and the Caribbean. In other words, Africa's earnings from agricultural exports in 1989 would enable the region to purchase 28 percent less manufactures and crude petroleum than in the period 1979-81; and Latin America's, 18 percent less.

While data for 1990 do not yet permit a full assessment of changes in terms of trade and purchasing power of agricultural exports, recent events do not provide ground for optimism.

Export prices of most agricultural commodities have generally tended to weaken in 1990 compared with the average levels of the previous year (Figure 1.10). For cereals, export prices of *wheat* fell about 30 percent between

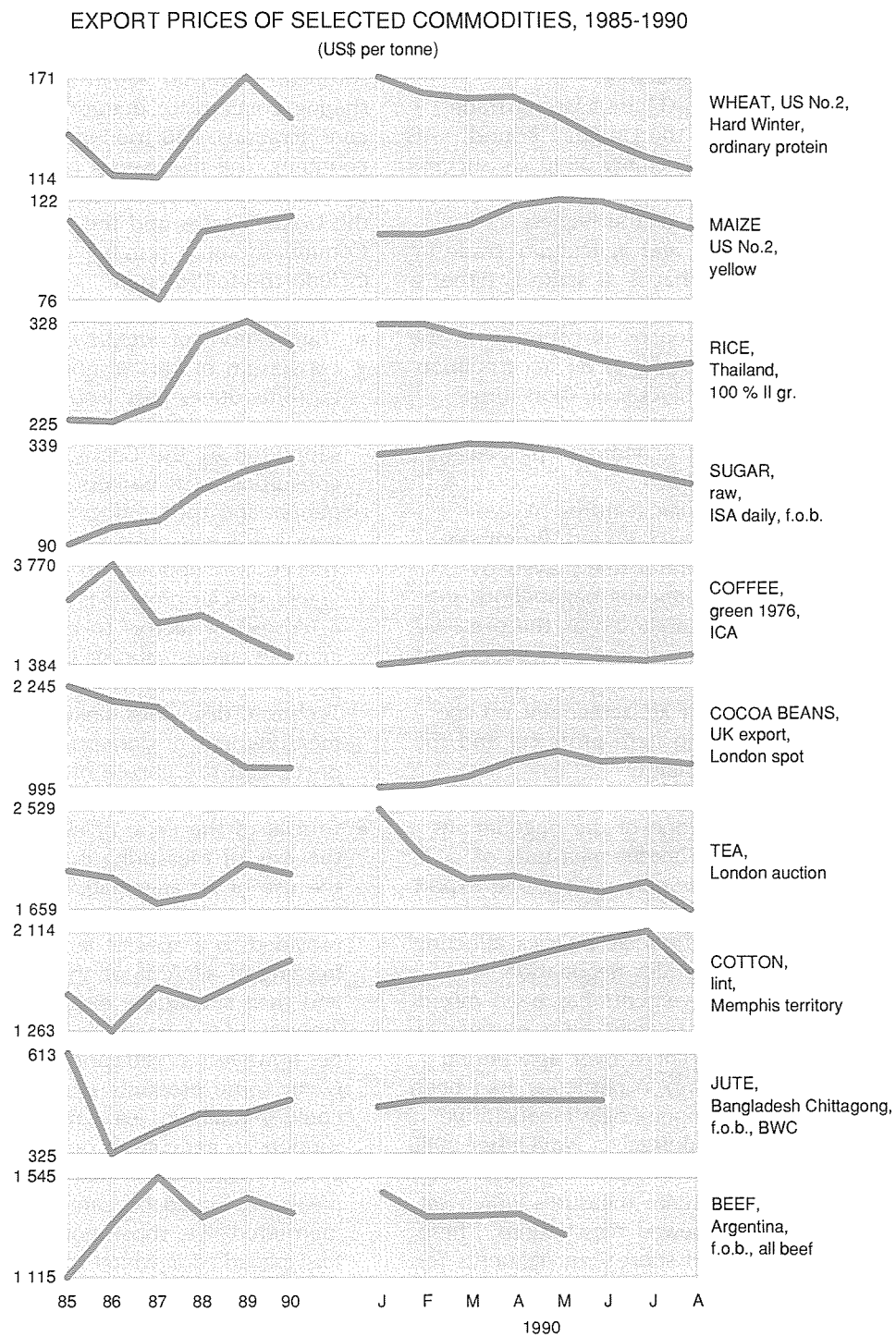
January and August 1990. The price of *maize* significantly strengthened during the first half of 1990 but weakened in July/August to about the same level as in late 1989. With improved supplies and sharply reduced import demand for *rice* in the main importing countries, particularly in Asia, rice prices in mid-1990 were about 10 percent lower than in early 1990. Prices of the main groups of *oil-seeds* and *meals* were also significantly lower in 1990 than in the previous year. On average, quotations for *soybeans* in January/August 1990 were about 10 percent lower than in January/December 1989; and 17-20 percent lower in the case of palm oil and soybean meal. Soybean oil quotations remained close to the average of 1989.

Prices for *tropical beverages* (coffee, tea and cocoa) showed pronounced fluctuations in 1990 with average quotations during January/July remaining below the average levels of the previous year. Particularly striking was the overall decline in coffee prices in 1990, which were 23 percent below the average levels of 1989 despite some strengthening during the first quarter of the year. *Cotton* prices sharply strengthened during the first half of 1990. Prices of *sugar* further strengthened during the first quarter of 1990 as world markets remained tighter and stocks continued to fall. However, with expectations of a record output in 1990/91 and a better balance between production and consumption, prices began to fall in the second quarter and by August had reached levels of a year earlier.

Against a background of generally weakening agricultural prices, the outlook suggests increases in the cost of imports of manufactured goods and crude petroleum in world markets. While the US dollar unit value index of manufactured goods exported by developed market economies had remained unchanged in 1989 from the level of the previous year, it increased by almost 6 percent in the first quarter of 1990 compared to a year earlier. This tendency could be accentuated. In particular, recent events in the Near East have given oil prices an immediate jolt and, while it is not possible to foresee at which levels prices will stabilize, prospects for at least the short term are for significantly higher levels than in 1989 and the first half of 1990. Higher oil prices are also likely to affect the price of manufactured goods because of their impact on the energy and petrol-related component of production costs. Therefore, a



Figure 1.10



Source: FAO

* eight-month average except for jute (six months) and beef (five months)



further significant deterioration may be expected in 1990 in agricultural terms of trade *vis-à-vis* other major traded products.

Agriculture in the Uruguay Round of multilateral trade negotiations

The eighth round of GATT multilateral trade negotiations (MTN) — the Uruguay Round — is due to conclude in December 1990. Its success or failure, critically dependent on the last stage of negotiations, will be of the highest importance for overall and agricultural trade in the years to come. What is at stake is either a freer and more equitable trading system granting fair participation of all countries in the benefits of expanded trade; or an accentuation of competing trading blocks, of short-term benefit to a few, but potentially disastrous for many trade-dependent economies, particularly in the developing world.

A number of particular features have characterized the Uruguay Round. Prominent among these is the central role played by agriculture — unlike previous negotiations in which the sector was regarded as the preserve of domestic policy. Indeed, the very success of the Round is now seen to hinge on the ability of negotiators to reach an agreement on the liberalization of trade in farm products and the reduction of farm subsidies.

Another important feature of the current Round is the broad scope of the negotiations which cover not only border measures of protection, i.e. tariffs, import quotas and export subsidies, but also measures of support for domestic production. Thus, all policies affecting agricultural trade are under negotiation.

The record of achievements has been mixed and positions remain far apart on a number of key issues. Wide differences over agricultural policies and farm reform in particular had been at the basis of a disappointingly inconclusive mid-term review in Montreal in November 1988. Reconvened in Geneva in April 1989, the review agreed on a set of interim measures which set the framework for renewed negotiations. These covered long-term and short-term elements for reform as well as sanitary and phytosanitary regulations. It also recognized the special position of developing countries and the need for their special treatment, including ways and means to compensate for the negative effects of reform on net food importers. Agreement was also reached on further negotiations to liberalize trade in tropical products, including their processed and semi-processed form.

Several proposals have been tabled since then and intensive discussions have continued between the main negotiators: the United States; the European Communities; the Cairns Group of 13 agricultural trading nations; North European countries, Japan and Switzerland, sharing concern for domestic food security considerations; and food-importing developing countries. The discussions have been dominated by dissent between the two main protagonists, the United States and the European Community, on a number of issues. These include the following:

- "Tariffication" of *import barriers*, i.e. conversion of part of non-tariff barriers into customs duties that would initially provide equivalent protection. The United States, supported by the Cairns Group, suggested converting such barriers into bound tariff quotas and then reducing them to zero or very low levels over a period of ten years. The EC was opposed to such an approach unless special provisions are made, including a "corrective factor" to protect farmers' incomes against abrupt changes in world prices or fluctuations in exchange rates. Technical difficulties, linked to the measurement of domestic and world market prices and the choice of a reference year, further complicate the issue.
- Crucial to the issue of *domestic support* is the way of measuring it. The EC suggested the use of an aggregate measure of support (AMS), including all the government support provided to a specific farm product; and the freezing of all AMS at their current levels and their successive reduction, by agreed amounts, on a yearly schedule. There would be, however, a "rebalancing" of support; that is, for some products subsidies/border tariffs could actually increase provided the overall support to agriculture declined. The United States' suggestion is that internal support measures should be categorized as "permitted" (i.e. those not distorting trade), "disciplined" (for which the AMS approach could be applied) and "prohibited". On this basis, all domestic support directly affecting farm production and prices could be phased out over ten years. This proposal is supported by the Cairns Group but opposed by the EC.
- Positions between the EC and the United States on *export subsidies* are even more difficult to bridge. The United States



advocates phasing out these subsidies over five years, while the EC considers export refunds as an integral part of its current variable levy and dual pricing system. Thus, export refunds would be subject to the corrective factor the EC proposes for import charges.

A number of additional concerns were raised by other countries. Several North European countries, Switzerland and Japan expressed the view that food security considerations and other non-trade concerns such as environmental protection should also be taken into account in discussing a reform process that would affect agricultural production. Several of these countries had serious reservations regarding the use of the AMS approach as a means for reducing agricultural support.

A number of developing countries emphasized the need to take into account the possible negative effects of agricultural reform on net food-importing developing countries. They suggested several measures to counter such effects, including improved access to markets, provision of financial and technical assistance for agricultural development, food aid and concessional sales. The need for special and differentiated treatment for the developing countries in implementing reform was also emphasized, with particular reference to a proposal presented by Brazil.

In April 1990, trade ministers from 30 countries met in Mexico in an attempt to summon the political impetus needed to complete successfully the MTN by the end of the year. While the meeting did not result in any breakthrough on the key issues, it set a deadline of July for establishing an outline package of agreements. An encouraging feature of this package is that it covers all 15 items in the Uruguay Round including reduction of farm support in all three main areas — import barriers, export subsidies and domestic support.

At their July 1990 economic summit meeting in Houston, leaders of the seven largest western industrial countries reached a compromise agreement on farm support. The agreement called for cuts — but not outright elimination — in all categories of farm support, within a framework that includes a common instrument for measuring such support and taking into account food security considerations. It is hoped that this compromise agreement will provide the political impetus needed for

reaching basic agreements on farm reform and other trade issues and so pave the way to a successful conclusion of the Uruguay Round in December 1990.

At the subsequent meeting of the Trade Negotiations Committee (the governing body of the Uruguay Round) in late July an accelerated timetable was laid down for negotiations, leading to the conclusion of the Uruguay Round at a ministerial meeting in Brussels from 3 to 7 December 1990.



FOOD AVAILABILITY AND NUTRITION

Calorie supply

Food availability at the country/regional level can be assessed on the basis of dietary energy supply (DES), generally measured in terms of kilocalories per caput per day. Being primarily the result of changes in domestic food production and net trade, DES reveals not only the capability of a country's food productive system in relation to its population's requirements, but also the extent to which domestic supply deficiencies have been compensated through importing food, either commercially or as food aid.

The following features can be observed from the early 1970s to recent years (Table 1.7):

- A wide gap of over 900 calories per caput/day currently separates average calorie supply in developed and developing countries. However, since calorie supply rose faster in developing regions, the gap has narrowed significantly since the early 1970s. Thus, DES in developing countries was equivalent to 65 percent of that in developed countries in 1969-71, compared to 72 percent by 1986-88.
- While the growth in DES increased in North America and western Europe between the 1970s and 1980s, it decelerated significantly in most developing country regions during the 1980s, a period of particularly unfavourable conditions for economic and agricultural growth for many of them. China was the major exception.
- Among developing country regions, a polarization of extreme situations occurred. On the one hand, the Near East, the developing region with the highest DES levels since the 1970s, continued to show an expansion in calorie supply during the first half of the 1980s — an expansion exceeded only by that of China during this period. On the other hand, Africa, where DES growth and levels were already the lowest during the 1970s, experienced an actual decline in average DES (0.2 percent yearly) during 1979-81 to 1986-88.

The obvious two determinants in a country's food supply situation are its capacity to expand domestic production or finance a net import position. For developing countries as a whole,

there is a clear relation between DES and production changes, with exports and imports broadly netting out. At the individual region's level, however, the relative importance of production and net imports greatly varies. Thus, the two developing regions that achieved the fastest expansion in DES (Asia and the Near East) did so through opposing means. The Asian CPEs — overridden by the weight of China — relied almost entirely on domestically produced food, their imports only accounting for a minor and stable share of total DES. A similar phenomenon occurred in the Far East (non-CPE Asia), although the growth in production and DES was less dramatic. By contrast, the steep increase in DES in the Near East was primarily import-based, as per caput calorie production has declined since the mid-1970s.

In the case of Latin America, the very slow growth in DES during the 1980s was a consequence of a slow-down in production expansion and a sharp reduction in imports — both trends reflecting the severe crisis that affected the region's economic and agricultural performances since 1981-82.

In Africa, dismal food production performances since the early 1970s had to be compensated for by increasing imports. The latter, however, only marginally expanded in calorie terms during the 1980s, mainly because the lack of foreign exchange limited imports on commercial terms. As a result, Africa experienced a fall in DES during the 1980s — the only region to do so — after a long period of slow growth.

Incidence of undernourishment

Given assumptions on calorie intake distribution and minimum requirements, DES also allows the incidence of malnutrition to be estimated at the country and regional levels. Estimates of the incidence of undernourishment, based on 1983-85 data,⁸ were last presented to the FAO

⁸ *The Current World Food Situation*. CL 95/2. June 1989. This exercise was based on the methodology and assumptions used for the *Fifth FAO World Food Survey*. It incorporated the application of the cut-off point (minimum per caput requirement) of 1.4 BMR as the minimum energy requirement for adults and adolescents. The application of a given cut-off point obviously determines the overall picture of absolute undernourishment estimates. However, since the purpose was to provide indications of trends rather than absolute numbers, the choice of the cut-off point using 1.4 BMR, *vis-à-vis* the more conservative 1.2 BMR, was not crucial.

TABLE 1.7. Dietary energy supplies (DES) and annual rates of change, by region/country group
1969-71, 1979-81 and 1986-88

Region/country group	DES			Average of annual changes	
	1969-71	1979-81	1986-88	1969-71 to 1979-81	1979-81 to 1986-88
	(..... kcal/per caput/day.....)			(..... %))	
Developed market economies	3 186	3 300	3 389	0.3	0.5
<i>North America</i>	3 371	3 487	3 626	0.3	0.7
<i>Western Europe</i>	3 233	3 371	3 445	0.4	0.4
<i>Oceania</i>	3 200	3 287	3 369	0.4	0.4
<i>Other developed market economies</i>	2 735	2 810	2 860	0.2	0.3
Developing market economies	2 158	2 317	2 352	0.7	0.2
<i>Africa</i>	2 046	2 148	2 119	0.6	0.2
<i>Latin America</i>	2 514	2 675	2 732	0.7	0.3
<i>Near East</i>	2 399	2 794	2 914	1.6	0.5
<i>Far East</i>	2 049	2 185	2 220	0.6	0.3
<i>Other developing market economies</i>	2 222	2 347	2 379	0.4	0.2
Centrally planned economies	2 378	2 606	2 824	0.9	1.1
<i>Asian CPEs</i>	2 006	2 323	2 620	1.4	1.6
<i>Eastern Europe and USSR</i>	3 318	3 401	3 418	0.3	0.1
Total developed countries	3 229	3 333	3 399	0.3	0.3
Total developing countries	2 106	2 319	2 434	1.0	0.7
World	2 435	2 587	2 671	0.6	0.5

Source: FAO.

Council in June 1989. The main conclusions were as follows:

- The number of undernourished persons in developing market economies rose by an estimated 15 million in the ten-year period 1969-71 and 1979-81, and by 37 million (to a total 512 million) in the following five years, an increase of 11 percent. Despite this increase in the absolute number of undernourished persons, their proportion in relation to total population declined during the 1980s, to an estimated 21 percent in 1984-86, because population grew faster overall — by 40 percent.
- The Far East region held the majority of undernourished persons in developing market economies — expectedly, given the region's massive population. The share of this region in the total number of malnourished persons in developing market economies tended to decline, however, from 61 percent in 1969-71 to 56 percent in 1983-85 (Figure 1.11).
- In relative terms — as a proportion of the respective populations — the incidence of undernourishment was considerably higher in Africa than in other regions. Furthermore, unlike other regions, this proportion rose during the 1980s and the absolute number increased by 27 percent. It is estimated that nearly one in every three Africans was

undernourished in 1983-85, broadly the same proportion as in the early 1970s. All other regions recorded varying degrees of improvement between 1969-71 and 1984-86, the most notable being that in the Near East, where the proportion of undernourished population was halved.

- The Near East was also the sole region where the absolute numbers of undernourished declined, although here again such progress was arrested in the 1980s.

The fact that more than 20 percent of the population of 98 developing countries was estimated to be undernourished by the mid-1980s is a major indictment of virtually all aspects of development. No contemporary problem compares in gravity to the human devastation caused by persisting hunger and malnutrition. Recognition of this fact has prompted FAO and WHO to sponsor jointly an International Conference on Nutrition, to be held in Rome in December 1992. It is expected that the conference will result in an agreement on a coordinated strategy for national and international action to eradicate hunger and malnutrition.

Food shortages and emergencies

Serious problems of food supply shortages continue to persist in Africa. In *Ethiopia* and



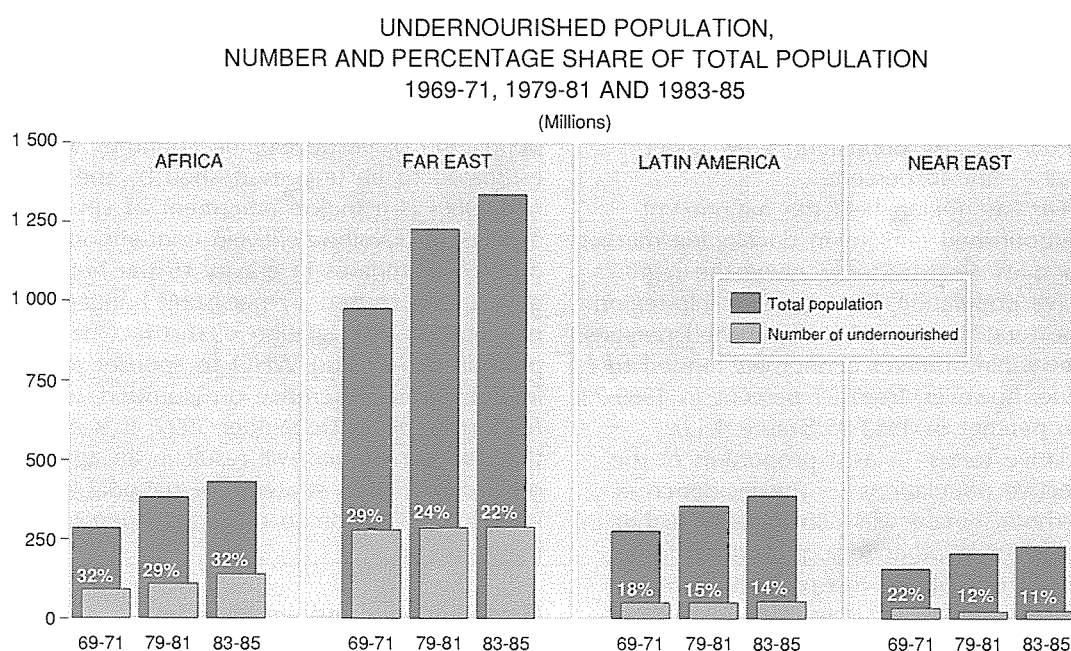
the Sudan the 1990 harvest outlook is poor. Inadequate early season rainfalls in northern and western Ethiopia have jeopardized crop prospects in areas already facing serious food shortages. Although later rainfall brought some relief to several areas, the situation remains critical. International emergency relief programmes have so far averted widespread famine but the situation remains precarious and could still deteriorate in the period leading up to harvest at the end of the year. Insufficient early season rainfall has also hit areas of the Sudan already confronted by food shortages following droughts last year, and the food supply situation in the affected areas continues to deteriorate. In both countries, the outcome of the harvest at the end of the year will be crucial. In the south of the Sudan, Operation Lifeline Sudan Phase II, aimed at delivering more than 100 000 tonnes of food, is being implemented amid logistical difficulties. Thus there are fears that the food aid pledged under the programme may not be delivered to all at-risk populations because of the late start of the operation and the deterioration of the roads.

The food supply situation also remains highly critical in *Angola* and *Mozambique* with food aid deliveries falling well short of requirements. In both countries continued civil strife is seriously constraining agricultural activity and

marketing as well as impeding the distribution of relief supplies to at-risk populations. In *Mozambique*, despite an increase in the recent harvest as a result of better weather and improving security conditions in some areas, cereal output will still cover only half of requirements. Moreover, logistic constraints will continue to hamper food distribution in deficit areas. Food shortages are widespread and serious, with current food distributions insufficient to ward off the threat of malnutrition and starvation. In *Angola* a decline in the recent harvest of cereal crops due to poor rainfall in southern and central provinces has further aggravated the situation. Cereals output in 1990 covers less than 40 percent of domestic consumption requirements. The needs of urban, displaced and drought-affected populations have to be met entirely by imports while pledges and deliveries of food aid to date are well below minimum needs. In both countries, as of August 1990, increased international assistance is required, in particular special measures to expedite delivery of food aid and logistic support for its internal distribution, including airlifts to otherwise inaccessible areas.

In *Liberia* civil strife has led to a rapid deterioration of the food supply situation, impeding the marketing and distribution of basic food supplies and disrupting agricultural

Figure 1.11



Source: FAO



activity. Severe food shortages are reported throughout the country while the number of refugees fleeing to neighbouring countries continues to grow. Substantial emergency food relief for the war-affected and displaced population is needed.

Other African countries facing shortfalls in food supplies and requiring exceptional assistance in the current marketing year, as of September 1990, were: Burundi, Cape Verde, Malawi, the Niger, Rwanda, Sierra Leone and Somalia. At the same time, a number of countries were experiencing situations of exceptional surpluses in some areas while requiring external assistance for transportation to deficit areas in the same or neighbouring countries. Examples are Benin, Burkina Faso, Chad, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Mauritania, the Niger, the Sudan, Togo, Uganda and Zimbabwe.

Against the background of a difficult food supply situation in several African countries, there are four main areas which require immediate attention: i) priority to accelerating the delivery of relief supplies to at-risk populations of northern Ethiopia and the Sudan as well as monitoring the development of crops for harvest at the end of the year in both countries; ii) further pledges and logistic support for internal food distribution are needed to ensure supplies for strife-afflicted populations of Angola, Mozambique and Liberia; iii) further pledges of food aid for 1990/91 are needed for 12 countries; and iv) additional donor support is required for the purchase and internal distribution of local surpluses as well as for the disposal of unutilized exportable surpluses.

Serious food supply shortfalls are currently reported in nine other developing countries outside Africa. In Asia, despite a further anticipated improvement in the overall situation this year, difficult food supply situations are reported in Afghanistan and Sri Lanka as well as Jordan and Lebanon in the Near East. Shortfalls requiring exceptional and/or emergency assistance are furthermore reported in four Latin American and Caribbean countries — Bolivia, Haiti, Nicaragua and Peru — as well in Western Samoa, where emergency assistance is being provided to victims of the cyclone, Ofa, experienced in early February.

Another problem, hopefully temporary but currently causing major concern, is the massive outflow of people from the Near East following recent events in the region. In the absence of adequate transportation facilities to repatriate

these refugees, tens of thousands of them have gathered in desert tent camps in the Iraq-Jordan border area in conditions of extreme hardship. Serious shortages of food and water as well as medical and other services are reported. The situation in these camps remains critical despite some relief in the form of external aid and a recent improvement in the ratio of arrivals to departures. However, a large number of people are still reported to be waiting to cross the border from Iraq.



EXTERNAL ASSISTANCE TO AGRICULTURE AND FOOD AID

Official external assistance to agriculture

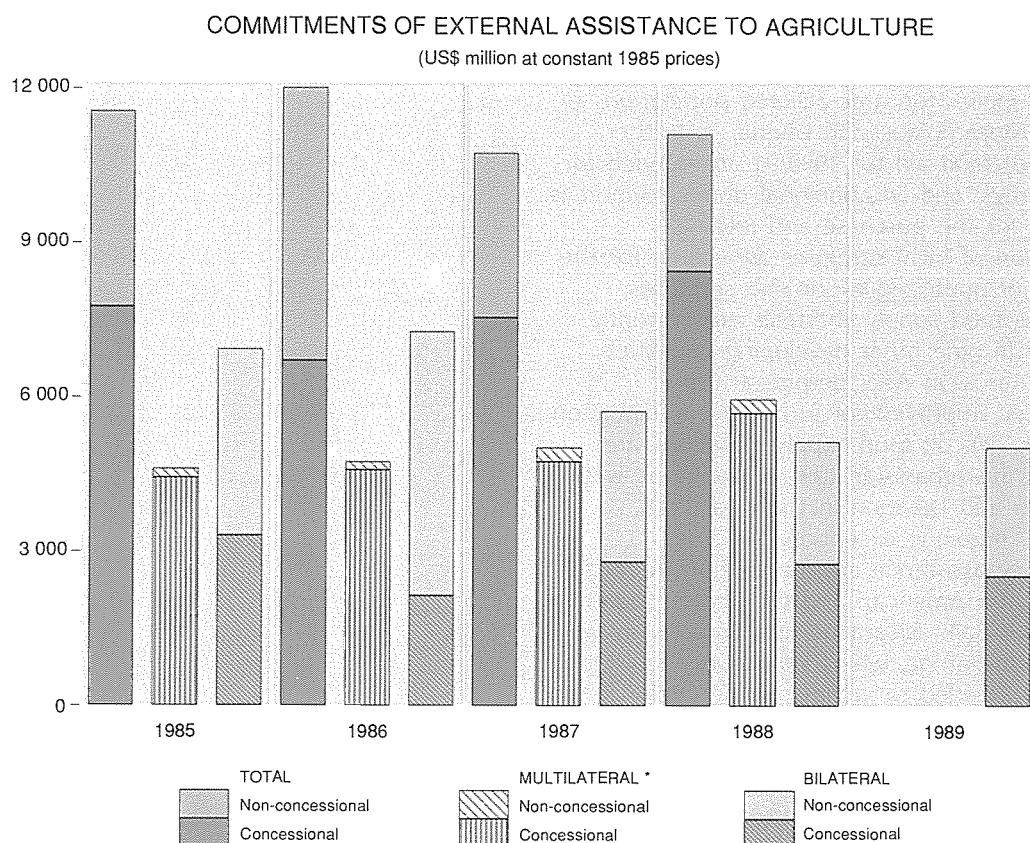
Overall commitments of external assistance to agriculture reached about \$16 billion in 1988, which is the latest year for which complete estimates are available. At current prices this amount was 10 percent more than in 1987 and 39 percent more than in 1985 — the latter level being virtually the same as in 1980-81. However, if these figures are deflated by prices of manufactured goods, in real terms there was a 4 percent decrease in 1988 commitments from the levels of 1985 (Figure 1.12). Nevertheless, there has been a steady increase in the estimated share of grants in total commitments, from 19 percent in 1980-81 to 24 percent in 1984-85 and 31 percent in 1987-88.

A notable feature since 1986 has been the sustained increase in bilateral commitments from the OECD's Development Assistance Committee (DAC) which more than offset a

decline in commitments from multilateral institutions. Thus, bilateral commitments accounted for over half of the total in 1988 compared to 40 percent in 1985. The increase in bilateral commitments from DAC/EEC was particularly pronounced in 1988 (29 percent more than 1985 and 19 percent more than 1987 at constant 1985 prices). This increase mainly reflected the very high commitment figure of \$2.3 billion from Japan in 1988 compared to only \$930 million in 1987. An increase of a similar magnitude was expected for 1989 since Japan intends to raise the share of its official development assistance in DAC's total, in line with its share in DAC countries' GNP. EEC lending also rose noticeably in 1987 and 1988 (\$1.2 and 1.3 billion respectively compared to a little over \$500 million in 1986).

Estimates for 1989 are only available for multilateral lending. At an estimated \$7.2 billion in 1989 — \$5 billion at constant 1985 prices — multilateral commitments of external assistance to agriculture fell by almost one-third in real terms from the high figure of 1986. World Bank

Figure 1.12



Source: FAO, Policy Analysis Division and OECD

* Not available for 1989



lending has remained stagnant at about \$4 million a year since 1987, despite an increase in lending to other sectors. The share of agriculture in both IBRD and IDA commitments has continued to fall. IBRD loans to agriculture accounted for 27 percent of the total in 1980/82 compared to only 17 percent in 1987/89. One reason for the relative decline of agriculture has been the growing importance of World Bank structural adjustment loans which often have an agricultural component.

Regional banks' lending sharply fell in 1989, mainly reflecting a very low level of commitments by the Inter-American Development Bank (IDB) (which does not include a number of large IDB loans that were approved in the course of 1989 but not signed by the end of the year). By contrast the African Development Bank (AfDB) considerably expanded its commitments to agriculture in 1989.

Disbursements of external lending to agriculture are estimated to have reached \$14.2 billion in 1988, 15 percent more than in 1987. (\$7.5 billion from multilateral, and \$6.7 billion from bilateral, sources.)

The World Bank and the Asian Development Bank (AsDB) accounted for much of the increase in multilateral disbursements in 1988. The World Bank's disbursements of \$4.7 billion reflected the high levels of commitments during 1986 to 1988 (totalling \$4.3 billion) for fast disbursing loans for agricultural adjustment programmes, credit and inputs. Commitments made in 1989 for credit and agricultural adjustment projects reached \$1.5 billion with \$267 million, or 18 percent of the total, disbursed in the same year. The remainder is expected to be disbursed in 1990 and 1991.

The sharp increase in the transfer of resources from the Asian Development Bank (from \$435 million in 1987 to \$885 million in 1988) was mainly owing to the expansion of quick disbursing programme loans and also to more effective delivery operations.

Multilateral disbursements of external lending to agriculture in 1989 are tentatively estimated at \$6.2 billion, approximately 17 percent less than the amount disbursed the previous year. Information for bilateral flows in 1989 is not yet available.

Recent developments in agency funding

The latest information for IFAD's Third Replenishment indicates a total amount of \$566.3 million. This is above the Second

Replenishment figure (1985-87) of \$540 million, but falls short of the target of \$750 million. The Third Replenishment is expected to be effective by 30 June 1990 and covers the period to June 1992.

The target of \$300 million for IFAD's Special Programme for sub-Saharan Africa was reached in January 1988. However, because of fluctuations in the dollar exchange rate, this total is currently about \$276 million. Most of this amount has been committed and the Programme is due to terminate by the end of 1990 unless a decision is taken on its continuation.

In December 1989, 32 countries agreed to provide SDR 11.68 (\$15 billion) to IDA (IDA-9) for the period 1 July 1990 to 30 June 1993. In addition, the repayments of funds lent in IDA's early years will provide an estimated SDR 1.6 billion in new commitments in the same period, bringing the total resources available to SDR 13.3 billion (\$17 billion). In comparison, IDA-8 totalled SDR 10.5 billion (\$13.4 billion). Priority areas for IDA funding will be: poverty reduction; support for sound macro-economic and sectoral policies and programmes, including further emphasis on institutional strengthening; and environmental programmes. Conventional investment should represent about 75 percent of all IDA lending, leaving around 25 percent for quick disbursing adjustment programmes.

The share of IDA-9 resources going to sub-Saharan Africa is likely to continue to be between 45 and 50 percent.

In March 1989 the IDB Board of Governors finally approved the proposal for the seventh General Increase in Resources by \$26.5 billion to a total of \$61 billion. The increase of resources will permit a lending programme of \$22.5 billion from 1990 to 1993. If the trend of allocating roughly 30 percent to agriculture is maintained, approximately \$6.5 billion would be available to agriculture in Latin America and the Caribbean during the next four years. The amount allocated to agriculture from 1986 to 1989 was \$2.5 billion.

Food aid

In 1989/90, food aid in cereals is estimated at 11.5 million tonnes compared to 10.2 million tonnes in 1988/89. The increase largely reflects additional allocations to Eastern Europe (mainly Poland and Romania) from the EEC, the United States and other donors. Total shipments to low-income food-deficit countries are expected



to be 8.6 million tonnes, only marginally above the 1988/89 level and about three million tonnes below the quantities shipped to them in 1987/88.

Contributions to the International Emergency Food Reserve (IEFR) in 1989 amounted to 390 000 tonnes of cereals and 34 000 tonnes of non-cereal food commodities — well short of the 500 000 tonne target. About 94 percent of the contributions in total cereals and all of those in non-cereals were channelled through the World Food Programme (WFP). As of May 1990 contributions to the IEFR amounted to 158 000 tonnes of cereals and 6 322 tonnes of non-cereal food commodities.

There were 46 WFP emergency operations in 1989 of which 29 were in Africa, five in Asia, eight in the Near East and four in Latin America for a total cost of \$93 million. More than two-thirds of the cost or \$63.5 million were from the IEFR and \$29.5 million from the WFP annual emergency allocation of \$45 million. About 88 percent of the total WFP emergency operations from all sources in 1989 were directed to refugees, returnees and displaced persons. As of end-April 1990, 11 WFP operations have been approved (nine in Africa, one in Asia and one in the Near East) at a total cost of \$23.9 million.

As of June 1990 pledges to WFP for 1989-90, by 77 donors, amounted to \$1 152.1 million or 82 percent of the pledging target of \$1 400 million, approximately the same proportion as during the same period in 1987-88. The total amount pledged includes \$875.2 million in the form of commodities and \$276.9 million in cash, or 24 percent compared with an expected cash component of at least one-third of total contributions, as stipulated by the WFP general regulations.

The preliminary FAO estimate of total food aid in cereals in 1990/91 is 9.8 million tonnes, about 1.7 million tonnes lower than the previous year, when exceptionally high shipments were made to Eastern European countries. No allocations to these countries are currently envisaged in 1990/91. Food aid in cereals to low-income food-deficit countries are expected to increase by about 4 percent from the previous year, though still remaining well below the levels provided to these countries during 1984/85-1987/88. Food aid in cereals would represent about 17 percent of total cereal imports by low-income food-deficit countries, the same as in the previous year, compared to an average of about 20 percent in

the previous five years. In 1990/91 a higher proportion of shipments could be in the form of wheat and rice, in view of the decline in world prices of these commodities *vis-à-vis* those of coarse grains.

Budgetary allocations for food aid programmes of major donors for 1990/91 are expected to remain at about the same level as in the previous year. Funding for the United States' PL 480 programme for fiscal year (FY) 1990/91 is set at about \$1.5 billion, (\$846 million under Title II and the remainder under Title I), slightly lower than for FY 1989/90, but the volume of cereals to be shipped could be higher because of lower commodity prices. However, the United States' food aid in maize and sorghum under Section 416, which totalled over 1.6 million tonnes in FY 1989/90, is likely to be 1.5 million tonnes (500 000 tonnes of maize and one million tonnes of sorghum) during FY 1990/91. Thus, total shipments by the United States from both PL 480 funding and Section 416 would amount to about six million tonnes in 1990/91 — roughly the same level as in 1989/90.

Food aid in cereals by the EEC during 1990/91, financed by the regular food aid budget, is also expected to be maintained at the previous season's level of about 1.7 million tonnes (grain equivalent). In 1989/90 an additional 1.65 million tonnes were extraordinarily shipped to Eastern European countries, which were financed outside the food aid budget. Substantial amounts of EEC food aid in cereals will continue to be in the form of triangular transactions.

Shipments of food aid in cereals in 1990/91 from Canada, Japan, and other donor countries are also expected to be maintained at the level of the previous year.

As of July 1990, contributions from 13 donors to the IEFR amounted to 168 000 tonnes of cereals and 9 000 tonnes of non-cereal food commodities. Of these contributions, 120 000 tonnes of cereals and 9 000 tonnes of non-cereal commodities have been pledged for multilateral channelling through the WFP. In addition to IEFR contributions, 417 000 tonnes of cereals and 42 000 tonnes of other food commodities have been pledged under the subset of the WFP regular resources for meeting the requirements of protracted refugee situations.

As of July 1990, 64 000 tonnes of cereals and 5 000 tonnes of other food commodities have been allocated to 22 WFP emergency



operations in 19 countries. Of these, 32 000 tonnes were allocated to assist refugees and displaced persons, 21 000 tonnes to assist victims of drought and crop failure, while the balance was for victims of sudden natural disasters. In addition, to date in 1990, 391 000 tonnes of cereals and 38 000 tonnes of other food commodities have been allocated to 22 protracted refugee operations against resources which have been made available for that purpose.

FISHERIES

Production

In 1988, world fish production continued the strong growth which has characterized the period since the mid-1970s. The world fish harvest in 1988 was almost 98 million tonnes, or nearly 5 percent higher than the combined catch and aquaculture production of the previous year (Figure 1.13). While recorded higher catches were widespread, larger landings of small pelagic species in the southeastern Pacific and increased production by China were the principal contributing factors to the overall increase.

Catches of small pelagics by Chile, Ecuador and Peru had been unfavourably affected in 1987 by the change in the El Niño current. In 1988, however, catches by these countries increased by over 2.5 million tonnes. Peru was the principal beneficiary of the fishery, its catches increasing by almost 45 percent to over 6.6 million tonnes. These increased catches enabled Peru to increase its fish-meal production by over 50 percent, matching the Chilean production of 1.1 million tonnes. In Chile, catches were adversely affected by the movement of fish stocks from the northern to the southern part of the country and, consequently, increased by the relatively small margin of 8 percent. Nevertheless, catches reached the second highest level ever of 5.2 million tonnes.

Fish production in China increased by a further one million tonnes, a consequence of the continued development of aquaculture as in the previous year. Elsewhere in Asia, Japan's catches of 11.9 million tonnes were only slightly higher than in 1987. The country nevertheless maintained its position as the leading fishing nation. Several other Asian countries reached record levels of production.

Although total output by African countries showed a further increase, catches off southern and southwest Africa fell by over 9 percent to 1.3 million tonnes. As a result, production of both fish-meal and canned fish declined.

The USSR maintained its catch at about the level of the previous year, i.e. 11.3 million tonnes. The stability of United States production at 5.9 million tonnes was in marked contrast to that of the previous year when it had increased by 16 percent as a result of increased operations in the northwest Pacific. New Zealand production, however, boosted by



expansion of its national operations and through joint venture enterprises, expanded by a further 17 percent. Canadian catches increased by some 34 000 tonnes to 1.6 million tonnes, but catches of the higher-priced ground fish declined slightly. Output in the Scandinavian and EC countries remained, in aggregate, at about the same level as in the previous year. Countries where there was a fall in production included Norway, where there was decline in cod catches, and the United Kingdom; countries recording increases included Denmark, Iceland, France and Spain.

Primarily, as a result of the higher catches of small pelagic species, the greater part of the overall increase in fish production in 1988 was used for reduction to fish-meal. Very favourable fish-meal/soymeal price ratios and low stock levels encouraged a marked growth in fish-meal production, which rose by some 400 000 tonnes. Therefore, although supplies of fish for direct human consumption continued to grow in 1988, the rate of increase (4.3 percent) was less than the overall expansion in total world production (Table 1.8).

As in the previous year, aquaculture continued to make an important contribution to fish and shellfish supplies, especially for carp, tilapia, eel, trout, salmon, molluscs, shrimps and prawns. Aquacultural production grew particularly rapidly in Asia.

Trade

Short supplies of some important species and sustained demand further boosted the value of

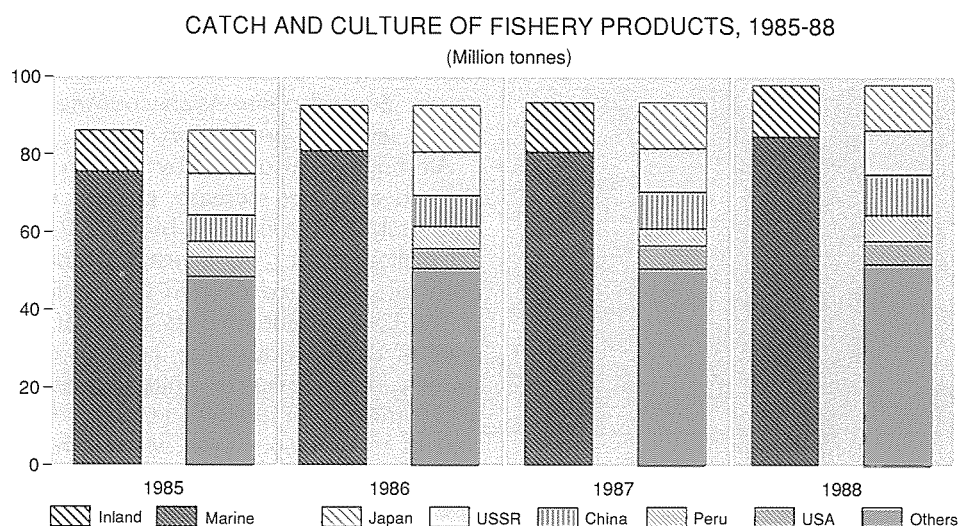
fish prices and international fish trade (Table 1.9). Available data indicate that the value of fish trade in 1988 rose by some 12 percent to reach well over \$31 billion. Exports by developing countries exceeded \$14 billion, double those achieved in 1984.

The United States became the world's leading exporter of fishery products in 1988; taking into account the \$220 million received for trans-shipments to foreign vessels in the North Pacific, the United States achieved a remarkable 33 percent growth in fish exports, the total value of which exceeded \$2.4 billion. Other major exporters also significantly expanded their sales (Canada +5.5 percent, Denmark +5.9 percent, Republic of Korea +18.5 percent, Thailand +29.3 percent and Norway +9 percent).

Japan was again by far the world's major importer of fishery products, with its purchases rising by a further 28 percent in value to a total representing almost one-third of world fish trade.

Imports by the United States declined in both quantity and value but all other major importing countries increased their purchases significantly. Notable among these were France (+10.5 percent) whose imports reached a level more than twice their value of the early 1980s, Spain (+30 percent) and the United Kingdom (+14 percent). Thailand (+70 percent) and Taiwan, Province of China (+18 percent), also merit mention because their fish imports have increased rapidly in recent years as an input for export-oriented fish processing industries.

Figure 1.13



Source: FAO

BOX 1.3

Shrimp farming — a success for aquaculture?

One of the undoubted highlights in the recent history of aquaculture is the growth in production of shrimp, mainly the *Peneus* species. In tropical coastal land, using simple earth ponds, tidal or pumped water supplies, local or hatchery-reared seed, and simple fertilization or feeding, a marketable crop of 15 to 30 g shrimp can be reared in as little as three or four months. Annual yields range from 200 to 500 kg/ha in simple extensive tidal ponds using natural productivity, to upwards of ten tonnes/ha in modern intensive systems with complete feeds, aeration and regular water exchange. Sold on the international markets of Japan, the United States and western Europe, shrimp is almost a perfect export, using basic local resources to bring in foreign exchange. Recognizing its potential, FAO has played a key role in initiating and supporting the industry with inputs in technical development, training, information services and institutional support.

In production terms, the result has been impressive. In 1981, cultured shrimp accounted for 2.1 percent of the total world shrimp harvest, while in 1988 this share was estimated to have risen to 22 percent. Output in 1988 reached some 450 000 tonnes, corresponding to a farm-gate market value of perhaps \$2.5 billion. Much of this originates in the developing world, particularly in Southeast Asia and Latin America. In Bangladesh, shrimp is the second most important export commodity and much of it is from farming. In the Philippines, about 40 000 ha of ponds are producing shrimp; China was estimated to produce 100 000 tonnes in 1988, an increase of some 50 percent over the previous year. In Latin America, cultured shrimp accounts for almost half the total shrimp harvest in the region. Ecuador, now the leading producer of

farmed shrimp in the Western Hemisphere, supplied 70 000 tonnes in 1988, more than 80 percent of the region's production.

As a result of this development, rural coastal land of limited agricultural potential, until recently regarded as of little value, has acquired a new status. There are also new prospects for income and employment; traditional brackish water fishpond operators have a new source of income; fishing communities can get involved in catching seed shrimp and broodstock; and farms and hatcheries in rural areas offer local employment and training for young people. Furthermore, there are new service industries; in Southeast Asia, "backyard" hatcheries have provided excellent opportunities for small family-based businesses whose earnings give stimulus to local economies.

Yet much of the potential, not least the current sustainability, of the industry is under question as, after a decade of increasingly rapid and profitable growth, shrimp farming faces the problems of its almost unrestrained expansion. Markets show increasing signs of saturation; in 1988 and 1989, high inventories and abundant supply pushed prices to levels at which many producers faced losses, and in some cases had to suspend production. In Taiwan, over 1987-88, production dropped sharply because of serious disease losses associated with degraded environmental conditions resulting from highly intensive production methods. Ecuador, with less intensive systems, had similar problems one year later. As yet there are few treatments available.

In many areas, rising demand for feed materials puts pressure on supplies, including low-value fish, which might be available for direct consumption. The widespread clearing of mangrove areas and the destruction of important habitats — not least for larval marine fish and shrimp — the erosion of coastal margins, and the salinization of coastal flood plain soils are cause for increasing concern. As production moves

increasingly toward larger-scale entrepreneurs or corporate groups, traditional communities and their activities become displaced. While the industry was profitable and expanding, these factors might have been less noticeable; under present circumstances, however, the wider costs of the industry must be questioned.

If shrimp farming is to bring real and continuing benefits to producer countries, means will have to be found to stabilize the industry, increase its efficiency and reduce its adverse impacts. This will require the right kind of market and technical support, planning and regulatory advice, particular care over resource management, and social and environmental assessment. These concerns are already starting to be addressed in current FAO projects in Asia and Latin America; while support for production continues, the emphasis is shifting more strongly toward ensuring that shrimp farming has a sound and well-structured future.

TABLE 1.8. Disposition of world catch, 1985-88

					Change			
Item	1985	1986	1987	1988	1984-85	1985-86	1986-87	1987-88
	(. '000 tonnes)				(. %)			
World	86 257	92 612	93 414	97 985	2.9	7.4	0.9	4.9
For human consumption	60 984	65 777	67 836	70 755	2.5	7.9	3.1	4.3
Marketing fresh	16 381	19 498	20 908	23 015	5.3	19.0	7.2	10.1
Freezing	20 388	21 784	22 107	22 740	1.2	6.8	1.5	2.9
Curing	12 745	13 045	13 191	13 220	4.5	2.4	1.1	0.2
Canning	11 470	11 450	11 630	11 780	−1.2	−0.2	1.6	1.3
For other purposes	25 273	26 835	25 578	27 230	4.0	6.2	−4.7	6.5
Reduction	24 273	25 835	24 578	26 180	3.7	6.4	−4.9	6.5
Miscellaneous purposes	1 000	1 000	1 000	1 050	11.1	—	—	5.0

Source: FAO, Fisheries Department.

TABLE 1.9. Trade in fisheries, 1985-88

Item	1985	1986	1987	1988	Change			
					1984-85	1985-86	1986-87	1987-88
	(..... \$ million)				(..... %)			
World								
Exports	17 382	23 072	28 127	31 597	7.1	32.7	21.9	12.3
Imports	18 602	24 226	30 508	35 096	8.2	30.2	25.9	15.0
Total developing countries								
Exports	7 698	10 514	12 819	14 365	7.3	36.6	21.9	12.1
Imports	2 467	3 028	3 708	4 596	0.5	22.7	22.5	23.9
Total developed countries								
Exports	9 684	12 558	15 308	17 232	6.8	29.7	21.9	12.6
Imports	16 135	21 198	26 800	30 500	9.5	31.4	26.4	13.8
Major exporters								
United States	1 162	1 481	1 836	2 442	15.9	27.5	24.0	33.0
Canada	1 359	1 752	2 092	2 207	6.8	28.9	19.4	5.5
Denmark	953	1 341	1 751	1 854	6.0	40.7	30.6	5.9
Korea, Rep.	797	1 171	1 506	1 784	1.9	46.9	28.6	18.5
China (Taiwan Province)	956	1 422	1 674	1 695	15.9	48.7	17.7	1.3
Thailand	675	1 012	1 261	1 631	6.6	49.9	24.6	29.3
Norway	922	1 171	1 475	1 608	2.1	27.0	26.0	9.0
Major importers								
Japan	4 744	6 594	8 308	10 658	12.8	39.0	26.0	28.3
United States	4 052	4 785	5 662	5 389	9.5	18.1	18.3	—4.8
France	1 040	1 510	2 022	2 234	6.6	45.2	33.9	10.5
Italy	985	1 265	1 738	1 894	32.7	28.4	37.4	9.0
Spain	412	722	1 322	1 716	5.6	75.2	83.1	29.8
UK	941	1 216	1 387	1 577	7.5	29.2	14.1	13.7
Germany, Fed. Rep.	820	1 113	1 270	1 411	2.4	35.7	14.1	11.1
	(..... %)							
Export as share of catches								
Total developing countries	8.9	11.4	13.8	14.9				
Total developed countries	11.2	13.3	16.5	17.6				

Source: FAO, Fisheries Department.



As regards fish availability, there is an increasing contrast in the overall trends and patterns between the developed and developing countries, particularly in parts of Africa and Asia.

In general, for the developed countries, the situation is one of relative abundance of supply and stable or even declining real prices for a number of products. Although total allowable catches of the preferred demersal species in the northeast Atlantic have been severely reduced in recent years, low-price substitutes (for example, hake and Alaska pollack), have become increasingly available, except in countries where they are subject to high import barriers. Prices of aquaculture products, such as salmon and shrimp, are also becoming increasingly attractive to consumers, while oversupply and, consequently, falling prices of squid are benefiting such large importing countries as Italy and Japan.

For a number of developing countries, particularly in Africa and Asia where fish often is an important component in the diet and a major source of animal protein, per caput consumption of fish is declining in response to rising prices. The preferred species are becoming increasingly unaffordable by the lower-income groups. Inadequate domestic supplies of fish sometimes result from increased pressure on resources by industrial and semi-industrial vessels fishing for export to developed countries, directly or through feed fishing for aquaculture production oriented to export markets. Although the foreign exchange so earned can indirectly contribute to increasing food supply if used for financing food imports, the immediate effect is inevitably to reduce fish supplies for domestic consumers. Additionally, such fishing frequently diminishes the catches of the artisanal subsector, the overall economic benefit of which is often underestimated by governments. An important policy issue is, therefore, the proper evaluation of all economic and social aspects involved in promoting fish consumption as opposed to promoting fishery activities as a source of foreign exchange.

Outlook

Some slight expansion in the catches of marine fish can be expected provided that correct management practices are applied by the fishing nations. Strict management is also necessary to avoid loss of catch and overexploitation. Some reduction in fish losses is

possible as a result of better utilization and improved fish handling and processing. The long-term and sustainable growth in overall fish production, however, appears to depend heavily upon the continued development of aquaculture. In particular, there appear to be opportunities for further significant increases in aquaculture output by China which already accounts for over one-half of total world production in this sector. There is clearly scope for additional growth in both yields and areas under cultivation. A major constraint may be the availability of feed. Aquaculture is becoming an increasingly significant consumer of fish-meal: it is estimated that some 650 000 tonnes of high-quality fish-meal involving the reduction of over three million tonnes (live weight) of fish were used in aquaculture operations in 1988.

Preliminary indications for 1989 suggest that there were further increases in production and trade. One of the most important positive influences on production in 1989 was aquaculture, because it is expected that China's rapid growth in freshwater aquaculture will have continued into 1989 and 1990. In 1989, however, most of the North European countries recorded lower catches while global catches of small pelagics for reduction to fish-meal and oil remained at about the same level as the previous year, a further decline in the production of fish-meal in southern Africa being offset by an increase in Chile.

Looking further ahead, the economic changes currently taking place in Eastern European countries may result in the development of new markets for fresh and frozen fish.



FORESTRY

Production and trade

In 1989 some 3 460 million m³ of *roundwood* were produced in the world, 55 percent of which was produced in the developing world (Figure 1.14). *Fuelwood* is the largest single component accounting for 1 975 million m³. About 1 520 million m³ of this total is produced and consumed in the developing countries as an energy source for large parts of the rural population. It is estimated that fuelwood represents 18 percent of the energy needs of developing countries, with this share reaching 80 to 85 percent in some African countries. The production of fuelwood in the developed countries grew rapidly in the late 1970s, but has recently declined because of decreasing fossil fuel prices.

The *pulp and paper sector* continues to expand with all of the main producing countries setting record levels in production and capacity utilization in 1988. Trade was strong as domestic demand rose in some major importing countries, and prices for most pulp and paper grades significantly increased.

The sector continued to grow in 1989, although at a slower pace than previous years, with European production and consumption reaching new records for almost all grades. The European fibre market remained tight, however, as indicated by a 25 percent increase in imports of waste paper in 1989. Growth in the production of *pulp and paper* was particularly strong in Japan (9 percent). On the other hand, the rapid growth of the sector in North America during 1986-88 ended in 1989 with output decreasing slightly from the record level reached in 1988.

The pulp and paper industry also continued to expand in developing countries, although at a much slower rate than in previous years. China's production of paper and paperboard grew by only 1 percent in 1989.

The *mechanical wood products sector* recorded another year of expansion in 1989, following the good performance of 1988. Most of the growth occurred in western Europe where very mild winter conditions in 1988 and 1989 had a favourable effect on the level of housing starts and resulted in a considerable increase in production and consumption of mechanical wood products. Production of coniferous sawnwood, the main wood material used by the building industry, is estimated to

have reached the historical record of 56.5 million m³ in 1989, some 3 percent above the previous record of 1980.

Output in most East European countries was stagnant or declining because of the difficulties in introducing economic reforms and restructuring industries. In North America the steady growth of the mechanical wood product sector since 1983 ended in 1988, with building activity dropping 10 percent. The decline in output continued in 1989, with the main exceptions of two wood-based panel products, particle board and medium-density fibreboard. The decline of North American consumption was only partly compensated by the steady growth of exports from the United States in 1988 and 1989 as a result of the weakening of the US dollar. Japan experienced a marked increase in its wood housing activity in 1989, after a marginal decrease in 1988. Imports of mechanical wood products increased in 1989, reflecting notably expanded imports of sawnwood and wood-based panels, both from temperate and tropical origins.⁹

Japan's imports of tropical logs grew slightly in 1989, after declining in 1988, principally to replace a low level of inventories.

After years of sustained growth, developing country production of mechanical wood products decreased in 1988 but resumed expansion in 1989. Countries with modern export-oriented industries benefited from greater world demand for mechanical wood products.

Exports of tropical timber, an important source of foreign exchange for some tropical developing countries, expanded by about 2.5 percent in volume in 1988. Their total value reached \$7.6 billion in 1988, 10 percent above 1987, with an increase in the share of the higher-value processed products. Early estimates for 1989 point to further expansion of this trade, with a strong growth in western Europe's imports of tropical sawnwood from Southeast Asia; and a further increase in exports of plywood from Indonesia, which may exceed the 8 million m³ mark, most of which will be imported by Japan.

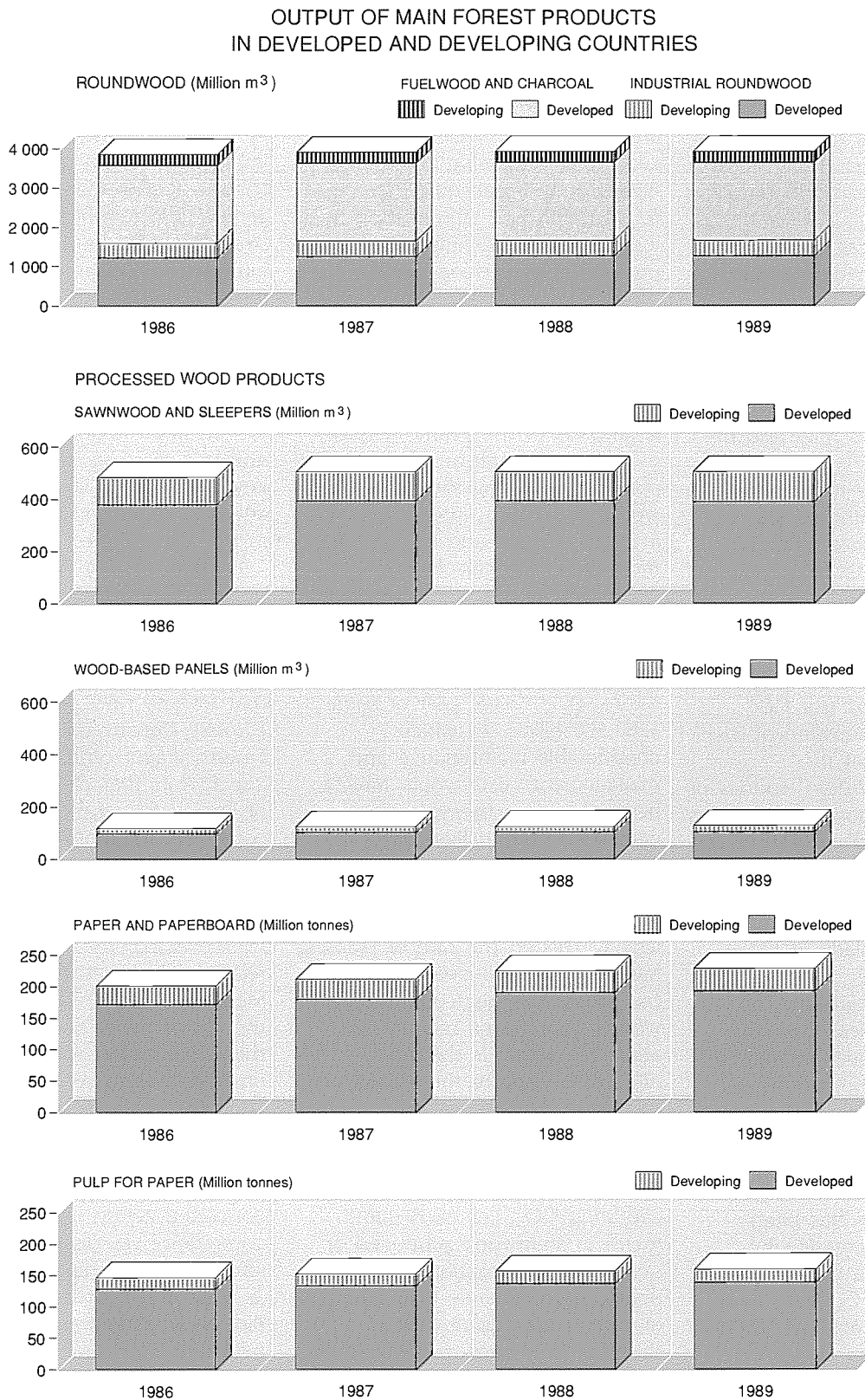
Current issues

Concern for the tropical forests. World public opinion is becoming increasingly concerned

⁹ Japan's imports of sawnwood increased twofold in the period 1978-1989 but imports of plywood grew 20 times during the same period, indicating growing import demand for manufactured wood products.



Figure 1.14



Source: FAO

BOX 1.4

Forestry and climate change**The problem, extent and causes**

The so-called greenhouse gases, which are composed mainly of carbon dioxide (CO₂), methane (CH₄) and nitrogen compounds (N₂O, NO, NO₂), are major regulators of global temperature. A buildup in the atmosphere of these gases has been clearly documented over recent decades and a doubling of CO₂ has been predicted by the middle of the twenty-first century. This may cause the Earth's climate to become significantly warmer, with the main effects being felt at higher latitudes. Changes in rainfall and rainfall patterns may also be expected.

The modelling of these potential changes is very complex, and the rate and magnitude of actual changes have yet to be determined. However, it is thought that the average global temperature may rise between 1 and 5°C during the next century.

The primary source of CO₂ buildup is the combustion of fossil fuels, which account for approximately 5.2 billion¹ tonnes of carbon per year. However, changes in land use (shifting cultivation and other forms of conversion of forest to agriculture) which are eliminating considerable amounts of biomass, particularly in the tropical forest areas, also contribute to this buildup. The amount of CO₂ released during deforestation has been estimated at one to two billion tonnes per year; the amount released from soils in the course of this process is greater than that from the vegetative cover. Worldwide, atmospheric carbon has been estimated to be increasing by approximately three billion tonnes annually.

Global warming of the magnitude predicted above would

also affect the geographic coverage of forests and woodlands, and the rate of growth and production of their component species. It may also lead to changes in the composition of species, shifts in genetic variation patterns and loss of biological diversity in forests and other natural ecosystems.

On the other hand, forests, plantations, and trees in non-forest areas act as an efficient sink for carbon. Considerable amounts of carbon may be absorbed by reforestation and afforestation by increasing the stocking and production of existing forests through sound forest management practices and by more extensive use of durable wood products.

Although it would seem feasible, in theory, to capture temporarily large parts of the yearly increase of carbon through accelerated tree planting, capturing the full excess would require an unrealistic input in terms of land and capital. The most optimistic calculations estimate that this would require the establishment of some 500 million ha of high-yielding plantations in the immediate future, at an initial cost of some \$200-500 billion, to which considerable maintenance and management costs would have to be added. As a measure of comparison, 1.1 million ha of plantation were established successfully per year in the 1980s in the tropical world (excluding China). Though the rate of planting has significantly increased during the 1980s, it is not commensurate with the total area mentioned above — which is the area needed to capture the excess carbon in the atmosphere.

Keeping the above facts in mind, however, it is clear that forestry can contribute substantially to capturing CO₂. For each cubic metre of stemwood produced or saved from destruction by fire or decay, approximately 0.26 tonnes of carbon are captured. It is therefore important to: diminish the rate of deforestation; increase the rate of afforestation/reforestation; improve the management of natural regeneration of trees and

shrubs; improve the management and productivity of existing forests, including intensive protection against fire, diseases and insect pests; and increase the conversion of mature wood to durable wood products.

FAO's role and programme

FAO's contribution in this field resides first and foremost in its role as coordinating agency for the implementation of the Tropical Forestry Action Plan. TFAP, the general aim of which is to strengthen and harmonize international cooperation in tropical forestry, constitutes a forestry response to climate change at national as well as regional and global levels. It promotes the sustainable management of tropical forests, afforestation/reforestation and tree planting, all of which are key components in limiting the amounts of carbon dioxide present in the atmosphere.

In order to help foresters and development planners in FAO member countries gain a better understanding of the complex issue of global warming and the role that forestry may play, FAO's Forestry Department is preparing a Forestry Paper on Climate Change and Forests that reviews the status of knowledge as of 1989. The paper will be published during the autumn of 1990, with a shorter version to follow later.

A panel, consisting of nine high-level experts from forestry and related fields, met in Rome in March 1990 to review a draft of the above paper and to provide the Organization with guidelines on how best to serve its member countries in the field of climatic change and forests. The panel recognized that predictions on future climate change merited concerted action by the world community viz. dissemination of information on the role of forests as sinks and sources of carbon dioxide, and their potential role in mitigating climatic changes; protection and buffering of forests and trees against destruction and depletion caused by such changes; and adoption of global and

¹ 1 billion tonnes = 1 000 million tonnes
= 1 gigaton = 1 petagram.

national strategies aimed at better scientific understanding of the processes involved. However, it was stressed that the present level of knowledge could not justify massive and costly action for the sole purpose of sequestering CO₂.

The Forestry Department also collaborates in the work of the International Panel on Climate Change (IPCC), and actively participated in meetings of its Working Group III on response strategies to the climate scare.

about the destruction of tropical forests. Deforestation may result in many forms of serious and far-reaching environmental damage, such as the loss of the genetic resources of unique ecosystems, the degradation of soils, the acceleration of soil erosion, decreased soil fertility and changes in water quality and waterlife habitats. In addition, the lives of indigenous forest dwellers may also be profoundly altered.

Alarm has been expressed about the possibility of deforestation contributing significantly to the global warming of our planet through the release of carbon dioxide into the atmosphere or by reducing the absorptive capacity of the woody biomass.

Governments of tropical countries have responded to this worldwide concern through a number of recent initiatives.

In May 1989, the governments of the eight countries situated in the Amazonian Basin adopted a joint declaration of the Amazon which aims to strengthen concerted action and cooperation within the context of the Amazon Cooperation Treaty. The declaration expresses strong commitment to the conservation and sustainable management of forests and other natural resources of the Basin, to the benefit of local communities.

The countries concerned have formed a Special Commission on the Environment for the Amazonia with the function of designing joint programmes to study measures for environmental management favouring the sustainability of Amazonian natural resources; to promote research; develop methodologies; evaluate environmental impact; obtain financial resources and technical cooperation; seek compatibility of environmental legislation; and exchange information on the protection of the environment in the Amazon region.

Some results of the recent efforts of the region's governments are already apparent. In 1989, the deforestation rate of the Brazilian Amazonia was slowed down considerably, mainly because of heavy rains, but also because of tighter restrictions placed on forest clearing by the relevant authorities, and the withdrawal of subsidies.

In 1989, an international mission was mounted under the auspices of the ITTO to assess the sustainable utilization and conservation of tropical forests and their genetic resources as well as the maintenance of the ecological balance in the state of Sarawak, Malaysia. On the basis of the latest assessment

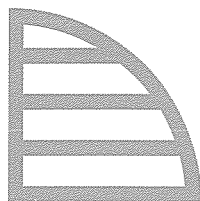


of forest resources in the Philippines, which reveals the reduction of forest area to below 40 percent of the land area, that country's parliament is proposing a bill which would restrict logging to levels essential for domestic processing. In Thailand, where serious floods were attributed to excessive and uncontrolled logging, a ban on logging has been imposed by the government. In Laos, strict legislation has been introduced to eliminate uncontrolled logging and slash-and-burn practices.

Forestry in Europe. In May 1989, the Council of European Communities adopted a new Forestry Action Programme centred on four main objectives: protection of forests; development of

forestry within the framework of the development of rural and backward regions; production and marketing of forest products; and support for afforestation of agricultural land as an economic alternative to agricultural surpluses. Coordination is to be organized through the creation of a Permanent Committee on Forestry and a system of forestry information. The forestry sector is important in the Community as it is estimated to employ more than two million workers. Forests cover some 20 percent of land area and produce about 115 million m³ of roundwood annually. Domestic production covers approximately 50 percent of annual consumption by the member countries of the Community.

PART TWO
REGIONAL REVIEW



REGIONAL REVIEW

Developing country regions

This issue of *The State of Food and Agriculture* introduces a new approach to the coverage of the developing country regions. In order to review agricultural trends and issues with more insight and focus than an analysis at the aggregate regional level permits, the discussion centres on the experience of selected subregions: southern Africa, Pacific Asia, the Caribbean, and middle-income countries in the Near East. Future issues of this publication will successively cover other developing country subregions.

The subregional country groupings are used for analytical purposes only and do not necessarily refer to any territorial, political or institutional entity.

AFRICA

Overview

Africa's GDP growth accelerated somewhat in 1989 to 2.9 percent, compared with 2.4 percent in 1988. In per caput terms, the 1989 increase was negative but was nevertheless the second best performance since 1980. Indeed, the economic situation in sub-Saharan Africa appears to be desperate. Estimates vary as to the degree of decline undergone during the "lost" decade of the 1980s but, according to International Monetary Fund (IMF) estimates, real per caput GDP has fallen a cumulative 6 percent since 1981, following a previous percentage point decline during 1972-81. According to the African Development Bank (AfDB), Africa's real per caput income in 1989 was about 15 percent lower than in 1980. Whatever the figures are, the reality is significantly lower standards of living, a decaying infrastructure and smaller shares of world markets. Africa's total debt levelled off in 1988-89 at slightly less than \$200 billion according to IMF estimates, but its debt service, having declined in 1987, rose again to 25 to 27 percent of its exports of goods and services — returning to the high levels of the mid-1980s. The Economic Commission for Africa (ECA) estimates that the net outflow of resources from Africa amounted to \$5.5 billion in 1989.

Against this gloomy background, Africa's volume of export trade picked up in 1988 and 1989, permitting some growth in imports which had collapsed in the early to mid-1980s. Benefiting from more favourable weather conditions and economic circumstances in those countries determinedly carrying out policy

reforms, Africa's agriculture has performed relatively better in the late 1980s, although growth in agricultural output still lags behind that of population.

Challenges and opportunities in southern Africa

Southern Africa provides a contrasting picture of formidable challenges and developmental opportunities. The challenges are a soaring population growth rate; continuing wars and civil strife; and widespread and grave economic problems. The opportunities are a rich natural resource base; a capricious but generally favourable climate for a wide range of agricultural activities; the presence of a relatively well developed transport infrastructure; and the makings of a functional institutional framework in some countries.

The southern African subregion has a unique opportunity for development arising from the gaining of independence of Namibia, the possible cessation of hostilities in Angola and Mozambique, and the general scaling down of the confrontation with the Republic of South Africa (RSA). The ECA estimates that the nine SADCC states suffered a loss in GDP of about \$60 billion in 1980-88 owing to the destabilization activities of the Republic of South Africa, i.e. more than double these countries' GDP in 1988.¹ The opportunity for development would lie in the restoration of

¹ The nine states of the Southern African Development Coordination Conference (SADCC) are Angola, Botswana, Mozambique, Malawi, Lesotho, Swaziland, United Republic of Tanzania, Zambia, Zimbabwe. The source of these estimates is *South African destabilization: the economic cost of frontline resistance to apartheid*. UN-ECA, 1989.



stability in the subregion, the expected inflow of capital, the opening up of markets, and significantly reduced transport costs through the reopening of lower-cost rail links with the coast.

This section briefly reviews current agricultural and development issues in two countries which would be directly affected by such favourable events: Zambia and Zimbabwe.

Zambia. The economic and agricultural sector policy changes announced in mid-1989 marked a turning point in the problem-strewn path of Zambia's economic progress. A revaluation of the currency and price controls had been introduced as part of the May 1987 package of policies, the New Economic Recovery Programme (NERP), which marked the

BOX 2.1

Africa

"Out of Africa, always something new." So wrote Pliny, but some 2 000 years later, the publication of two reports has illustrated the vicissitudes and frustrations that Africa is enduring in modern times. In late 1989, the World Bank painted a bleak picture of sub-Saharan Africa which was threatened to become "marginalized" from the mainstream of global economic activities.¹ Sub-Saharan Africans were almost as poor as they were 30 years previously, the region's share of world markets had fallen by almost one-half and deindustrialization was becoming apparent. In April 1989, the joint meeting of African ministers of economic planning and development and ministers of finance had adopted a framework for analysis and strategy implementation which was a sober assessment of the ongoing economic crisis, a blueprint for future action and a basis for constructive dialogue between African countries and their development partners.²

A central theme of the World Bank report is the need for good governance, an efficient public service, a reliable judicial system and an administration which is accountable to the public. People

must be given greater responsibility for improving their lives, grassroots organizations must be fostered and the informal sector promoted. As the world enters a new technological age, if sub-Saharan Africa is not to become more marginalized, it must improve science and technology and training and form new partnerships with the appropriate firms and research institutions, underlining the report's emphasis on the need to promote private sector activities in Africa. Savings and investment must be raised and, in the context of a rapidly growing population, a population policy must become an integral part of development. Increased productivity is needed in agriculture and elsewhere in the economy as well as improved infrastructure, stronger incentives and less, but better, government.

The genesis of AAF-SAP was the increasing concern among African policy-makers, not only with respect to the relevance of stabilization and structural adjustment programmes (SAPs) to Africa's long-term development objectives, but also with respect to its social, economic and financial impacts. Such programmes had been undertaken by more than 30 African countries since 1980. An assessment of them led to the conclusion that although they aimed at restoring economic growth, usually by achieving fiscal and external balances and permitting market forces to allocate resources, such objectives could not be achieved without

¹ *Sub-Saharan Africa: from crisis to sustainable growth.* World Bank, 1989.

² *African alternative framework to structural adjustment programmes for socio-economic recovery and transformation.* (AAF-SAP). ECA, 1989.



abandonment of the IMF programme of 1985. Since mid-1989, policies shifted back toward the IMF conditions, opened up the way for discussions with the Bretton Woods Institutions and led to renewed funding from bilateral and other multilateral institutions within the framework of the Fourth National Development Plan 1989-93, launched in January 1989. The

new policy orientation involved a drastic devaluation of the kwacha to ZK16 = \$1 from the ZK10 = \$1 level set in November 1988, and the decontrolling of consumer prices. The introduction of a dual exchange rate system in February 1990 effectively resulted in a further massive devaluation of the kwacha. The market rate fell to ZK40 = \$1 while the official rate

addressing the fundamental structural bottle-necks found in African economies. Hence, at the beginning of 1988, with the financial support of the United Nations Development Programme (UNDP), ECA began work on an alternative conceptual framework for SAPs that would address both the adjustment and structural problems facing African economies. The exercise was strongly supported by the 43rd Session of the UN General Assembly during the mid-term review of the UN Programme of Action for Africa's Economic Recovery and Development (UN-PAAERD).

The result of a lengthy process of consensus-building among African economic policy-makers, the main thrust of AAF-SAP is its holistic approach whereby the macro-economic framework, the policy measures and the strategies for their implementation take into account the dynamic relationship between economic adjustment and transformation. The aim is to remove any conflict between structural adjustment and long-term development, and to encourage the mobilization of domestic resources for investment as well as the creation of an appropriate environment to ensure a balance between the public and private sectors. The core of this alternative framework is the recognition of the human dimension in development which critics of orthodox SAPs claimed was not adequately covered by SAPs and thus led to increased

marginalization of underprivileged groups of the population. This recognition implies the empowerment of people, the equitable distribution of income and wider democratization of the decision-making and implementation processes. AAF-SAP is not a rigid framework to be applied uniformly to all African countries, but could be used to design, implement and monitor national programmes of structural adjustment along with transformation and growth.

AAF-SAP was formally adopted by the ECA Conference of Ministers in April 1989.³ It was subsequently submitted to the Council of Ministers of the Organization of African Unity (OAU), the Ninth Conference of Heads of State or Government of Non-aligned Countries, the Economic and Social Council of the United Nations (ECOSOC) and the 44th Session of the UN General Assembly.

With a view to making AAF-SAP operational, in-depth studies have been undertaken of three controversial instruments contained in the framework's proposals: production subsidies, multiple exchange rate systems and a differential interest rate policy. In addition, the general framework is being better defined by the elaboration of AAF-SAP model types that subsequently can be tailored to suit specific country

situations. At the country level, Lesotho is the first country in which an AAF-SAP mission has been mounted.

Critics of AAF-SAP, while welcoming these attempts by Africa to develop its own development model to confront the region's grave economic problems, point out that certain elements of economic reform cannot be avoided and that the "alternative" tends to demand the very attribute which Africa most lacks: experienced and capable economic managers. It is agreed, however, that "social standards" must not regress and that vulnerable groups must be protected during the possibly protracted period of economic adjustment.

³ Resolution 676 (XXIX).



continued to be linked to the special drawing right (SDR), at a rate equivalent to about ZK25 = \$1. Although the new exchange rate policy provides an incentive to non-traditional exporters, tourism and private foreign investors, as well as balance-of-payments support, it has received criticism for its adverse impact on inflation. The annual inflation rate rose to more than 120 percent in early 1990, partly because all duties and sales taxes on imports are calculated on the value of goods at the market rate for the kwacha.

Nevertheless, the process of economic reform received a positive reception at the World Bank Consultative Group meeting for Zambia held in April 1990. Donors endorsed Zambia's economic restructuring programme and pledged \$450 million of support. This financial support should go some way toward relieving the foreign exchange shortage which regularly imposes a severe brake on imports and which has resulted in a stagnating economy and deteriorating living standards. It is estimated that the programme requires about \$1.9 billion of external aid, however. A major problem remaining is Zambia's external debt which was around \$7.2 billion in mid-1990, about 36 percent of which is owed to multilateral donors and so is difficult to reschedule.

Alongside the radical changes in economic policy, introduced in mid-1989, the Zambian Government introduced some far-reaching sectoral reforms, particularly in agriculture. The core of these was the abolishment of the National Agricultural Marketing Board (NAMBOARD) with its produce marketing and fertilizer distribution functions taken over by the Zambian Cooperative Federation (ZCF) and Nitrogen Chemicals of Zambia respectively.

Ironically, it has been Zambia's recent success in expanding maize production in the small farm sector that has contributed to its maize marketing problems. There was a carryover of 5.5 million bags (90 kg) from the 1987/88 season, and supplies were 18 to 19 million bags in 1988-89 compared to the ten to 11 million bags required for consumption. Such large crops not only increased marketing costs but led to serious transportation and storage problems. Inadequate supplies of grain bags, lorry spares and tarpaulins have been a recurring problem for agricultural marketing, particularly of maize, during the past decade. As the government absorbs the greater part of both intra- and interprovincial transport costs as well as storage costs, the expansion of maize

production away from the traditional commercial producing areas along the rail lines has led to increased marketing costs.

The other component of the maize subsidy is at the consumer level. In an attempt to hold down these costs, the government introduced a rationing scheme in 1989 whereby households qualifying for assistance (those earning at that time less than ZK20 500/month, assuming an average of six members) were limited to six coupons granting 14 kg of maize meal per month. At the then prevailing prices, the subsidy was about one-third of the selling price (which was already artificially low to the extent that transport and storage costs were also largely subsidized). Even with the introduction of the rationing scheme, the consumer subsidy was costing about ZK250 to 300 million a year. However, the total cost of the maize subsidy exceeded ZK1 billion, a significant share of the ZK3.5 billion budget deficit for 1989. In an attempt to reduce subsidy costs, the price of maize meal was more than doubled in mid-June 1990, the result of which has been violent protests and riots in the capital, Lusaka.

The issue of maize marketing in general, and the maize subsidy in particular, plays a key role in Zambia's agricultural policy. The country has considerable agricultural potential which was largely neglected until recent years and, indeed, a maize surplus has been achieved in the past two relatively favourable seasons. Producer prices of crop products other than maize have essentially been freed, with farmers able to negotiate with the buyers (millers and processors) for wheat, rice and oil-seeds. In April 1989, both Australia and the United States announced that they would end shipments of food aid in order to encourage domestic production of wheat. Shortages were expected because domestic production used to cover only about one-quarter of the annual consumption of 120 000 tonnes, but with the liberalization of prices, the price of bread increased significantly and demand has consequently fallen.

Future thrusts in the Government of Zambia's agricultural policy have become sharpened by the realization that the reserves of copper on which Zambia remains critically dependent will be almost exhausted by the end of the decade. Agriculture, therefore, will have to assume a much stronger role in economic development and, having been neglected in the past, it has received more attention in the current (Fourth) Plan, 1989-93. Non-traditional exports, including



agricultural products such as air-freighted horticultural products, are being actively promoted but there is still a long way to go as such exports comprise barely 10 percent of total merchandise exports. The agricultural sector itself also would have to more than double its present economic size to compensate for the eventual decline in Zambia's mining sector.

Zimbabwe. Within a difficult overall economic environment, Zimbabwe's agricultural sector has performed well, if erratically, since Independence. Output was depressed by drought in 1983/84 and again in 1987 but it has diversified considerably away from tobacco and maize. Increased production, particularly of maize and cotton from the small-scale or communal sector, has been notable and has more than compensated for the decline in the number of large-scale farms, witnessed immediately before and at Independence. With a diversified agricultural output and a land/population ratio in between that of Zambia and Malawi, Zimbabwe still has considerable agricultural potential. Nevertheless, there are several policy issues which have to be addressed.

The first of these is access to land, involving land reform. The ownership of land in Zimbabwe is extremely skewed:

- Approximately 4 500 large-scale farms occupy 13.5 million ha (3 000 ha/farm). Land ownership within the large-scale sector is also highly skewed; the sector covers a wide range of land types and supports an estimated 1.7 million people comprising farm labourers and their families.
- Approximately 8 500 small-scale commercial farms occupy 1.5 million ha (over 176 ha/farm); 800 000 family units, or about four million people, occupy 16 million ha (the communal lands) at an average of 20 ha/farm; since 1980, 40 000 families, about 250 000 people, have been resettled on 2.5 million ha at an average of 62.5 ha/farm.

Resettlement was of major political importance at Independence, with a programme envisaging the resettlement of about 162 000 families by mid-1985.² Because of difficulties in

supporting resettled families — particularly during the drought years of 1983-84 — the marginal quality of some of the land which became available through the abandonment or voluntary sale of large-scale farms, and the subsequent shortage of land, only about 45 to 50 000 families have been resettled, either on individual holdings or on collective cooperative holdings.³

Pressure has been rising, particularly prior to the recent elections, for the fulfilment of earlier promises regarding access to land. In this context, several problems have to be resolved:

- Output and export earnings are still highly dependent on the large-scale sector. Investment is already low and a further loss of confidence could have serious consequences for food supply and exports. Therefore, the challenge is to obtain an adequate release of land without jeopardizing output and employment. The possibility of a land tax was raised in the budget statement for 1989 as a means of bringing underutilized land onto the market.
- Resettled families need to be supported during the first year at least, and maybe longer. Such expenditure will have to be borne by the government budget at a time when strenuous efforts are being made to halve its deficit.
- The land allocations per resettled family appear generous when account is taken of livestock. A wider range of farm systems incorporating livestock — but not just cattle — on extensively managed systems is necessary.
- Where possible, the integration of resettled smallholders within the existing large-scale sector would also seem desirable to avoid the continued dichotomy of the farming system and to enable the small-scale sector to benefit from the better infrastructure, transport and marketing facilities of the main commercial areas — without additional government expenditure — as well as from wider off-farm employment opportunities.

The second issue concerns agricultural marketing, pricing and input supply. In common with many other countries in Africa, Zimbabwe has a long history of intervention in agricultural

² The first five-year plan, 1986-90, foresaw the resettlement of 15 000 families per year.

³ There are, in fact, four basic resettlement "models".



markets, promoted by its settler community and the need for food self-sufficiency following the Unilateral Declaration of Independence (UDI) in 1965. Price intervention is operated through four agricultural marketing parastatals (for beef cattle, maize and other food crops, dairy products and cotton) coordinated by an umbrella organization, the Agricultural Marketing Authority.⁴ A controlled producer price system operates for wheat, maize and other coarse grains, soybeans, groundnuts, sunflower seed, cotton, beef and whole milk, and retail prices are fixed for maize meal, bread, cooking oil, beef, milk and stock feeds. The Grain Marketing Board is the sole buyer of maize in the commercial maize areas. Some intraregional trade is permitted within the communal areas, although not between them. Pan-territorial and pan-seasonal pricing systems inhibit the private sector from collecting maize from outlying areas and from performing a cereal storage function.

There are clear imperfections in agricultural markets in Zimbabwe, the most obvious sign being the very large subsidies required by the marketing boards. To what extent these result from the boards' being required to implement inconsistent or contradictory prices as opposed to being a consequence of their inefficiency, is difficult to establish but, in 1984/85, the agricultural marketing parastatal deficits amounted to 17 percent of the total government budgetary deficit and 1 to 2 percent of GDP. By 1989, as reported in the budget statement, the accumulated losses or subsidies of the agricultural marketing boards and the Agricultural Finance Corporation amounted to about \$370 million, equivalent to 7 percent of total recurrent expenditure for 1988/89 or 37 percent of the budget deficit for that year.

While food subsidies have been reduced since 1980 as the government has abandoned its cheap food policy, it is notable that subsidies on beef continue and that beef has to be rationed because the Cold Storage Commission has insufficient throughput at existing prices.

⁴ There are ten statutory boards under the Ministry of Lands, Agriculture and Resettlement (MLAR).

ASIA AND THE PACIFIC

Overview

Economic growth in Asia and the Pacific slowed in 1989, but the region remained one of the fastest growing areas in the world. Real growth of aggregate GDP fell to 5.3 percent in 1989 from a record 9.4 percent in 1988. The region's two largest economies, China and India, experienced rather sharp declines in GDP growth. In China, GDP growth fell from 11.2 percent in 1988 to 3.9 percent in 1989, while India's growth rate fell from a record high of 9.5 percent in 1988 to 4.5 percent in 1989. Agricultural GDP grew by 4.5 percent in China and 2.0 percent in India during 1989.

Throughout the region, only Nepal, Papua New Guinea and Western Samoa recorded GDP growth rates of less than 2 percent in 1989, and none were negative. On the other hand, the Republic of Korea, Singapore, Thailand, Indonesia, Malaysia, the Philippines, Pakistan, Fiji, Maldives, and Taiwan (Province of China) all had GDP growth rates over 5 percent. Thailand, with a GDP growth of 10.8 percent, was the world's fastest growing economy in 1989.

Similarly, several countries had strong agricultural sector performances during 1989. In Nepal, Pakistan, Myanmar (formerly Burma), Fiji and Viet Nam, agricultural GDP grew by around 6 percent or more in 1989. Indonesia, Laos, Malaysia, Thailand and the Philippines recorded agricultural growth rates between 3.5 percent and 4 percent.

The Asian region accounted for nearly 90 percent of 1989 world rice production, and 42 percent of total world cereal output. China, India, Bangladesh and Thailand all experienced record rice harvests resulting from a combination of good weather, expanded use of high-yielding inputs, and greater area planted.

Pacific Asia: the newly agro-industrialized economies

Pacific Asia includes a wide variety of countries that differ greatly from each other in natural resources, population size, geographic characteristics and economic systems. Japan, a leading economic power, is one of the largest and most stable industrial economies. China is the world's most populous country, with over one-fourth of the global population. The four natural resource-poor newly industrialized economies (NIEs) form a secondary industrial



base, together exporting manufactured products equal to around one-half of Japan's or the United States' exports.⁵ The region also includes numerous resource-rich, low- and middle-income developing countries in Southeast Asia.

Over the past three decades, Pacific Asian countries have pursued widely divergent development strategies resulting in significantly different growth patterns. The exceptional economic performances recorded by the Asian NIEs since the early 1960s have been well documented. These four countries consistently applied macro-economic and trade policies that stimulated broad-based development through an export-led industrialization strategy. Rapid export expansion, initially founded on labour-intensive manufactured products, led to the strong industrial sector performance that has played such a dominant role in generating and sustaining their impressive growth rates.

In the 1980s, two additional Pacific Asian countries, Thailand and Malaysia, successfully established export-oriented, labour-intensive manufacturing sectors. Manufacturing exports grew by over 30 percent per year during the 1980s in Thailand, and by 20 percent per year in Malaysia. Both countries have become major exporters of textiles, clothing, footwear, semi-conductor devices, computer parts, furniture components, and plastic products.

But unlike the Asian NIEs, Thailand and Malaysia are building manufacturing sectors that also include agro-industries that take advantage of their abundant agricultural resources. Thailand's successful agro-export diversification strategy has included all agricultural subsectors. During the 1980s, annual rates of increase in the value of exports were frozen fowl 26 percent; canned fish and prawns 29 percent; wood products, including furniture parts, 21 percent; and canned pineapple 14 percent. Together, these products doubled their share of total export value to nearly 13 percent by the end of the decade. Similarly, in Malaysia, the yearly growth in the export value of rubber-based manufactured products was 33 percent, wood products 10 percent, and processed foods 10 percent during the 1980s.

Their success in increasing production and trade of traditional agricultural products, while diversifying into new agro-industries aimed at exporting higher-valued products explains

why these two countries are frequently referred to as the newly agro-industrialized economies (NAEs).

The changing structure of trade and industry in Pacific Asia. The 1980s were characterized by record high interest rates, a prolonged recession in the industrial countries, rising protectionism, depressed primary commodity prices, shrinking supplies of development finance, increasing trade competition among developing countries, and the growing tendency of OECD countries to establish regional trading groups and to practise "trade bilateralism". These changing world economic conditions have contributed to a restructuring of trade and industry in Pacific Asia that has both benefited and constrained development efforts in Thailand and Malaysia.

For example, because of rising labour costs, currency appreciations, loss of Generalized System of Preferences (GSP) status, and tighter import quotas imposed by some OECD countries during the past decade, the NIEs have lost their comparative advantage in labour-intensive manufactured exports. The NIEs have responded by shifting toward more skill-intensive and capital-intensive manufacturing industries while investing heavily in relocating many labour-intensive export industries in the Southeast Asian countries where wages are lower.

Even though all countries faced the same changing world economic conditions, Thailand and Malaysia have been more successful in attracting, establishing, and expanding export manufacturing industries than the other Southeast Asian developing countries. Thailand and Malaysia have also diversified into new high-valued agricultural products and agro-industries. Finally, they have consistently increased domestic agricultural production and export earnings of traditional products in spite of declining terms of trade throughout most of the 1980s.

In the past, Thailand and Malaysia supplied the NIEs and Japan with raw materials and primary commodities. Today, both countries are not only steadily advancing toward newly-industrialized country status, they have also become major investors in commercial projects and importers of natural resources and raw materials from the least industrialized countries of the region — Myanmar, Laos, Cambodia and Viet Nam.

Beginning in the early 1980s, Thailand and Malaysia redirected their economic development

⁵ The Asian NIEs include Singapore, Hong Kong Territory, Republic of Korea and Taiwan, Province of China.



policies toward a more outward-oriented strategy. Policy shifts included maintaining more competitive exchange rates, adjusting tariff structures, establishing export incentives, modernizing tax systems, providing investment incentives, changing public expenditure patterns and liberalizing financial sectors. The surging exports, continuing price stability and domestic and foreign investment booms experienced by Thailand and Malaysia are prompting more and more Southeast Asian countries to examine closely the development strategies and economic policies followed by these two NAEs.

Agricultural performance and policies: the cases of Thailand and Malaysia

Thailand. In 1985, textile products replaced rice as Thailand's major export. By 1987, textile products earned twice as much as rice. At present, Thailand's manufacturing sector accounts for about one-fourth of GDP and two-thirds of exports, but agriculture remains the major employer. Nearly 60 percent of the labour force, 17 percent of GDP and over 35 percent of exports originate in the agricultural sector. Storing, transporting and processing agricultural products provides even more jobs and export earnings in the rapidly expanding agro-based industries.

Thailand is one of the largest agricultural exporters in the world. The country typically supplies over one-third of the world's rice exports and is a leading exporter of tapioca, rubber, seafood, sugar, poultry and canned pineapple. The value of its agricultural exports increased by over 13 percent per year during the 1980s.

Over the past decade, the fishing industry has contributed significantly to agro-industrial exports. Thailand is the world's leading exporter of canned tuna, accounts for nearly 20 percent of the fresh and frozen prawn market and has the third largest fishing fleet in Asia. Seafood exports increased by 24 percent per year during the 1980s, and currently account for nearly 10 percent of total export earnings. Around 20 percent of agricultural imports consist of fish that is processed and canned for export.

Rice remains the country's most important food and export crop. In 1989, rice represented 60 percent of the cultivated area, 40 percent of total crop value, just over 25 percent of the average Thai's food budget and nearly 20 percent of agricultural export earnings.

Rice also helps to illustrate how changes in trade policies have promoted strong growth in

Thai agriculture. For example, Thai policy-makers reduced the export duty on rice from 30 percent in 1980 to 5 percent in 1981 and then removed it and other taxes on rice exports completely in 1986. Exchange rate policy allowed the baht to depreciate 30 percent against the US dollar during the 1980s, maintaining the competitiveness of Thai exports. In addition, restructuring the import quota system, including lowering import tariffs, reduced the cost of yield-increasing inputs and encouraged greater use of fertilizers and pesticides. Finally, eliminating export licensing requirements, improved competition among buyers and traders, reducing their profit margins and passing price increases of rice to producers.

These and other policy changes created higher relative producer prices for commodities such as rice. The improved price incentives encouraged investments in small-scale irrigation works, the adoption of short-season varieties and increased fertilizer use on the dry season rice crop by about 20 percent in the last two years alone. The wet season rice crop is grown for home consumption so traditional varieties requiring fewer inputs are used. In addition, marginal increases in input costs have been offset by higher yields, resulting in lower variable costs per unit of production. Farm incomes increased by 8.8 percent in 1987, 19 percent in 1988, and 12.4 percent in 1989, while real agricultural GDP grew by 9.5 percent in 1988 and 4.1 percent in 1989.

Other important policy measures to promote agricultural and agro-based production include broader access to export financing; improved marketing support; special tax exemptions; and investments in roads, ports and related facilities. At the same time, government expenditure on production-related rural infrastructure such as large irrigation works, rural development projects, and research and extension services has increased. In 1988, the government announced special privileges and tax incentives to promote more rural industrialization and to encourage agro-processing firms to locate outside the crowded Bangkok area.

The growth process and the pace of industrialization are also presenting formidable development and environmental problems for Thai policy-makers. Since 1970, Thailand's forest cover has been reduced by around 38 percent. Over the past two decades, about 380 000 ha per year have been deforested and only 70 000 ha replanted. Government officials finally withdrew all logging concessions on national



forests early in 1989, shortly after devastating floods and landslides in the south had exposed the potential human and environmental dangers of deforestation. Officials remain concerned about how to enforce the logging ban while at the same time providing support for the wood-product industries. Thailand has been a net importer of tropical logs since the mid-1970s and recently arranged concessions for logging forests in Myanmar.

Likewise, extensive fishing in both the Gulf of Thailand and off the Isthmus of Kra has depleted fish stocks and the Thai Government has negotiated fishing rights in Myanmar's off-shore zones. Increased imports of fish are required to support the canned fish industry and the Thai fishing fleet is continually forced further from its traditional waters. The depletion of these and other resources needed to support the agro-processing industries remains a major problem for Thai policy-makers. Additional problems are arising from increased competition between industrial, urban and agricultural requirements. Despite adequate rainfall, reservoir levels are 17 percent below long-term averages because of the expanding need for electricity in Bangkok. This situation may threaten irrigation capacity in the near future as it did in 1987. Finally, the Bank of Thailand reports that rural poverty, land and income distribution problems, and inadequate infrastructure continue to hamper development efforts.

Malaysia. Like Thailand, Malaysia has pursued an outward-oriented, export-led development strategy over the past decade with a well-balanced emphasis on manufacturing, agro-industrial, and traditional exports. Since the early 1980s, Malaysian policy-makers have faced volatile oil prices, declines in prices of its major export commodities, slower import growth in the OECD countries and more limited access to international financial assistance.

Malaysia often experiences serious rural labour shortages because of cyclical demands for higher-paying jobs in urban industries and construction. In addition, the country suffered a recession in the period 1985-86, partly resulting from low commodity prices, although the economy made a strong recovery in the following years. GDP growth registered an 8.8 percent increase in 1988, and 7.6 percent in 1989, with the annual inflation rate never rising above 3 percent in the past three years. The agricultural sector grew by 7 percent in 1987 and nearly 4 percent in 1988.

The policy adjustments frequently credited with helping the country overcome these problems include tightening government spending; easing restrictions on industrial licensing and the foreign investment code; establishing new investment funds; introducing export credit refinancing programmes; maintaining a competitive exchange rate; and reforming the export duty structure. For example, export duties declined by 8 percent per year during the 1980s, falling from 18 percent of total government revenues in 1980 to 6.5 percent by 1988. The ringgit has depreciated 20 percent against the US dollar and nearly 100 percent against the yen since 1980.

In 1989, the agricultural sector accounted for about 16 percent of GDP and 30 percent of employment. Malaysia is the world's largest producer of palm fruit/kernel and rubber, as well as the largest exporter of vegetable oil, rubber and tropical timber and the third leading exporter of cocoa. Five natural resource-based commodities (rubber, tin, petroleum, palm oil and timber) accounted for 72 percent of export earnings in 1980, but only 41 percent by 1988.

Over 80 percent of Malaysia's agricultural land is in tree crops — primarily rubber with 36 percent and oil-palm with 34 percent. In the early 1980s, policy-makers began to recognize the environmental and economic value of the tropical forests. Research and extension efforts placed increasing emphasis on improving productivity to increase production instead of simply clearing forests to expand the planted area. During this period, development projects focused on rehabilitating crops, constructing irrigation facilities, expanding technical assistance capacity, introducing new varieties, and increasing the use of fertilizers and pesticides.

Both large estates and small farms were replanted with high-yielding rubber, oil-palm, and cocoa varieties. The area under high-yielding oil-palm expanded by over 60 percent during the 1980s; almost all cocoa areas are planted with high-yielding varieties, including plants developed by the Malaysian Agricultural Research and Development Institute; and nearly all the paddy grown in the country consists of high-yielding varieties. Input use has also increased substantially. Fertilizer consumption per hectare is up by over 50 percent since 1980 and specific projects aimed at improving fertilizer use on smallholdings have been implemented. Imports



of intermediate goods to support agricultural production have increased by around 6 percent per year in the 1980s.

The intensification strategy and policy shifts have helped Malaysia to compensate for low commodity prices in some cases. For example, while the price of palm oil decreased by 2.9 percent per year in the 1980s, export volume increased by 8.5 percent resulting in annual increases in the value of palm oil exports of 5.8 percent per year.

Malaysia's current policy efforts are focused on strengthening the agroprocessing industries of its traditional products to help alleviate poverty in rural areas, while developing new high-valued and agro-export products including fruits, vegetables, meats and fish to diversify the economic base and expand export potential. Recently, Malaysia became a net exporter of poultry and pork products, but high import duties on feed ingredients are inhibiting the expansion of the livestock sector.

Expanding agriculture's role in the industrialization process. Thailand and Malaysia have successfully promoted both manufactured and agro-industrial exports by practising an outward-oriented development strategy supported by fairly efficient import substitution policies. Stable social and political institutions combined with policy changes that encouraged agricultural growth have allowed these two countries to take advantage of the opportunities as well as to minimize the problems presented by changing external economic conditions.

At the same time, the rapid depletion of natural resources and increasingly unequal rural-urban and rural-rural income distribution patterns are a potential threat to long-term growth and social stability.

Both countries face the challenge of maintaining the growth process while finding ways to spread the benefits of growth to the rural poor. Development experiences in the NIEs demonstrate that increasing incomes of the rural and urban poor contributes significantly to the growth process by expanding domestic demand for locally produced products and by encouraging product diversification. Thailand and Malaysia appear to recognize the need to enhance rural incomes and to support the agricultural sector with a broad network of external support services along with trade and price policies that provide incentives and economic opportunities for the rural poor.

LATIN AMERICA AND THE CARIBBEAN: THE EXPERIENCE OF CARIBBEAN COUNTRIES

Overview⁶

As the decade came to a close, widespread evidence suggested that the regressive trend that had started in the early 1980s in the region was far from being arrested. GDP growth for Latin America and the Caribbean as a whole rose by a cumulative 11.7 percent between 1981-89, representing a 8.3 percent overall decline in per caput terms. Only five out of 24 countries (Barbados, Colombia, Cuba, Chile and the Dominican Republic) achieved increases in per caput GDP during 1981-89. After having fallen for the second consecutive year in 1989 (by 1 percent), per caput GDP was at the level of 1977-78.

Agricultural production rose 2.4 percent yearly during 1981-88, slightly above population growth, but only by 1.9 percent in 1989. Average inflation in 1989 rose for the third consecutive year to almost 1 000 percent, an all-time high. While a causation between inflation and GDP growth cannot be directly established, it is in countries with the highest inflation rates that growth tended to be more depressed (namely, Peru, Argentina, Venezuela and Nicaragua).

The external sector was less favourable in 1989 than in the two previous years. While exports rose by 9 percent, the rate was lower than in 1987-88 and — in the case of non-oil exporting countries — the increase in export earnings was largely offset by the increase in interest payments. Imports rose at a somewhat lower rate than exports in 1989, but the current account deficit remained at about \$11 billion for the third consecutive year.

Agricultural trade stagnated overall on the side of exports, which rose by only 0.5 percent yearly between 1981-88, and declined by 2.7 percent yearly on the side of imports.

Total external debt declined by 5 percent in real terms in 1989, but debt/export and interest/export ratios remained very high — about 50 percent higher than the average levels

⁶ The estimates of economic performance presented in this section are from the Economic Commission for Latin America and the Caribbean (ECLAC).



prior to the crisis of the early 1980s. The region continued to be a major net exporter of resources, estimated at about \$17 billion in 1987, \$29 billion in 1988 and \$25 billion in 1989.

Caribbean countries

While presenting varying country situations, the Caribbean subregion generally shared in the major economic difficulties that reflected, and contributed to, the region's poor agricultural performance during the 1980s.

All but a few Caribbean countries — in particular Antigua, Dominica and St Vincent — recorded a marked slow-down in economic activity during the 1980s in relation to the previous decade, and several of them experienced pronounced declines in GDP. With sharply reduced export earnings and external financing flows in the early 1980s, the current account deficit of the subregion deteriorated to an equivalent of 17 percent of GDP in 1982 — over one-third of GDP in several countries. Although the deficit subsequently declined, it still averaged 10 percent of GDP in recent years. The problem of external debt was generally less acute than elsewhere in the Latin America region yet became critical in some countries: for instance, in 1989, external debt in Jamaica represented 120 percent of GDP, and debt service 40 percent of exports; in the Dominican Republic, the two ratios were over 70 percent and nearly 30 percent respectively; and in Trinidad and Tobago, 57 percent and 27 percent respectively.

Agriculture provided uneven support to economic growth and trade during the 1980s — the contribution of agriculture to overall economic expansion being in any event modest, given the sector's small, and in the long term, declining share in total GDP (about 8 percent of the total in CARICOM and 18 percent in non-CARICOM countries in recent years). Nevertheless, in most cases, agricultural growth exceeded that in other sectors while generally remaining well below population growth. Agricultural exports stagnated in value during the 1980s but with other trading sectors faring even worse, their importance in relation to total exports significantly increased. On average, agricultural export earnings contributed to financing over 40 percent of total import costs in recent years, although the share tended to fall in some countries, particularly in Guyana, the Dominican Republic and Haiti. Although food imports rose

only moderately in volume and declined in value, they tended to absorb a greater share of foreign exchange earnings during the 1980s.

Against these trends, recent performances were relatively favourable in the subregion, particularly in the external sector. Favourable factors included the rebound of non-oil commodity prices, particularly sugar, and relative strength in those of petroleum; a booming tourism sector; and weakening of the US dollar, a factor of considerable importance given that several countries peg their currencies to the US dollar, and one implying significant gains in competitiveness since the dollar began weakening in 1988. The tendency was not uniform, however, as per caput GDP fell in 1989 in Jamaica, Trinidad and Tobago, Haiti and Guyana and only marginally increased in the Dominican Republic, despite that country's booming exports.

Underlying the generally faltering performances cited above have been the constraints and comparative disadvantages of most Caribbean countries — small open economies with a limited resource, manufacturing and exporting base and high costs of production. Being highly dependent on agricultural imports and exports, many of these countries are particularly sensitive to changes in the global economic and agricultural setting. Thus, the adverse external environment for agriculture during much of the 1980s (deteriorating agricultural terms of trade, falling international demand for most of the region's traditional export products, and reduced market access) had profound repercussions on their overall economic performance. These problems coincided with the collapse of several international commodity agreements as well as losses in international competitiveness — resulting from the strengthening of currencies pegged to the US dollar until 1987-88 and a disappointing trade performance despite preferential treatment by industrial countries. Performances in several countries also have been affected by natural disasters: more recently, hurricane Gilbert, which caused extensive damage in 1988, particularly in Jamaica, and another severe storm that devastated several northeastern Caribbean islands in September 1989.

Behind these temporary factors are a number of more fundamental constraints. Traditional export crops — sugar, bananas, tree crops — have become increasingly uneconomical, yet they still are the primary sources of foreign



exchange and employment.⁷ While some of these crops, particularly sugar, could be rendered more viable by widespread mechanization, reducing labour intensity is not a feasible solution in some countries severely affected by unemployment problems. Export diversification (toward citrus, ornamentals, exotic fruits and products, aquaculture, etc.) has opened promising avenues in some cases, but leaving aside their risky, and initially costly exploitation, the potential for these products to substitute traditional exports remains limited. Despite austerity and import substitution efforts, food imports have become increasingly competitive in domestic markets — indeed, they have grown faster than food production for domestic consumption in many countries.

Recent developments in the external sector have presented some encouraging features for the short and mid-term (see section, Trade developments and issues). However, the above problems require more fundamental solutions in the longer term, including: improving productivity and external competitiveness; promoting export diversification — promoting the export of non-traditional and processed products — and reducing dependence on traditional markets; and further developing the domestic sector as a means of achieving food security, reducing rural poverty and lowering the costly and risky dependence on food imports. While these broad objectives are common to many other developing countries, they represent a particularly difficult challenge for the Caribbean, which must develop the sector from a more disadvantaged resource base and less competitive position than most.⁸

Trade developments and issues. The crucial importance of developed country markets for Caribbean countries sharply contrasts with the minor, and declining, economic weight of primary product trade with the Caribbean in industrial areas. Between 1980 and 1986, the value of Caribbean exports of primary products to the United States declined by 7 percent yearly; those to the EEC by 2.9 percent; while those to Canada, of comparatively lesser

importance, rose by 7 percent.⁹ Yet, the value of Caribbean (excluding Cuban) primary product exports to these industrial areas accounted for nearly one-fifth of their total merchandise exports during 1980-86. As regards market share in industrial countries, imports of primary products from the Caribbean accounted for about 3.5 percent of total United States imports in 1980-81, but only 1.8 percent of the total in 1985-86. The share also declined slightly from 0.6 percent to 0.5 percent in the EEC and rose only in Canada from 1.5 percent to 1.8 percent.

Market prospects are largely conditioned by developments in the preferential trade arrangements with industrial countries and areas: trade and aid agreement with the EEC under the Lomé Convention; the United States' Caribbean Basin Initiative (CBI); and Canada's Caribbean. In addition, Caribbean countries benefit from the industrial countries' GSP, granted to most developing countries. However the value of preferential agreements, at least in their past form, has been questioned in the light of the poor trade performance of Caribbean countries — in fact, poorer than that of most developing countries — and, more importantly, with regard to their long-term effects. Are these arrangements helping fragile agricultural industries become self-sustaining, or are they "addictive" mechanisms of indefinite dependence instead? What appears certain is that they constitute in the short term an irreplaceable life line to vital markets in industrial zones.

The recently-signed (December 1989) Lomé Convention (Lomé IV) contains provisions of considerable importance to the Caribbean as they directly address the concerns often expressed in the region: that the opportunities, including preferences, currently available to them may be jeopardized by the conclusion of an integrated market in the EEC in 1992; that the EC's opening toward Eastern Europe would lead to declining aid resources to Third World countries; and that EC concessions to all developing countries under the GATT principles would result in a dilution of aid and benefits for Asian, Caribbean and Pacific States (ACP) adhering to the convention.

On the issue of post-1992 developments, it is obviously impossible to assess the full

⁷ For instance, in early 1989, the production cost of sugar in Jamaica was 19.5 US cents/lb compared with world market prices of 10 to 11 US cents/lb.

⁸ A detailed framework for action at the regional level is provided by the *1989-91 Caribbean Community programme for agricultural development*, prepared by the CARICOM Secretariat.

⁹ Caribbean exports of non-fuel primaries to the United States were in the order of \$1 billion yearly during the 1980s, compared with about \$700 billion to the EEC and \$150 million to Canada.



consequences for the Caribbean until the process of EC market integration is complete. However, the fact that Lomé IV will have a life of ten years (it is due for renegotiation in the year 2000) gives reassurance at least for the mid-term. The increase in financial resources available under the convention is also an encouraging feature: the overall package rose from ECU 8.5 billion in Lomé III for the period 1985-90 to ECU 12 billion in Lomé IV for the period 1990 to 1995 — short of the minimum ECU 15.5 billion the ACP had demanded, however. STABEX and SYSMIN, the two instruments for assisting ACP commodity export revenue have both been strengthened financially and turned into non-reimbursable transfers — features of considerable interest for the region. In the past, Caribbean ACP have drawn from STABEX in the case of such agricultural commodities as sawnwood (Belize), coconuts (Dominica), nutmeg, mace and cocoa (Grenada), and bananas (Dominica, Grenada, Jamaica, St Lucia and St Vincent).

More important in terms of resource transfer than any other form of assistance to Caribbean ACP are the special trade protocols for traditional exports from the region. The sugar protocol, whereby the EC guarantees an annual purchase of up to 1.3 million tonnes of ACP sugar at EC prices, was not affected by the negotiations. In other words, while the protocol was maintained on an indefinite basis, it does not contemplate increased quotas, which can only occasionally change through the reallocation of country quotas. For bananas, the protocol resumed the provisions benefiting traditional suppliers. In particular, the Windward Islands, Jamaica, Belize and Suriname will continue their exports to the United Kingdom at unit prices significantly in excess of the world market level. It was also agreed that the banana protocol "does not prevent the community from establishing common rules for bananas in full consultation with the ACP as long as no ACP state, a traditional supplier to the Community, is placed as regards access to and advantages in the Community in a less favourable situation than in the past or the present".

The new rum protocol allows an increase in the quantities which may be imported free of customs duties and a progressive elimination of quotas by 1995. The previous protocol only allowed duty-free access within an overall ceiling, which had to be divided into member states' allocations. This may provide an

opportunity to the Caribbean rum industry which, while accounting for over one-third of world rum production and trade, has experienced a decline in exports and has been operating below production capacity during much of the 1980s. The Caribbean currently supplies about 30 percent of the EC rum market.

Developments affecting trade with the United States and Canada are also of major importance for the region. The Caribbean Basin Economic Recovery Act, commonly referred to as the *Caribbean Basin Initiative* (CBI), provides tax incentives for foreign investments in beneficiary countries and duty-free access to the United States market for a range of products exported by the 23 eligible countries. The CBI began in January 1984 and remains effective until September 1995. The United States Congress is presently considering a 12-year extension known as CBI-II.

All eligible CBI exports can enter the United States duty-free if they are grown, produced or manufactured in a beneficiary country and meet the rules of origin requirements.¹⁰ Participating Caribbean island countries have doubled their United States market share of CBI products since 1983. CBI exports have increased 33 percent per year between 1983 and 1987, although these exports were already growing at a similar rate in the four years prior to the CBI. More than 90 percent of CBI exports have included only seven product items: beef and veal, rum, tobacco, pharmaceutical products, ethyl alcohol, steel wire and bars, and electrical capacitors.

Several problems continue to inhibit CBI performance. In particular, the United States' GSP scheme has allowed duty-free access for many Caribbean exports since the 1970s, and an important purpose of the CBI was to broaden the product coverage. Nevertheless, many items of interest to Caribbean exporters are still excluded under the CBI, including textile and apparel articles subject to the multifibre arrangement (MFA), canned tuna, petroleum products, footwear, certain leather, rubber and plastic gloves, luggage and

¹⁰ The three rules of origin are: i) the item must be imported directly from a beneficiary country; ii) at least 35 percent of the value of the item must be added in one or more beneficiary countries, but United States components may comprise 15 percent of the 35 percent value-added requirement; and iii) the product must be substantially transformed in one or more beneficiary countries.



handbags. However, in 1986, a special arrangement allowed textile products manufactured from 100 percent United States components to enter the United States outside the MFA.

The decline in the United States' *sugar quotas* and a sharp fall in sugar prices during most of the 1980s has severely reduced export earnings for many countries — although quotas have been raised in recent years as a consequence of reduced domestic production in the United States. Quotas from Caribbean countries¹¹ fell from about 594 000 short tonnes in 1984/85 to 410 000 short tonnes in 1985/86 and an average 230 000 short tonnes in 1987 and 1988. A significant increase was, however, announced for 1989/90, totalling about 634 000 short tonnes for the 1 January 1989/September 1990 21-month period. This increase only partially offsets the reductions operated between 1985 and 1987, however. Sugar exports by Caribbean countries to the United States dropped from \$408 million in 1980 to \$93 million by 1987. The surge in sugar prices in recent years has nevertheless resulted in considerable gains in export earnings from this commodity.

The *United States-Canada Free Trade Agreement* also presents some problems for the Caribbean Basin countries. Because each country has established different value-added levels to establish eligible products, Caribbean countries face two non-interchangeable markets. The Caribbean countries also fear losing market shares in Canada to United States exporters, and in the United States to Canadian exporters, as trade restrictions between the two countries are removed. Reduced access to the United States market would have greater consequences, given the high dependency of several countries in the region on these markets,¹² but the impact of possible losses in market share in Canada cannot be underestimated. Although Caribbean exports to Canada are relatively small and largely concentrated on minerals, Canada has been a fast growing market for the region. Exports of sugar, coffee, rum, fruits and vegetables account for about one-fourth of total Caribbean exports to Canada.

¹¹ Barbados, Belize, the Dominican Republic, Guyana, Haiti, Jamaica, St Kitts and Nevis and Trinidad and Tobago.

¹² For instance, the United States took almost 80 percent of the Dominican Republic's total exports, and supplied 56 percent of its imports in 1988.

NEAR EAST

Overview

GDP rose 3 percent yearly between 1980-1989 in the region as a whole, only slightly above population growth, but growth rates widely diverged within countries and country groups, ranging from 2.4 percent in the high-income countries to 3.9 percent in low-income countries. In 1989, GDP growth exceeded 5 percent in five countries while, in seven others, the increase in GDP fell below population growth.

Agricultural production rose by 2.8 percent between 1981 and 1988, a slightly slower rate than that of population. There were substantial increases in Saudi Arabia, the Libyan Arab Jamahiriya and Jordan, but production growth failed to increase in per caput terms in a majority of other countries. In 1989 agricultural production stagnated with decreases in Iran, Turkey and Jordan but good performances in most low-income countries of the region.

The inflation rate averaged 13.9 percent in 1989, the lowest rate since 1983, but was expected to accelerate slightly in 1990 to 14.2 percent.

The value of total merchandise exports declined 9.3 percent yearly between 1981 and 1988, mainly reflecting decreases in export revenues in oil-exporting countries. Merchandise imports only increased 1.3 percent yearly. In this period of severe external account constraints only a few countries — in particular Egypt, Afghanistan and Turkey — significantly expanded their imports.

Most non-oil exporters experienced stagnating or, in several cases, sharply falling export earnings from agriculture. The growth in imports was significantly reduced from the very high rate of the previous decade. However, despite some improvement in the agricultural trade balances in the second half of the decade, the value of agricultural exports only represented about 28 percent of that in agricultural imports in recent years.

The external debt of the Near East region approached \$100 billion in both 1988 and 1989. Total debt has represented about 80 percent of GDP in recent years, this share being extremely high in some countries: in 1988 the debt/GDP ratio for Egypt was 142.5 percent; for Jordan 110 percent; for the Sudan 134 percent; and for the People's Democratic Republic of Yemen 212 percent. Debt service as a share of exports



steadily increased from 1982 until 1985 when it reached a peak of 13.6 percent. The ratio has broadly stabilized at 12 percent in recent years.

Middle-income countries in the Near East

This section focuses on five middle-income countries of the Near East — Cyprus, Egypt, Jordan, the Syrian Arab Republic and Turkey.

Beyond their middle-income status, these countries present widely varying characteristics. The three largest economies — Egypt, Turkey and the Syrian Arab Republic — are the more agricultural oriented, with that sector accounting for about 18 to 20 percent of their GDP, employing 30 to 40 percent of their population and generating a varying but generally significant proportion of total export earnings (about 10 percent in the Syrian Arab Republic, 20 percent in Egypt and 25 percent in Turkey). The smaller economies are far less agriculture-based, although in Cyprus over one-fifth of the population is rural and farm product exports are important sources of foreign exchange.

Against this diverse structural background, the countries share major difficulties on the economic and financing fronts, with macro-economic imbalances reaching extreme proportions in some of them. Thus, the net trade deficit in recent years represented about 5 percent of GDP in Cyprus, 12 percent in Egypt and the Syrian Arab Republic, and as much as 40 to 45 percent in Jordan. Such imbalances could only be financed through massive external capital flows, mainly from oil-exporting neighbouring countries, in the form of aid and resident remittances. These flows, which represented over 20 percent of these countries' GDP in the late 1970s, enabled high and sustained investment levels, despite a very low domestic saving rate. However, with the end of the oil boom and large-scale repatriations, external financing flows sharply shrank, exposing the underlying weaknesses of these countries' economies.¹³ Investment rates plunged from over 30 percent of GDP in the early 1980s to about 20 percent in 1987, despite some recovery in domestic savings; imports fell from an equivalent 50 percent of GDP to less than 40 percent of GDP during the same period; external debt approached \$100 billion in 1988 and 1989, representing over 70

percent of the aggregate GNDP of these countries; and inflation accelerated, particularly in Egypt and Turkey.

These imbalances were accompanied by uneven economic performances, the positive exception being Turkey (which accounts for almost two-thirds of the combined output of the middle-income countries).¹⁴ Agricultural production rose less than 2 percent yearly during 1981-89 (crops 1.8 percent and live-stock 2.3 percent), compared with an average 3.2 percent during the 1970s — with Turkey again being the positive exception — and agriculture grew by 3.5 percent yearly. Agricultural exports, already a very small share of GDP by developing country standards (4 to 5 percent of GDP during the 1970s), fell to less than 3 percent of GDP in recent years following a collapse in agricultural terms of trade. On the other hand, agricultural import unit values fell considerably during the 1980s. However, as these countries' food imports also expanded strongly in volume, in financial terms they remained considerable — food imports accounted for about 20 percent of their total merchandise imports and 40 percent of their total export earnings in recent years. Egypt, the world's third largest importer of wheat and flour, currently imports over 40 to 50 percent of its total food supply; Cyprus over 70 percent; and Jordan as much as 80 to 90 percent.

Recent policy developments. Agricultural policy instances have been largely influenced by macro-economic policies to rectify internal and external imbalances. All countries have embarked on some form of stabilization and structural adjustment programme with the general objectives of reducing current account and fiscal deficits, and reducing government intervention in market mechanisms. While similar in approach, the implementation of these programmes has varied in severity: strong austerity has characterized recent policies in

¹³ Flows from migrant workers remained considerable, however. Official remittances from migrants were \$3.4 billion for Egypt (1989), \$742 million for Jordan (1987) and \$2 billion for Turkey (1987).

¹⁴ Unlike other countries in the group, Turkey maintained a stable investment ratio (about 21 percent of GDP during 1981-87), largely financed through domestic savings (19 percent of GDP). Combined with stable terms of trade, the country's import capacity rose sharply, thus contributing to a 5 percent yearly growth in GDP during 1981-88. However, austerity measures introduced in 1988 to counter overheating and a severe drought reduced GDP growth to 1.1 percent in 1989.



the Syrian Arab Republic and Jordan, while a more gradual approach has been followed in Egypt and Cyprus. In Turkey, policy measures have been conditioned, on the one hand, by galloping inflation requiring fiscal and monetary restraint and, on the other hand, by the objective of resuming rapid growth which slowed down sharply in 1989.

Common to several countries has been the recognition of distortions introduced by currency overvaluation and measures to achieve more realistic exchange rates. Substantial devaluations were undertaken in 1989 in Egypt, Turkey and Jordan. Both Egypt and the Syrian Arab Republic are gradually moving toward a unified exchange rate, a move encouraged by the IMF.

Along with more realistic exchange rates, other measures have been introduced or strengthened, to promote exports and reduce imports, including agricultural products. Such measures have included revisions in the tariff structure for exports (Jordan, Syrian Arab Republic and Egypt) coupled with, in some cases, additional subsidies to exporters (Turkey). Private investment in agricultural export activities has been encouraged through generous tax holidays, for example, and other incentives (Turkey). The trade surplus recorded in the Syrian Arab Republic in 1989 — the first in over 30 years — was to a significant extent achieved through the successful promotion of private sector food and textile exports. In Cyprus, strong support is provided for the production of seasonally early crops for export.

Another primary concern remains the reduction of food import dependency through incentives to food crop production. However, adjustment-related policy changes have rendered the provision of such incentives increasingly difficult. All countries are making efforts to control public expenditure, a large part of which is in the form of producer and consumer subsidies. In Egypt, prices of many subsidized food items have been raised significantly and are expected to increase further as part of a recent agreement with the IMF. In Turkey, the cut in input subsidies which started in 1983 has been pursued, and the announced policy of Cyprus is to eliminate subsidies and reduce price control. On the other hand, food subsidies in Jordan's 1990 budget is estimated to remain at approximately the same level as in 1989; and the Syrian Arab Republic's pricing policy has been adjusted to offer higher profit margins to farmers, with

continuing government intervention in agricultural markets of virtually all crop commodities and some livestock products.

Despite budgetary difficulties all five countries have strengthened efforts to expand land reclamation — seen in some cases as one of the most viable means of achieving food self-sufficiency — improve land productivity and increase water resources. Several projects of afforestation and soil conservation (e.g. in Jordan) and land reclamation in desert areas (Egypt) have been launched. Large irrigation projects are under way in Turkey (southeast Anatolia) and in Syria-Jordan (for the joint construction of the Al-Wenhad Dam), increasing irrigation water supplies for both countries. A significant feature of several recent programmes has been the importance given to the preservation of the natural environment. The Governments of Cyprus and Jordan have taken the most explicit steps in this direction.

For Cyprus and Turkey, the request to become members of the EEC has been another policy feature of far-reaching potential consequences for agriculture in the two countries.

Recent commodity-specific measures include the following:

- In Egypt, the government has allowed farmers more discretion in deciding what crops to plant. Controls have been relaxed on the production of wheat, rice, sugar cane and lentils. Cotton remains the most regulated crop, with 100 percent procured by the government. Wheat deliveries became voluntary in 1987 and ever since farmers have sold wheat on the open market and received higher prices than those set by the government.
- In Jordan, government intervention in agricultural/food marketing has remained pervasive with price controls on food staples, animal products, vegetables, etc. However, area restrictions under the Cropping Pattern Programme have been reduced and are now confined to tomatoes and eggplants in the Jordan Valley. Measures have been undertaken to improve quality control to gain share in the winter market in Europe and the EC has offered favourable import conditions. Plans are afoot to diversify cropping patterns to put the country's limited land and water resources to maximum use. The sheep stock is being built up to reduce reliance on imported meat.



- In the Syrian Arab Republic, the pervasive state controls on agricultural production are being gradually relaxed. To stimulate output, hefty increases have been effected in the procurement prices of major crops. The private sector has been allowed a greater role in internal trade and exports, although the government remains the only buyer of wheat, barley and chickpeas.
- As part of the structural adjustment programme in Turkey, support prices of major products have been increased to world market levels, although the number of commodities with support prices has been sharply reduced. In March 1989, the support price of wheat was raised by 80 percent and a 100 percent payment on the delivery of the crop enforced compared with 1988's staggered payment schedule. The sharp increase in the support price for wheat was intended to boost production of this crop which was cut down by a severe drought.

EASTERN EUROPE AND THE USSR

Overview

In 1989, and particularly in the last quarter of the year, political and economic reforms have swept over all countries of Eastern Europe, profoundly affecting their socio-economic and institutional systems. In this initial stage of reform, traditional and new problems have combined to render the current situation particularly difficult. Many countries in the region had been grappling for years with problems of "stagflation" and economic imbalances which, while unrevealed, were similar to those sometimes faced by developed market economies. Now, in addition, these countries must face the complexity of a transition from planned to market economies without a supporting theoretical background, which makes this experience a unique one. Policy reforms, particularly those for agriculture — a key sector for each of these economies — have greatly varied both in content and breadth. These differences reflect not only the economic weight and structure of agriculture in individual countries but also — perhaps mainly — the form and extent of their political reform.

It is still too early to assess the impact of the above reforms on the region's aggregate agricultural performance, generally characterized by inadequate and erratic growth. Regional production growth in 1989 was above the average for the 1980s, but individual country performances varied widely. The aggregate increase largely reflected a production recovery in the USSR and Bulgaria after two years of set-backs. For all other countries, 1989 was a poor agricultural year.

Recent policy changes in food and agriculture

Agriculture is a key sector in all East European economies and the USSR. Even in the German Democratic Republic (GDR), the most industrialized of these countries, about 9 percent of the population is engaged in farming, with the share rising to 10, 13 and 14 percent respectively in Czechoslovakia, Hungary and the USSR, and to around 22 percent in Poland and Romania. By comparison, only 7 percent of the population in western Europe and 2.5 percent of that in the United States are engaged in farming.

While regional agricultural trade is a relatively small share of total merchandise trade (5 percent in 1987 as compared with 10 percent in



western Europe and 15 percent in the United States), it is a vital source of foreign exchange earnings and hard currency. In Hungary, the most agricultural export-oriented country of the region, about one-fifth of total imports are financed by agricultural exports. In the other countries, this share ranges from 2 to 3 percent in the German Democratic Republic and the USSR to 11 percent in Bulgaria.

The economic importance of the sector justifies the special attention given it recently through policy reforms. A review of the main policy changes is given here by country.

On the broad economic front, reforms in Hungary included the establishment of an active stock market and further expansion of independent commercial banking. Joint venture laws allow a share of foreign ownership and repatriation of profits by foreign companies — despite the drain on hard currency reserves this represents. Since 1988, enterprises have been free to trade most products with partners in the convertible currency area. Measures are being introduced to render the forint partially convertible by 1992 or 1993 and limitations on the use of hard currency for the imports of a large group of products have been reduced. For a transitional period the forint will be successively devalued against convertible currencies and revalued against the currencies of other Eastern European countries.

In the case of agriculture, important reforms took place in Hungary regarding the legality of private land holdings and the establishment of markets for land. As of 1 January 1990, remaining government controls on most retail prices as well as farm subsidies were removed. This, however, had the immediate effect of fuelling price inflation which is expected to exceed 20 percent in 1990. A major objective is to expand agricultural exports to hard-currency countries, in view of the heavy debt burden (debt servicing absorbs 60 percent of annual export earnings in convertible currencies).

Among other problems, the new government elected in March 1990 will be facing:

- a debt of \$20 billion, the highest in per caput terms in the COMECON, and increasing debt service;
- a huge current account deficit (\$1.4 billion in 1989);
- high and rising price inflation;
- a decrease in total trade caused by reduced trade flows with the USSR, traditionally Hungary's main trading partner;

- an initial problem of increasing unemployment caused by looser cooperation with COMECON countries; and
- difficulties in expanding privatization, with 90 to 95 percent of enterprises being state-controlled.

Poland has also introduced significant market-oriented economic and agricultural policy reforms. Such reforms are interesting for a number of reasons. First, they have been proposed quickly, and introduced rapidly and with great determination. Second, the reforms are economy-wide and not just limited to agriculture. They send a clear message to economic agents that they must adjust their behaviour to the new policy conditions or face the consequences of non-adjustment with no help from the state. Third, the reforms maintain a significant support from the population which believes that current hardship is for a better future.

In the *USSR*, agricultural policies underwent numerous changes in 1989 in the attempt to revitalize the agricultural sector, but uneven progress was made toward greater alignment of USSR agriculture with world markets. Reforms continued in the agricultural administrative system. The State Agro-industrial Committee (GOSAGROPROM), established in November 1985, was abolished and replaced by the Council of Ministers' Commission for Food and Procurement, though some responsibilities were passed to other central organs such as the State Planning Committee (GOSPLAN). More authority was given to the republics, which now have control over the placement of state orders with farms, the setting of regional prices, and the use of investment funds at the regional level.

On 8 August 1989 a regulation was introduced allowing hard-currency payments to producers for deliveries of specific crops in excess of average annual sales during 1981-85 or 1986-88, depending on crops. The objective is to stimulate domestic production and sales to the state. Hard-currency payments were introduced in order to allow farms imported inputs or other production requisites they may need. The increased sales to the state would then decrease import needs and save foreign exchange. The programme, which was introduced on an experimental basis for two years, was not expected to result in any appreciable increases in output in the current season in view of its late announcement.



Since 1 January 1990 a law on leasing went into effect, superceding previous legislations, and a new legislation on land use was adopted on 28 February 1990. It contained the following provisions:

- rights of inheritance for certain land uses;
- land can be for industrial, cooperative or joint venture users;
- conditions for rescinding the right to use the land;
- system of land fees; and
- environmental land protection.

While these laws are aimed at providing incentives to production, their impact is expected to be limited because the negotiation of leases is dominated by state and collective farms; the distribution system for essential inputs is inadequate and, perhaps more importantly, leasees are reluctant to enter into a contract that would expose them to a greater risk than the largely guaranteed pay of state and collective farms.

The price reform of wholesale and intermediate goods that was expected to enter into force in January 1990 has been delayed until 1991 at least. While the planned revision does not intend to introduce market-determined prices, it would reduce some of the current drawbacks in Soviet pricing policy. Current retail prices for agricultural commodities are still heavily subsidized and are far out of line with world prices.

The pace and nature of agricultural policy reforms in the *German Democratic Republic*, *Czechoslovakia*, *Romania*, and *Bulgaria* will largely depend on the outcome of the planned elections in the spring and early summer of 1990. Some significant policy changes have already been operated in these countries, however.

In *Bulgaria*, the government has taken steps to introduce market forces into its agricultural sector. The previous government had already introduced wide-ranging reforms allowing prices of some commodities to be set freely; direct participation of enterprises in foreign trade; the formation of small, private enterprises, including agricultural enterprises; and providing for private sheep and cattle breeders to be paid partly in hard currency. The current government has recently abolished all limits on landholdings by private farmers and will now allow them to export their produce directly and receive hard currency for 20 percent of their exports.

In *Czechoslovakia*, the parliament is currently debating legislation to expand the private sector, break up state monopolies and liberalize foreign trade. It is also amending its laws on joint ventures to allow 100 percent foreign ownership. On 12 April 1990, a number of economic reforms were adopted including:

- internal convertibility of the koruna for companies by the end of 1990;
- freeing of prices in stages by the end of 1990 together with the abolition of subsidies; and
- elimination of central planning.

A sharply deflationary budget was proposed by the government in March. It was designed to force factories, farms and offices to reduce costs, cut jobs and to create favourable conditions for a market economy.

Spending on defence and security was cut by 12.5 percent while subsidies to industry, agriculture and food processing were reduced by 10.7 percent. Some "outside shocks" which could hit the economy in 1990 are feared, however. Supplies of oil and raw materials from the USSR are increasingly uncertain in view of the demand from hard-currency oil importers. Another uncertainty is represented by the currency and economic union between the German Democratic Republic and Federal Republic of Germany. The German Democratic Republic is Czechoslovakia's second largest trading partner after the USSR and, virtually overnight, will become part of the hard-currency trading area. Neighbouring Poland and Hungary are also expected to import fewer of industrial products from the country.

In the *German Democratic Republic*, a major influence for agriculture would be its monetary and economic union with the Federal Republic of Germany. Farm prices in the Federal Republic of Germany are subject to the Common Agricultural Policy of the EEC and, given the high support interventions, these prices are usually above world prices. German Democratic Republic farm prices have been even higher and would tend to decline if fully liberalized as recent events suggest. However, this potential threat to German Democratic Republic farm production units (i.e. combinats) could be avoided by raising retail food prices which have been kept unchanged since 1952. The decision in February 1990 to abolish the massive consumer subsidies (30 billion GDR marks) was a step in this direction.



The new Government of *Romania* immediately rescinded restrictive measures which had formerly affected private farmers by imposing mandatory delivery quotas. More recently, the government passed a decree giving complete freedom to both cooperatives and private farms to make all planting decisions and to sell their output to any buyer for whatever price they can negotiate. The government has tentatively endorsed the breakup of the largest socialized farms but intends to pursue that goal with great caution. The present government intends to maintain a substantial degree of state ownership although that policy may change after the elections.

In view of the acute problems of domestic food supply, the new government suspended all food exports and diverted stocks intended for export to the domestic market. Also, in the first quarter of 1990, the government authorized \$150 million of food imports.

None of these four countries has yet confronted the issue of large consumer subsidies, as have Hungary and Poland. Such subsidies, on the one hand, severely strain these countries' budgets. However, with increasingly open borders and liberalization of foreign trade, pressure to slash these subsidies and align their consumer prices with world markets will certainly intensify. The governments all recognize the danger of inflation and would like to introduce reforms gradually.

Agricultural policy reforms: the case of Poland

Beginning in 1989, the Polish Government implemented a series of radical policy changes aimed at transforming Poland's state-run economy into one driven by market forces. Prices were liberalized, most subsidies were eliminated, and laws were passed calling for the breakup and privatization of the state-run monopolies. Immediate consequences for the consumers were a sharp increase in food prices, but also the disappearance of the shortages that had chronically characterized Poland. Farmers, on their side, found themselves in a very difficult position because procurement prices have lagged behind escalating input prices. In response, they are holding back output and thereby creating the risk of new supply shortfalls. Serious discord is developing between the farmers, who want a reinstatement of support, and the new government, which is determined to pursue its current market-oriented policy, involving the elimination

of farm support — a course which is also prompted by budgetary constraints.

Approximately 80 percent of Poland's agricultural output comes from private farms. These farms are small, averaging 5 ha in size, and tend to be fragmented. Throughout most of Poland's post-war history, however, government policy discriminated against private farmers and favoured state farms. Reforms implemented in the early 1980s raised procurement prices received by farmers and provided somewhat better access to inputs. Nevertheless, at the beginning of 1989, farmers were still squeezed between the state monopoly on input supplies and the state purchase and distribution of farm output. Private farmers faced serious profitability problems and a steady erosion of their income.

In 1989, the following measures were passed, aimed at the commercialization of Poland's agriculture:

- In January, a decree abolished the monopoly of the state purchasing organization, allowing any individual or enterprise to compete with the state for the purchase of agricultural output. At the same time the system of state-controlled procurement prices was eliminated. Instead, the government set minimum prices for bulk commodities. These minimums were raised several times in 1989.
- In August, a decree removed all legal restrictions on retail food prices. Subsidies were frozen at their current level. A wage indexation plan was established which guaranteed 100 percent compensation for all food price rises in comparison with compensation for price rises of other goods which was set at 80 percent.
- In October, all consumer food subsidies were removed, except for those on a few basic items such as 2 percent fat milk and the lowest-quality bread.

Despite its expected long-term benefits, an immediate negative result of the August decree was an acceleration of inflation, which was almost 600 percent for the whole of 1989, with retail food prices rising nearly 1 000 percent. By October, however, the consumer shortages endemic to Poland had disappeared.

These consumer price rises did not translate into income gains for the farmers, however, who found themselves worse off than before. While their production costs rose dramatically, the prices received for their output failed to



increase proportionally. Despite the January 1989 decree, there was only a limited entry of new enterprises competing with the state purchasing monopoly. The main barrier was the lack of private capital markets to finance starting costs. State organizations also were very slow to bid up procurement prices. They claimed that extremely high processing and marketing costs, which were no longer covered by subsidies, and slack consumer demand prevented them from offering higher prices to farmers.

In response, the farmers refused to sell their output to the state. Livestock farmers eventually began to sell their herds in greater quantities, compelled by the high cost of feed. However, grain farmers continued to withhold output, seeing more value in their grain stocks than in the rapidly depreciating zloty. This created serious raw material shortages in the milling and baking industries, with the result that Poland was forced to request donations of wheat from the West.

In January 1990, a far-reaching programme was introduced in agreement with the IMF to combat what had become hyperinflation. The main elements were as follows:

- A balanced budget. Most remaining subsidies were abolished, state investment and other expenditures were curtailed, and the system of tax collection was tightened.
- Strict monetary control through the introduction of positive real interest rates.
- The devaluation and limited convertibility of the zloty and the removal of most restrictions on imports and exports.
- Strict wage controls. Wage increases were to be limited to 5 percent of the rate of inflation with heavy taxes to be imposed on enterprises granting excessive wage increases.
- More aggressive action to break up monopolies. The meat and sugar monopolies were especially targeted.
- A social safety net, including unemployment compensation and targeted food assistance.

The initial result of this programme was a 78.6 percent jump in prices during January 1990, as most remaining subsidies were removed. However, price rises fell to just 23 percent in February and less than 10 percent in March. By the end of the first quarter, inflation appeared to be under control though at the cost of a 30 percent drop in industrial sales and a growing threat of

unemployment. Household purchasing power was down 24 percent in January and 17 percent in February.

While authorities had expected about 30 percent of the 2 620 state farms to go bankrupt, as of March only between 10 and 20 percent these farms had gone out of business and the authorities claim that most of the remainder are now well run and profitable. The farms managed to do this by specializing in crop production and eliminating unprofitable livestock operations.

But conditions have not improved for Poland's private farmers. Falling consumer demand continues to hold down prices for producers and virtually no progress has been made toward breaking up the state input monopoly. Grain farmers are still holding back output and livestock producers are cutting inventories because of the high cost of feed. As a result, red meat output is projected to decline 5 percent in 1990, following a 7 percent drop in 1989.

Because of the growing crisis in Poland's agriculture, the government has recently enacted measures partially reinstating support to producers. An Agency for Agricultural Marketing has recently been created. Its function will be to buy at market prices when supplies are high and to sell when there are shortages. It is already engaged in the purchase of hogs. Fertilizer subsidies have been reinstated, and the government is offering low-interest credit for the purchase of farmland. To give farmers more control over their affairs, the government has announced that elections will be held in the cooperatives which, under the previous regime, were largely coopted by the state. In addition, the APEX organizations governing the cooperatives will be eliminated.

The outlook for Polish agriculture is uncertain. In the long term, rising real prices for food products should stimulate supply while decreasing domestic demand and creating an exportable surplus of agricultural products. Poland has the potential to be a significant agricultural exporter (in contrast to the current non-competitive status of many Polish industrial products on the world market) but serious obstacles remain. With the fragmented farm structure and poor infrastructure, Polish farming remains a high-cost operation. These costs must be lowered for Polish agriculture to compete on world markets, but that will require huge amounts of capital, most of which must come from external sources.



Currently, a major debate is taking place among government officials as to the type of agricultural policy which Poland should pursue. The farmers are demanding substantial government support, warning that they will otherwise be forced to cut back output. But the question is who can pay for such support? The consumers are too poor, with a large share of their average income already being spent on food, and the resources that the state can devote are extremely limited.

DEVELOPED MARKET ECONOMIES

Overview

With generally favourable economic conditions sustaining demand, the current agricultural situation for developed market economies is characterized by tight markets. Despite a recovery in relation to earlier years in production of some key products like wheat, coarse grain and oil-seeds, prices tended to strengthen, thus allowing a reduction in subsidy intervention levels in several countries. Sugar prices sharply increased, though still generally failed to cover production costs. Overall, agricultural production rose by 4.1 percent in 1989, almost offsetting the cumulative 5 percent decline of the three previous years. However, this was entirely a result of North America's recovery from the 1988 drought, as production stagnated in western Europe and fell in Oceania. While prospects for global agricultural trade in 1989 were for an increase in volume, developed market economies were not expected to increase their import requirements.

A major feature of the market situation in these countries has been the reduction to very low levels of their cereal stocks.

While recent developments in agricultural markets in these countries have not arisen from any significant shift in their agricultural policies, they have presented positive short-term features — higher prices and farm incomes, lower subsidy payments and reduced storage costs. However, this situation needs to be assessed in a broader, longer-term perspective. There is a delicate balance between controlling the inherent excess production capacity in the area and safeguarding food security worldwide. This balance is all the more difficult to achieve considering the uncertain prospects for demand — stagnant, except for meat, in the industrial countries; potentially strong, but currently depressed by economic and financial difficulties in many developing countries; and unpredictable in centrally planned economies.

Selected policy issues affecting agriculture

Behind the serious imbalances and distortions existing in agricultural markets in most developed market economies are the excessive protectionist policies that have prevented an adequate transmission of market signals to farmers. Given the size of the countries involved, these policies are distorting markets worldwide. In recognition of this situation, a set



of market-oriented actions and principles for policy action were established by the OECD Council in May 1987. These constitute a reference framework against which agricultural market developments and the policies governing them are regularly monitored.

The third OECD annual report on agricultural policies, markets and trade in the area states that, for the second consecutive year, both the total and the rate of assistance to OECD agriculture declined in 1989.¹⁵ As measured by the percentage producer subsidy equivalent (PSE), the rate of assistance fell from 45 percent in 1988 to 39 percent in 1989 — with PSEs ranging from 5 percent in highly market-oriented New Zealand to 72 percent in Japan. However, the significant decline in assistance in 1989 primarily resulted from the strengthening in world agricultural prices and the appreciation of the US dollar. Only a small part of the decline was a result of policy changes supporting greater market orientation. Agricultural trade remained distorted by high levels of farm support, import barriers and export aids, despite generally higher prices.

Prospects for agriculture in developed market economies — and, indeed, worldwide — are crucially dependent on three policy areas currently taking shape: the outcome of the Uruguay Round of GATT negotiations (see Part One, Agriculture in the Uruguay Round of multilateral trade negotiations); the orientations of the 1990 United States Farm Bill; and the process of integration in the European Community. The latter two issues are reviewed here.

The United States: the 1990 Farm Bill

Most farm programmes introduced in 1985 under the previous United States farm bill are due to expire in 1990, unless extended or modified. Thus in February 1990, after consultation with a large group of interested parties, the Administration presented Congress with a new set of wide-ranging proposals. The Administration hopes to have the new legislation signed into law before the autumn 1990 planting season, but it may not occur before early 1991.

The 1985 Food Security Act had been introduced at a time of excess supply in relation to demand for many agricultural products as well as a strong US dollar, and

when the primary concerns were flagging United States exports and deteriorating farm financial conditions. Thus, its objectives were to make agriculture more competitive while maintaining direct income support until market conditions improved. Considering that United States agricultural exports expanded, farm income boomed (net farming income reached an all-time high of \$48 billion in 1989) and farm financial conditions greatly improved (farm debt fell 28 percent between 1983 and 1989), the 1985 legislation was a successful one — although the depreciation of the US dollar also helped, as did the increase in prices following the 1988 drought. Thus, the new proposals build on the subsidy-backed, export-oriented foundations of the 1985 legislation, taking into account recent developments in the market place.

The set of proposals cover a wide range of issues such as price and income support, environment, international and crop disaster assistance programmes, food and consumer services, farm credit, science and education, marketing and inspection services as well as a variety of miscellaneous provisions. The proposed legislation aims to introduce greater flexibility to the existing programmes. In particular, farmers would be allowed to respond to market signals rather than to government support, thus permitting a further reduction in government spending on farm programmes.

- Greater production flexibility is expected to be introduced through a Normal Crop Acreage (NCA) concept. The NCA would define substitutable crops, authorize crop-specific acreage reduction programmes, and authorize planting on idled acres in exchange for giving up specified deficiency payments. This flexible approach would allow farmers to plant crops based on market signals without loss of farm programme benefits. It should also lead to higher production of crops in scarce supply, lower production of crops in surplus, and provide environmental benefits.
- On grain reserves and stocks policy, one undesirable effect of the current farmer-owned reserve (FOR) has been that farmers have been encouraged to hold stocks in government-financed storage at times when commodities have been needed by the market. The Administration's recommendation is to set a multiyear programme based on annual contracts and

¹⁵ *Agricultural Policies and Markets and Trade: Monitoring and Outlook*. OECD, 1990.



characterized by greater simplicity and flexibility. It will also shift more of those decisions from the government to the farmer. In addition, the replenishment authority of the Food Security Wheat Reserve will be extended.

- The recommendations for triggered ARPs concerning wheat and feedgrains are that levels be triggered each marketing year on the basis of stocks-to-use ratios. If the ratio of ending stocks to total use is estimated to be more than 40 percent for wheat and 25 percent for maize, the ARP level would be 12.5 to 20 percent of the base acreage. If the stocks-to-use ratio is 40 percent or less for wheat and 25 percent or less for maize, the ARP level would be 0 to 12.5 percent. For cotton and rice, ARPs would be used to achieve, to the maximum extent practicable, a stocks-to-use ratio of 30 percent for cotton and 20 percent for rice.
- As regards loan rates for programme crops and soybeans, recommendations are to apply the loan rate formula specified in the 1985 Act for wheat and feedgrains also to upland cotton, extra longstaple cotton, and rice, and to extend the 1985 loan rate formula for soybeans. This would generally provide loan rates at 75 to 85 percent of previous market prices. All would be nine-month loans, but the secretary of agriculture could extend them if market conditions warranted it (except in the case of cotton which would have ten-month loans).

The proposed farm bill also envisages the continuation of export programmes. Thus, it proposes to extend the provisions of the Export Enhancement Programme (EEP) (although without mandatory programme levels or commodity programming requirements) as well as the Targeted Export Assistance Programme. One stated aim of the Administration is to maintain United States leverage during the current Uruguay Round of GATT negotiations, and not to give way on subsidies unilaterally in the absence of an agreement from competitors to follow suit. However, while efforts to increase agricultural exports would continue, a successful set of agreements on a reduction of trade distortions in late 1990 would open consideration to additional policy alternatives.

European Economic Community (EEC)

Economic integration: implications for agriculture. The European Economic Community

(EEC) is in the process of completing the economic integration of its member countries as envisioned over 30 years ago. EC member countries signed the Single European Act in 1987 which committed them to remove all barriers to the free movement of goods, people, services and capital. In February of 1988 they agreed to remove these barriers by the end of 1992, and they have moved rapidly toward meeting that deadline.

Completion of a single EC market would make it the world's largest with 322 million people, a GNP of \$4.6 trillion, and total food expenditure of around \$450 billion. The political and technical complexity of such an undertaking is enormous but the political will to date seems to be sufficient to make the venture a successful one. Commercial interests have taken EC politicians at their word and are actively pushing for the creation of a single market. There have been thousands of joint business ventures in anticipation of increased commercial opportunities, including more than 150 joint ventures across borders within the EC's food and drink industry.

The creation of a single market will require the elimination of physical, technical, and fiscal trade barriers between the 12 member countries of the EC. These barriers will have to be abolished and rules, regulations, and standards will have to be harmonized in order for internal EC borders to be eliminated. The driving force behind the harmonization process is the removal of physical trade barriers which take the form of frontier controls. Removal of frontier controls requires the harmonization of fiscal and technical regulations that exist between the member countries. The EC has identified 279 directives which, if passed, would allow the removal of frontier controls.

Consequences for agriculture. The completion of the internal market has several implications for EC agricultural production and trade. The major implications are:

- removal of border taxes and subsidies (monetary compensatory amounts or MCAs) on agriculture and food products which should result in true common farm prices and more reliance on comparative advantage production in the EC;
- harmonization of animal and plant health and food safety regulations, resulting in more competitive farm input and output markets and simplified EC market access;



- harmonization in sectors related to agriculture such as transportation and financial services and value added and excise taxes which should lower farm supply prices;
- income and employment effects which should enhance EC farm income and provide increased employment for marginal farmers;
- pressure to reduce nationally based farm support measures which should result in more competitive agriculture; and
- increased focus on environmental issues in agriculture which should result in more production constraints.

The successful completion of the internal market could lead to a gradual but significant change in the pattern of agricultural production and trade in the EC through the above factors. There are also important links between the 1992 programme and the GATT negotiations as well as special implications for developing countries' agricultural trade, official development assistance, and foreign direct investment.

Reform of CAP prices. The lifting of internal EC frontier controls could result in elimination of the current internal economic distortion in the Common Agricultural Policy (CAP) — the agrimonetary system. Current functioning of the agrimonetary system leads to "uncommon" prices for agricultural products and prices which are higher than they would otherwise be. The EC Commission has attempted for over 20 years to return to a true common price for farm goods and the elimination of internal EC borders may provide the occasion.

The crux of the problem is that EC member countries have been allowed to establish an exchange rate for agriculture (commonly called the green rate) that differs from the official exchange rate. CAP prices are denominated in European Currency Units (ECU). Before the green rates were introduced in 1969 farmers were to be paid in national currencies at the official exchange rate. Since 1969, when exchange rate realignments occurred in the EC, member countries established a separate exchange rate for agricultural products and farmers were paid in national currencies at the green rate of exchange.

The effects of green rates are: i) farm prices differ between member states, and ii) member countries maintain some degree of control over national farm prices and, therefore, farm incomes and food prices. For example, the EC support price for the 1988/89 marketing

year for feed wheat was \$179 per tonne in Greece and \$232 per tonne in the Federal Republic of Germany, while the so-called common ECU price was set at \$201 per tonne. Price differentiation is accomplished by negotiating devaluations or revaluations of the green rate of exchange against the official exchange rate. There are even different green rates for commodities in the same country and there are currently 40 green rates in the EC.

When green rates appeared in 1969, first in France, then in the Federal Republic of Germany, and later in all EC member countries, it became necessary to establish a method of countering the price differentials between member countries created by the green rates of exchange. Without a price-equilibrating mechanism at the border, agricultural products would flow into the intervention system of the country with the highest price. Since the CAP guarantees that the intervention system must accept all quantities that qualify, there would have been a tremendous distortion of trade as price differences between member countries for some commodities reached over 60 percent.

The mechanism to prevent this trade distortion was a series of border taxes and subsidies that offset the price differences between the member countries. These taxes and subsidies are called monetary compensatory amounts (MCAs). MCAs change when green rates are devalued or revalued or when the official exchange rates change as a result, for instance, of a realignment in national currencies against the ECU in the European Monetary System (EMS).

In 1984 a special "correction factor" for green rates was introduced which effectively pegged all green rates to the revaluing currency in the EMS, thus giving birth to the green ECU. This was deemed necessary because the Deutschmark had been — and has continued to be until recently — the revaluing currency in the EMS, and revaluation of the German green rate meant price decreases for German farmers. Pegging the green rates to the Deutschmark solved that particular problem since German prices remain unchanged as the result of an EMS realignment but all of the devalued currencies receive farm price increases when their green rates are devalued. The correction factor had increased to 14.5 percent in early 1990 meaning that EC farm prices for CAP products have been increased by at least 14.5 percent since 1984 because of EMS realignments.

TABLE 2.1. Annual changes in CAP prices in ECUs and national currencies

Year	Common prices	National currencies
	(ECU)	(from green rates)
	(..... %.....)	
1982/83	10.4	12.4
1983/84	4.2	6.9
1984/85	-0.5	3.3
1985/86	0.1	1.8
1986/87	-0.3	2.2
1987/88	0.2	3.3
1988/89	—	1.6
1989/90	-0.2	1.3
1990/91*	-1.1	0.2

* Proposed.

Source: *The Agricultural Situation in the Community*. EC Commission, several issues.

If economic integration is completed by the end of 1992 and borders are abolished, then it would not be possible to collect MCAs at the border. Alternative methods are technically feasible but are not considered acceptable because they would either be costly or susceptible to fraud. Hence it appears that the current system will have to be severely modified or abolished.

The move toward fixing exchange rates within such a narrow band that price differentials would be insufficient to cause trade movements based on green rate differentials could solve the problem. True common prices in agriculture would then be possible and no MCAs would be created. Production distortions created by the green rates would no longer occur if no compensating mechanisms were established. This would allow EC agricultural production to be based more on the principle of comparative advantage and would favour least cost producers throughout the EC.

Agricultural price negotiations in the EC would then be much more transparent and the problem created by the green rates and the correction factor would disappear. For example, the average weighted increase in CAP prices from 1982/83 to the proposed prices for the 1990/91 marketing year is 12.8 percent when measured in ECUs; however, when converted into national currencies, price increases to farmers had actually increased by 32.8 percent in the same period (Table 2.1).

In the medium to long term, abolition of the agrimonetary system would lead to lower average support prices and weaker intervention, thus resulting in a more market-oriented agriculture within the EEC. However, in the short term, prices are likely to increase because most countries would have to devalue their green rates, thereby increasing prices in national

currencies, in order to return to official exchange rates. It is impossible to estimate how much lower EC price levels would have been in the past in the absence of the agrimonetary system because prices are negotiated.

Harmonization of plant and animal health and food safety. The EC intends to intervene in the food trade only when consumer health and safety are at risk and when the free movement of products is threatened. In the absence of harmonized rules, the principle of mutual recognition would apply meaning that products legally manufactured and sold in one member country could be sold in all member countries.

Completion of the internal market will have major effects on the food and drink industry because non-tariff barriers have long existed and have been increasing in recent years. The EC Commission, in a partial study of non-tariff barriers in the EC food and drink industry, estimated that these barriers were costing the EC industry over \$1 billion annually. Harmonizing national standards so that one EC-wide standard is applied instead of 12 differing standards could allow EC food companies to realize greater economies of scale in food processing and distribution. In the event, EC food companies would be more competitive on the international market as well as within the EC market. The benefits of lower food prices, greater variety and food quality are expected to accrue to EC consumers.

Over 100 of the 279 directives required to eliminate internal borders are directed at the agricultural and food industry. Thirty-two of the directives will affect the food processing industry and food safety concerns in such areas as packaging, labelling, additives, nutrition, etc., and over 70 will have to harmonize rules pertaining to plant and animal health and food safety in areas such as pesticide residues, animal drug residues, inspection and certification controls, etc. Significant progress has been made in the harmonization process as nearly all of the agriculture-related directives have already been approved by the EC.

As regards food and agricultural imports, access to the EC could be enhanced if imports were treated in the same manner in all 12 countries because only one set of standards would have to be met instead of separate ones for each country. However, some standards may be set higher than previous levels in certain member countries which might constrain market access in some cases. Indeed,



it is the stated purpose of the EC to set standards at the highest level that negotiations will allow.

At this point it is unclear at what level this will be because there are enormous differences between countries. In the case of pesticide residues it appears that standards will be set at levels lower than the country with the strictest rules but considerably higher than countries with the highest tolerance levels for residues.

The result of the harmonization of plant and animal health rules will be a more competitive EC farm supply industry and, therefore, a reduction in farm input costs. Production patterns could then change as costs per unit of production are affected by geographical location in the EC. A more competitive food processing sector could also bid up the price of farm produce in some countries as food companies search for low-cost raw material throughout the EC. The food processing sector will likely push for lower CAP prices because of the need for least-cost sourcing of raw materials.

Third country exporters to the EC are concerned about how EC imports will be treated. The concern is particularly focused on how third country testing and certification procedures and results will be treated by the EC. The assessment of conformity to EC regulations and quality assurance will require testing and certification procedures that may result in the exclusive use of EC laboratories. The current round of GATT negotiations could play an important role in the EC's harmonization process. In the mid-term GATT review in April, the EC agreed to allow internationally recognized scientific bodies to provide the scientific evidence in trade disputes that involved sanitary and phytosanitary rules. The EC is more likely to accept internationally recognized standards if there is a GATT agreement. If not, the EC might then set standards for the EC which would become de facto standards for the rest of Europe, and this could result in trade diversion if they were to differ significantly from other internationally accepted standards.

Harmonization in sectors related to agriculture.

Transportation. Elimination of border restrictions is expected to reduce transportation costs by 30 to 40 percent as average truck speeds would significantly increase from the current EC average of 12 km/h. When the transportation directive is fully implemented, which will

facilitate return hauling, then even greater savings are expected. These savings may result in a relocation of food processing plants and should be particularly beneficial to the Mediterranean member countries of the EC.

Financial services. The banking industry will be subjected to a more competitive environment as national banks become EC banks and provide services throughout the EC. More competitive rates of interest should decrease credit and mortgage costs for farmers in some countries allowing for more capital investment. Freedom of capital movement was allowed on 1 July 1990 and is expected to result in a more open and competitive environment for investment and financial services.

Value added taxes (VAT). Current VAT rates for food vary widely among EC countries. Harmonizing VAT will be an extremely difficult task and it is still too early to tell what rates will apply after 1992. VAT rates will converge, but not necessarily be equalized, in such a way that the effects of VAT on trade flows and tax revenue will be minimized.

Excise taxes. There are enormous differences between excise taxes on cigarettes, alcohol and fuel throughout the member countries. For example, Greece levies a tax on cigarettes equal to 13 US cents per carton while Denmark's rate is \$16.60 per carton; Italian fuel taxes are over twice the level of the Spanish tax and Ireland taxes pure alcohol at ten times the rate of Portugal. When these tax rates are harmonized, consumption patterns and farm input costs will be affected.

Income effects. The increase in GNP as a result of completion of the internal market is estimated by the EC Commission to be 5 to 7 percent over a five-year period. Many economists feel that this is an overestimate while others feel that it is underestimated by a factor of five. All agree that incomes will rise. An increase in income will be accompanied by a small but significant increase in food consumption, particularly of meat where EC per caput consumption is only two-thirds of North American consumption.

There are also income distributional effects that should increase incomes in economically disadvantaged regions of the EC where food consumption is relatively low. The agreements on CAP reform measures in February 1988 included a doubling of structural funds (from



\$8 billion to \$16 billion) destined for economically disadvantaged areas which are not able to withstand the competitive pressures created by the 1992 programme.

There is also a general expectation that a significant flow of investment to low-wage areas will occur as a result of the economic integration process. In the event, it would reinforce the redistributive effects of the increase in structural funds and the anticipated increase in GNP. Food costs are also expected to fall as a result of the 1992 programme and, in combination with the income distributional effects plus the increase in GNP, should result in a significant boost to food consumption in the EC. In turn, this may lead to a lower EC surplus food production and reduced agricultural exports.

Employment and farm structure effects. The EC Commission estimates that completion of the internal market will create a net addition of five million jobs. Many of these jobs will be created in the construction industry where farming skills are easily adapted. It is likely that some of the marginal farmers in the EC will be forced to abandon farming because of lower CAP prices in the future while others will abandon farming because alternative employment is available. In addition, many part-time farmers reside in economically disadvantaged areas where structural funds are to be doubled and where investment activity will increase.

The long-term macro-economic effects of the 1992 programme should thus have beneficial effects for food consumption and farm income. Of particular interest is the possibility of structural adjustments in the farming sector. With farmers abandoning farms for better-paying jobs made available by the 1992 programme, a consolidation of small farms into more economically-sized farms would help to alleviate the farm income problem in some areas of the EC. Such a development would reinforce the net farm income effects generated by lower input costs because of a more competitive demand by food processors for raw materials.

Nationally based programmes threatened. The elimination of internal borders will raise the question of nationally based production quotas for milk and sugar as well as import quotas allocated on a national basis such as those for bananas and beef. The problem of beef import quotas has already been solved but preferential

treatment for banana imports by some EC member countries may have to be adjusted after 1992.

The milk quota regime is likely to be altered after 1992 because low-cost dairies will apply pressure for the transfer of quotas across national boundaries. Such a development would be in line with the objective of the 1992 programme to promote competition and could lead to lower milk prices. Such a development would also make the EC more competitive in the world dairy market.

Farm support derived from national treasuries accounted for at least one-third of all EC farm support from 1981-86 when CAP guarantee and guidance expenditures are included. The large affluent member countries spend more — as indicated by national treasury payments from France and the United Kingdom — accounting for 42 and 38 percent, respectively, of total support payments for their domestic farmers for the 1981-86 period.

It is difficult to estimate the production effects of national farm aids because a significant portion of them are direct transfer payments which do not enhance production. Social security payments in the form of pensions, health benefits and other payments to curb intensive production could not be objected to on competitive grounds but rebates, tax incentives, etc., which do provide advantages for farmers, would seem to be incompatible with a borderless economic market. Conversion of these production-enhancing payments to direct payments would be compatible both within the GATT framework and with the 1992 objective of promoting competition.

Environmental focus on agriculture. The 1987 Single European Act has a strong environmental component directed at agriculture. (Intensive agriculture has been associated with ground water pollution, soil erosion and exhaustion, and even acid rain, which is brought about by methane and ammonia emissions from intensive livestock operations.) The 1992 programme provides the legal framework and EC-wide institutions for environmental groups and governments to address environmental issues related to agriculture. It has been estimated that EC agricultural production will be lower ten years from now because of the environmental constraint.

The development of an EC environmental agency has been approved and subsequent

TABLE 2.2. EC external trade, 1987

Country	Exports to:	Imports from:
	(.....%.....)	
United States	21	17
Japan	5	10
Latin America	5	7
Africa	7	17
Asia	10	10
Near East	10	7
Other	42	32
Total	100	100

Source: Ghosh, *European affairs*.

work will likely provide an even stronger rationale for transfers to farmers who lower the intensive use of inputs or who otherwise farm in a more environmentally safe manner.

Trade effects of the 1992 programme. From the above discussion it seems clear that EC agriculture could undergo a relatively dramatic change in production and trade patterns in the 1990s in the post-1992 integrated EC economy. The most obvious effect is a more competitive EC food processing and distribution sector. Economies of scale should accrue to the food companies that are able to focus on an EC-wide market without barriers. Economic efficiencies gained within the EC should result in more EC exports of processed food products to the world market.

It is difficult to judge whether there would be increased access to the EC market as a result of harmonization of standards. National and regional tastes will not disappear, which means there will be a premium on marketing. Higher standards for food safety could create conflicts with non-EC countries not able to meet the new standards. The EC will be particularly careful with tolerance levels for pesticides and animal drug residues. In addition, community preference may remain in place which means that the variable levy system for imports would continue protecting EC production from import competition.

An increase in food demand as a result of higher income levels and a redistribution of income should stimulate imports of animal feedstuffs. The amount imported will depend on the degree to which EC grain prices are reduced as a result of the elimination of the agrimonetary system.

A reduction in EC grain exports onto world markets should result from lower EC prices and slower production increases, as well as increased food consumption which reduces agricultural surpluses. This outcome depends on many other factors, not least of which is the rate of EC yield increases and the ability of the CAP budget to finance exports. Budget pressures should be alleviated by a more market-oriented EC agriculture and the emphasis on environmental degradation and food safety concerns should reduce intensive farming systems and thus slow yield increases for some crops.

Links between the 1992 programme and GATT. To some extent the outcome for agriculture

under the 1992 programme will depend on the results of the GATT negotiations. The EC would benefit from a more liberalized world trade environment for industrial goods, services and intellectual property — all of which stand to gain from the 1992 programme. A GATT agreement on the major issue of agriculture would complement the trade liberalization effects of the 1992 programme. Without such agreement, the EC might turn inward and concentrate on the internal aspects of the integration effort, ignoring external effects. EC harmonization of animal and plant health and food safety regulations, for instance, might then become more problematical for non-EEC countries.

The potential for an agreement on plant and animal health and food safety is another important link to GATT. The Community's standard-setting process could be guided by the GATT framework as the EC countries have agreed with other GATT members to use recognized international standards for resolving trade disputes over food safety and plant and animal health.

GATT members are also considering the use of relevant international scientific organizations for determining scientific consensus on standards. The three organizations that GATT members have recognized are: the Codex Alimentarius Commission of FAO/WHO; the Plant Protection Convention of FAO; and the International Office of Epizootics. A GATT agreement on a dispute-settlement mechanism would be useful to the external dimension of the 1992 programme where disputes are likely to arise because of new standards.

Implications for developing countries. EC trade with developing countries is the largest of all the regions as they account for over 40 percent of EC exports and imports (Table 2.2). Closer economic integration within the EC could have important trade-creation and trade-diversion effects which developing countries will feel. For



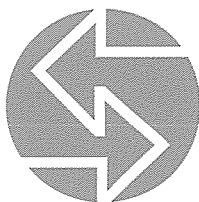
example, it has been estimated that diversion could lead to a 9 percent decline in total non-fuel exports from the Near East (including Turkey) to the EC. Trade creation resulting from internal EC export growth is not expected to match the fall in the Near East region's exports.

The most important effects in agriculture are likely to be felt by the ACP countries which enjoy special treatment under the Lomé Convention. For example, the ACP countries export around 100 000 tonnes of bananas

annually to the EC under preferential arrangements. Difficulties could arise from trying to maintain indefinitely this form of special treatment in a borderless EC. It is impossible to envisage precisely at this stage what the solution might be but the fact that ACP countries have increased in number from 44 in 1975 to 68 under Lomé IV (December 1989), while their share of EC imports has dropped from 8 percent to 3.8 percent during this period, is a cause for concern.

PART THREE
STRUCTURAL ADJUSTMENT AND
AGRICULTURE

I. A review of the issues



STRUCTURAL ADJUSTMENT AND AGRICULTURE

I. A review of the issues

THE NEED FOR ADJUSTMENT

A crisis unfolds

During the 1950s and 1960s developing countries experienced moderate to strong growth performances which, to a great extent, could be attributed to a relatively favourable world economic environment. While the terms of trade for most countries declined slightly during the 25 years after the Second World War, this was offset by inflows of private and official capital. The greater part of this financial inflow went to non-agricultural projects such as mining, manufacturing, and infrastructure. Yet agriculture performed reasonably well and, overall, developing countries benefited from a relatively stable world trading system of fixed exchange rates, preferential trading arrangements, and an increasing number of operative commodity agreements.

So sustained had been the growth performance of the Third World that, toward the end of the 1960s, issues regarding distribution of the gains from this growth received increasing emphasis, even to the point of making equity considerations integral to the definition of "economic development". While earlier development theory had tended to stress the likelihood of a positive relationship between income inequality and growth, by the early 1970s quite the opposite perspective gained respectability. This "basic needs" approach stressed the alleviation of poverty as the central concern of economic development. The emphasis on distribution tended in general to benefit agriculture for it was in the rural areas that the vast majority of the poor were found.

At the same time that a consensus emerged on the centrality of distribution to the development process, several shocks to the international system occurred, dramatically altering the international economic environment. In 1971, the stability of the international trading system was shaken by the United States Government's decision to suspend the fixed-price gold convertibility of the dollar. This measure ushered in a new set of

international rules for trade and finance based on variable exchange rates (at least for the OECD countries). This new exchange rate regime proved particularly problematic for many developing countries because of the vulnerability of their economies to international price fluctuations and the relative lack of trained personnel with the skills necessary to manage increasingly complex economies. The collapse of the post-war system of international regulation coincided with a period of rising inflation as well as the petroleum price increases of late 1973-74 which generated substantial trade surpluses and deficits for developing country oil exporters and non-oil exporters, respectively.

Well before "structural adjustment" gained wide currency, a period of economic adjustment in the developing countries resulted from these two shocks. Accumulating foreign debt from both private and official lending sources to fill current account gaps became one manner of adjustment. The overwhelming consensus that emerged in the 1970s maintained that growing indebtedness did not represent a long-term danger. On the contrary, in the absence of indebtedness, the hard currency surpluses of the oil-exporting countries would not have been "recycled" into the expenditure stream, with the probable result being a world recession. Furthermore, as a result of the inflation of the late 1970s (itself fuelled by demand pressures arising from borrowing), real debt burdens of even the most indebted countries remained quite low except in a few cases. Most years, negative real interest rates characterized commercial bank loans and even more so official loans which were made on extremely concessionary terms. Along with the rise in petroleum prices, many other primary products enjoyed buoyant world market conditions which added to the impression that debts would be manageable (see Box 3.1).

The debt burden as such arose at the beginning of the 1980s when recession in the developed countries resulted in the desired and relatively sudden elimination of world

BOX 3.1

Debt accumulation and resource transfer

"With high inflation and a depreciating dollar, a developing country would be better off borrowing dollars than paying cash. In view of these financial inducements, a finance minister who abjured borrowing would be like a purchasing manager who preferred paying retail for goods that were being sold at wholesale prices. If he wasn't fired, he should have been."

Alfred J. Watkins¹

Why countries borrowed

The two oil price shocks of 1973-74 and 1979 forced major adjustments by the world's economies. Oil-consuming developing nations, always in need of large amounts of capital to accelerate development, now required even more capital to finance rapidly rising fuel costs. To meet this need, they borrowed. By the mid-1970s, the depreciating US dollar, rising primary commodity prices, and real interest rates approaching zero made borrowing profitable. Finance officials turned to the private financial markets to obtain inexpensive capital.

Why banks lent

OPEC nations generally made large, short-term US dollar deposits in banks outside the United States, and outside the control of that country's banking authorities. Banks are not required to keep non-interest reserve accounts with the Federal Reserve on their off-shore deposits nor on their off-shore loans. They could lend out the entire amount, paying more for these deposits than for domestic deposits, but still make a higher profit by lending to developing countries.

To minimize the profit risks caused by variations between short-term deposit interest rates, long-term loan interest rates, and high rates of inflation, banks introduced floating rate loans. Unlike domestic borrowers in the United States who resisted floating

rate loans, developing countries accepted them.

Banks had a huge supply of funds to lend. Developing countries had the commodities which were rising in price, a willingness to accept long-term floating rate loans and a need for funds. Inflation made the developing countries appear wealthier and their debt smaller.

How debt accumulated

As the world recession emerged in the early 1980s, the debt crisis matured. Oil-importing developing countries suddenly found their economies confronted by the most perverse concomitance of circumstances: economic recession and rising protectionism sharply reduced import demand for their products; their terms of trade collapsed as oil and oil-based energy prices initially soared and prices of other commodities fell; commercial bank eagerness to lend turned to eagerness for repayment; and interest rates sharply increased in real terms, resulting in higher service payments and an appreciation of the dollar. Policy-makers and international development agencies faced a profoundly different world economic environment where repaying loans dominated both discussions and decisions on how economic adjustment should proceed during the 1980s.

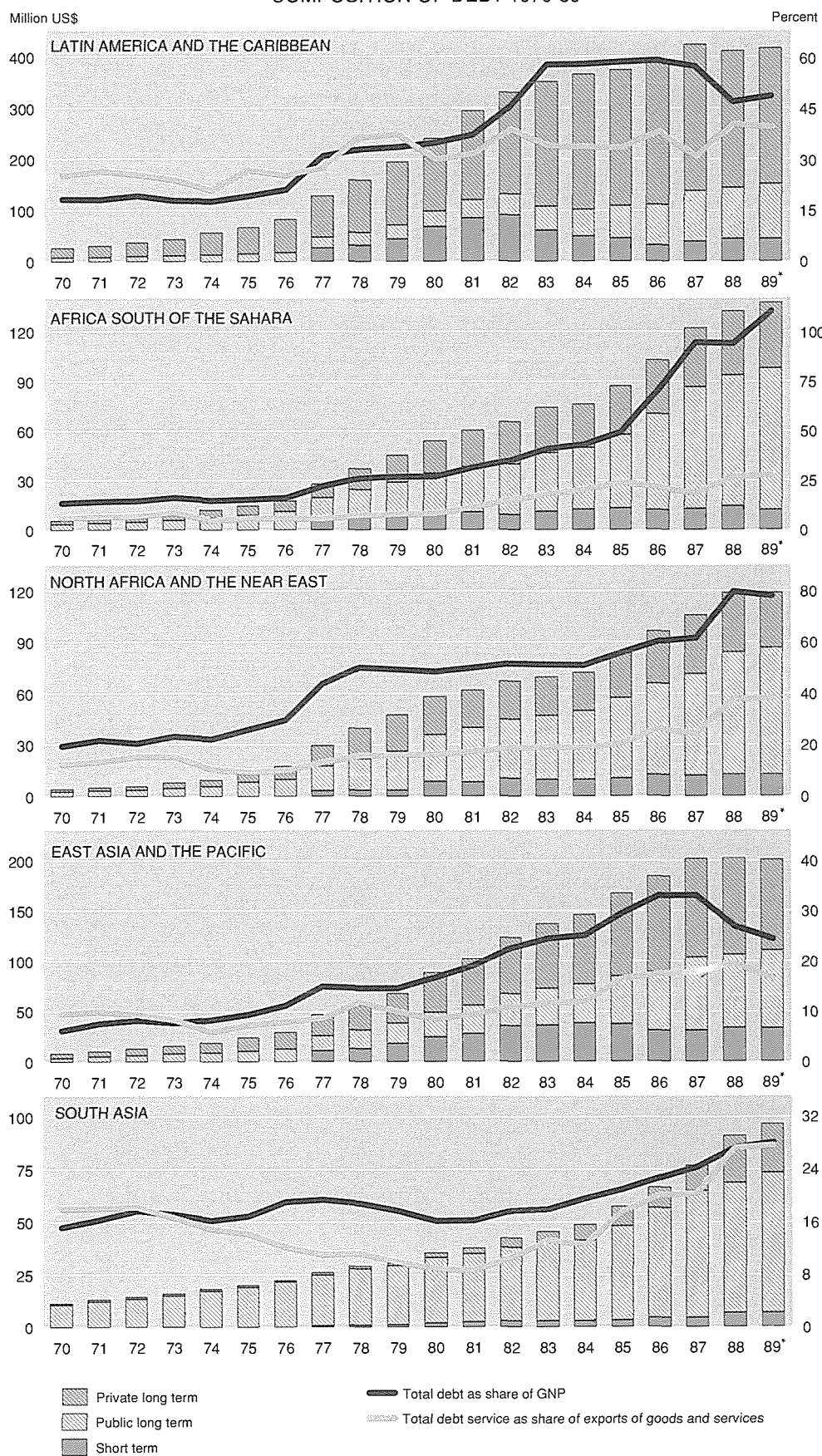
The debt picture in the 1980s

Overall, the Latin America and the Caribbean region has the largest amount of debt, peaking at over \$440 billion in 1987 but remaining close to that level since. The region is also the largest borrower of loans from private financial institutions. Its debt-service/export ratio fluctuated around 35 percent between 1982 and 1986, but reached nearly 40 percent in 1988 and 1989.

Total debt as a percentage of GNP, however, is highest in Africa, south of the Sahara, where it reached 110 percent in 1989. Official lending dominates the African debt portfolio at a ratio of about two to one. The North

¹ A.J. Watkins. 1986. *Till debt do us part*, Landham, MD, University Press of America.

COMPOSITION OF DEBT 1970-89



Source: World Bank

* Estimate

Africa/Near East region has also accumulated a high percentage of total debt to GNP during the 1980s, growing from around 48 percent in 1980 to 78 percent by 1989.

East Asian and Pacific countries have reduced debt-service ratios and debt to GNP in the last half of the 1980s. Total debt as a percentage of GNP dropped from a high of 33 percent in 1986 to under 25 percent by 1989. Debt service as a percentage of exports has remained under 20 percent for the East Asian countries, significantly lower than any other region. The South Asian region is notable for its low volume of total debt compared to the other regions. On the other hand, both the debt-service to exports and the total debt to GNP ratios have steadily increased throughout the 1980s.

about \$20 billion yearly in the early 1980s. Subsequently, however, these developing countries became net capital exporters. In each year since 1984, there was a net transfer of resources from developing countries to their creditors that reached about \$37.6 billion in 1988 and was estimated to increase to \$42.9 billion in 1989.

Debt and resource transfer

As a combined effect of these events, there was a net transfer of resources from the developing to developed countries. Countries which were formerly net importers of capital became net exporters without having achieved the mature development stage in which it would be normal for them to be net capital exporters. This occurred as swollen interest bills overtook shrunken new net lending in many developing countries, particularly in heavily indebted ones. While indebtedness resulting from annual interest payments in excess of new lending may not be unhealthy *per se*, it becomes so when income generated by the capital inflow is not sufficient to pay the interest while also allowing rising investment (and consumption). A reverse transfer of resources of an "abnormal" character then takes place as consumption and investment are squeezed in order to pay (by foregoing real resources) interest obligations that cannot be financed by net capital inflows.

The World Bank estimates net transfers on account of all debt to the 111 developing countries under its Debt Reporting System (DRS) at



inflationary pressures. Somewhat different from previous recessions, the severe downturn reflected in part the conscious policy of some developed country governments to arrest inflation through restrictive monetary policy, even at the cost of high unemployment. The recession contradicted forecasts in the 1970s that a fall in the price of oil would be accompanied by increased growth in the OECD countries. Yet a year or two into the new decade, recession brought strongly positive real interest rates (indeed, at unprecedented levels) and primary product prices dropped sharply in real terms. At this point developing countries, particularly the more heavily indebted, turned to crisis-borrowing on starkly unfavourable terms compared with those of the previous decade (see Box 3.2).

Problems of adjustment had not been uniform among developing countries during the 1970s, nor had growth performances shown a consistent pattern (see Part Two, Developing country regions, for an empirical review of these differences). Through debt accumulation, the larger, more developed "middle-income" countries generally managed to sustain a level of output growth well above that of population. This was particularly true of Latin America as well as a few countries in Africa and Asia. In Africa, on the other hand, adjustment to the shocks of the 1970s came with slower growth rates. For the decade as a whole, output expansion in the sub-Saharan countries barely covered population increases. Similarly, the problems of the 1980s varied among countries. In the case of the more developed countries of Latin America and a handful of countries in Africa and Asia (for example, Nigeria in Africa and the Philippines in Asia), debt service became *the* problem, with development stunted by net outflows of capital to satisfy debt-service obligations. In Africa south of the Sahara, debt also played a negative role along with deteriorating terms of trade.

During the 1970s, major policy changes occurred in the developing world in response to the more difficult international economic environment, and pressures for policy adjustment greatly increased with the debt crisis. The industrial countries slid progressively into recession from 1980 to 1982, with unemployment rates reaching unprecedented levels for the post-war period. The equally unprecedented drop in primary product prices followed the recession and negatively affected virtually all developing countries. The fall in oil

prices which led to the threat of default by Mexico in 1982 dramatically focused attention on the debt crisis. With this crisis, the priorities of the donor countries and multilateral agencies began changing from development to debt management. Reflecting in part the economic policy changes of the major market economies, structural adjustment became equated with policies of trade liberalization, market deregulation, privatization and fiscal austerity.

Adjustment and development

Structural adjustment is a dynamic process which aims at establishing a viable relationship between the domestic and international economies and laying the foundations for sustainable growth. As such, it need not be confined to a specific package of policy reforms undertaken under the aegis of international lending agencies. Ideally, as internal and external difficulties emerge, adjustment policies should be implemented before the economy deteriorates to the point where the country loses its capacity to repay loans and debts and the lending agencies have to be approached. Forced adjustment is likely to be very disruptive.

Moreover, many of the issues involved in structural adjustment have an impact on general development problems. A structural adjustment programme (SAP) is not neutral in its effects on development. It is now clear that adjustment is a long-term process, and the economic and political impediments encountered in its implementation, as well as the likely institutional, social and political repercussions of reform, have long been familiar to those engaged in development planning. A structural adjustment programme sets priorities, explicitly or implicitly, in terms of sectoral growth, income distribution, and food and export crop production. As such, it has direct implications for the country's development objectives, as well as its international trade relations, sectoral objectives and food security.

It can be reasonably argued that while adjustment was imperative for developing countries in the 1980s, it has often changed development priorities. A survey of multilaterally financed adjustment programmes reveals an emphasis on increasing foreign exchange availability as one way to facilitate debt-service payments. Until the end of the 1980s, the International Monetary Fund (IMF) and the World Bank supported the position that developing countries needed to pay their debts



in full, and that a confrontation over doing so could undermine international financial stability.¹ Thus, to a great extent structural adjustment had a debt-driven, foreign exchange emphasis. It is conceived that if debt-reduction schemes had begun at the beginning of the 1980s, the nature of adjustment, even within a liberalization framework, might have been quite different. Be that as it may, policies of stabilization and structural adjustment that emerged within deteriorating economic

conditions, and the pressing need to meet debt obligations, did not provide an overall development strategy.

Policies of adjustment

All countries are involved, to varying degrees, in international commodity and financial markets and are affected by changes in the world economic environment. Favourable changes such as buoyant commodity prices and easy access to borrowing on soft terms foster overall growth in developing countries and, if accompanied by relevant domestic policy measures, could reduce poverty, malnutrition, illiteracy, and perhaps environmental degradation.² When external conditions are less favourable because of

¹ "The biggest and most lasting casualty of a conflictual breakdown of loan agreements would be the confidence indispensable to future economic and financial relations. . . . At stake may be not only future financial flows to developing countries, but the preservation of the whole international framework." *Developing country debt: implementing the consensus*, p. x. Washington, World Bank, 1987.

² Environmental issues were treated in *The State of Food and Agriculture*, 1989, Part Three.

BOX 3.2

Interest rates

Nominal interest rates on loans to developing countries were significantly below export price increases during much of the 1970s, implying that interest rates were negative in real terms. This was more markedly so after the first oil price boom in 1973-74, with the sharpest decline in real rates accruing to oil-exporting countries in North Africa and the Near East. After a temporary return to positive interest rates in 1975, these remained negative until the end of the decade. Unlike the first round of oil price increases, and counter to the expectations of many countries that continued to borrow, the decline in interest rates following the second oil price rise of 1979 proved short-lived. Indeed, with austere monetary policies being introduced in the industrial world, rates turned strongly positive between 1981 and 1983. Much of the increase was associated with the growing importance of loans on a short-term floating interest basis, which involved considerable amounts of unanticipated payments. Nominal interest rates tended to fall

between 1985 and 1987, then firmed again in 1988 and further in the first half of 1989 before easing somewhat subsequently. Real interest rates fluctuated widely, as did export prices, but generally tended to decline in recent years in all regions except North Africa and the Near East. Nevertheless, they remained significantly higher than prior to the 1981-83 financial crisis.

Real interest rate levels are at the core of the external debt problem. Many estimates have been made demonstrating the considerable impact that even a small change in interest rates can have on the level of net financial transfers from indebted countries. Whatever the expected benefit from current efforts of debt reduction, these efforts can be offset by monetary tightness in creditor countries. The surge in interest rates in industrial countries since the last quarter of 1989 does not augur well for the immediate future.



developments in the world economy, achieving these social and economic goals through adjustments in domestic policies poses a much more difficult challenge.

The most important external variables facing the developing countries are the terms of trade and trade barriers to their exports; interest rates on old debt and new borrowings; and the amount and terms of official development assistance (ODA).³ These factors are influenced primarily by the actions of the developed countries, particularly the larger OECD countries. While the point is obvious, it is worth stressing that the economies holding the lion's share of world production and trade

determine conditions in world markets and, therefore, the developing countries' circumstances. The greater part of developing country trade and borrowing is with developed countries, not among the developing countries themselves.

Changes in the international economic environment have an impact on each national economy. These changes eventually produce responses on the part of producers and consumers after reaching them in a form mediated by government policy. "Adjustment" as such is the process of producers and consumers responding to external changes, and "adjustment policies" are government actions to mediate those changes.

From the 1950s through the 1970s there was a strong, though certainly not unanimously supported, development strategy suggesting that countries could benefit from policies which

³ Much of the commercial bank debt of developing countries has been contracted on the basis of variable interest rates, usually linked to the London inter-bank borrowing rate (LIBOR).

Nominal and real interest rates,¹ developing regions, 1971-80 and 1981 to 1988

Region	1971-80 Average	1981	1982	1983	1984	1985	1986	1987	1988
(..... %)									
Sub-Saharan Africa									
<i>Nominal</i>	5.4	8.3	7.5	7.1	5.4	5.8	5.4	4.1	4.0
<i>Real</i>	-7.6	16.8	15.5	9.3	1.6	9.5	11.4	2.4	-0.2
Latin America & Caribbean									
<i>Nominal</i>	8.9	13.9	12.6	10.7	11.1	9.1	8.2	7.6	8.0
<i>Real</i>	-9.4	15.0	20.3	17.1	8.7	13.9	21.4	2.7	2.3
South Asia									
<i>Nominal</i>	3.2	4.9	5.8	5.0	5.5	5.0	5.3	4.6	5.3
<i>Real</i>	-9.4	3.3	10.7	8.8	3.7	9.5	10.6	-5.7	-2.8
East Asia & Pacific									
<i>Nominal</i>	7.7	10.2	9.9	8.8	8.8	8.0	6.8	6.3	6.2
<i>Real</i>	-4.9	8.6	14.8	12.6	7.0	12.5	12.1	-4.0	-1.9
North Africa & Near East									
<i>Nominal</i>	5.9	7.2	8.2	8.9	8.5	7.5	6.9	7.1	6.9
<i>Real</i>	-26.9	-4.3	10.5	20.7	10.4	13.5	46.1	25.7	20.3

¹ Average interest rates on new commitments, nominal and adjusted for changes in export unit values.

Source: *World Economic Outlook*, IMF, October 1989; *World Debt Tables 1989-90*, vol. 1. World Bank.



would reduce the impact of external changes on the domestic economy, either by delaying them — thus providing more time for adjustment — or by counteracting them. Import substitution, agricultural marketing boards and controls on foreign exchange mobility are examples of such “isolating” adjustment policies at the national level. Cooperative international actions by producer and consumer countries in the formulation of commodity agreements is another example and constitutes the general thrust of multilateral action within the United Nations Conference on Trade and Development (UNCTAD). These policy measures reflected a judgement that greater openness to the world economy carried with it costs as well as benefits. In general, the industrial economies, being more flexible and integrated as well as economically stronger, were better able to reap the benefits while minimizing the costs of openness than were the developing countries.

In the late 1970s this view, which stressed the “vulnerability” of developing economies to international fluctuations, lost currency in the policy debate. During the 1980s, “adjustment” came to refer to a particular way of responding to external changes, namely by facilitating their transmission through the domestic economy. Therefore, “adjustment” came to imply trade liberalization and a reduction of government intervention in markets. According to this approach, policy changes are seen as necessary not just to accommodate external shocks but also to reform ill-advised policy measures of the past. The extent to which the difficulties faced by developing countries in the 1980s were more the result of unsustainable national development policies and policy errors (such as excessive government intervention) than of external shocks (such as the debt burden, declining terms of trade and increased developed country protectionism) is a difficult matter to assess. On one hand, a number of countries succeeded in overcoming external shocks and maintaining or restoring some degree of macro-economic balance (see the section, Macro-economic overview, in Part Three, II). This suggests that sound national policies can make a difference. On the other hand, if the more inward-oriented policies of the 1960s and 1970s were detrimental to developing country growth, the fault does not lie with the implementing governments alone. Without development assistance from the international agencies and bilateral donors, the

implementation of inward-oriented development plans would not have been possible. Indeed, in the 1960s and 1970s, it was not unusual for some of these agencies to recommend policies they now eschew as counterproductive.

The liberalization approach to adjustment had its antecedents in the stabilization programmes of the IMF, associated with the Stand-by Credit Arrangements established as early as 1952. These Stand-by Arrangements involved short-term lending by the IMF to countries suffering temporary balance-of-payments deficits. Quickly disbursed and having brief repayment periods, these “stabilization programmes” placed strict conditionality on the credit extended, usually involving currency devaluation and demand-contracting measures. In the 1960s and 1970s, the IMF initiated other balance-of-payments support programmes within the general framework of stabilization.⁴ While in the view of the IMF these stabilization programmes served to foster recovery and improve the general economic health of a country, they are not growth or development programmes, nor are they intended to be. Their short time perspective alone restricted their role to stabilization. In the mid-1970s, the IMF began somewhat longer balance-of-payments support programmes (the Extended Fund Facility) and, in the mid-1980s, involved itself in three-year programmes (the Structural Adjustment Facility).

By the beginning of the 1980s, the overwhelming majority of developing countries required support for balance-of-payments problems that varied from acute to catastrophic. It was then that the World Bank entered into the field of policy-conditional lending for balance-of-payments support, following the orientation of the IMF. Since the institutional function of the World Bank is to foster development, the lending programmes were longer, more concessionary, and with a more formal emphasis on growth and stabilization than those of the IMF (see Box 3.3).

Structural adjustment policies were recommended in the framework of loan conditionality. These policies required changes in both short-term economic management as well as institutional reforms. Their aims were a

⁴ Among these were the Buffer Stock Facility (for countries engaged in buffer stock arrangements under international commodity agreements); the Compensatory Financing Facility (for countries affected by price fluctuations of primary products); and the Oil Facility (for oil-importing countries).



more efficient allocation of resources and the enhancement of the economy's ability to withstand external shocks. These goals were to be achieved through devaluation, monetary and fiscal restraint (together with improved revenue performance, reduction of government intervention in markets, including labour markets) and liberalization of external sector policies. The expectation was that this set of policies would, *inter alia*, create incentives for the reallocation of resources toward internationally traded and/or tradable commodities (exportables and import substitutes) and would, therefore, enhance the foreign exchange position of countries implementing such policies — both through increased foreign exchange earnings and foreign exchange savings.

An important aspect of such loans and their associated policies is that they do not present a growth package as such. Conventional economic development plans involve a combination of more or less complex programmes and projects along with the means for their funding within an overall policy framework. Such programmes and projects, through their capacity-expanding potential and aggregate demand management, promote overall economic growth.

For the most part, the primary function of structural adjustment loans (SALs) is not to create assets directly, i.e. they are not project loans, nor are they restricted to the purchase of particular goods. Their primary role is to serve as a general balance-of-payments support. Such support relieves the foreign exchange

BOX 3.3

The World Bank and structural adjustment lending

As the terms of trade deteriorated, real interest rates increased and the debt crisis matured, the World Bank introduced structural adjustment loans (SALs) and sectoral adjustment loans (SECALs) in the 1980s. By linking these loans to policy changes and institutional reforms, adjustment lending is intended to help developing countries better absorb the impact of external shocks. In 1988, adjustment lending operations totalled \$19.9 billion to 59 countries and represented 25 percent of the Bank's annual lending.

The World Bank's language of adjustment¹

Adjustment. Policies to achieve changes in internal and external balances, changes in the structure of incentives and institutions, or

both. A focus on internal and external balances is referred to as stabilization. A focus on incentives and institutions is referred to as structural adjustment.

Structural adjustment. Policy and institutional reforms aimed at improving resource allocation; increasing economic efficiency; expanding growth potential; and increasing resilience to future external shocks.

Stabilization programme. An economic programme, often supported by the IMF, aimed at achieving stabilization. Stabilization programmes involve particular fiscal and monetary policies.

Structural adjustment loans (SALs). World Bank lending that supports structural adjustment. The macro-economic framework in which these loans have been made has often included IMF stabilization targets, to which structural elements were added. SALs were introduced to address balance-of-payments needs, provided stabilization and structural adjustment policies were undertaken. All such loans have provided general import financing. *Sector adjustment loans (SECALs).* World Bank lending for structural

adjustment in a sector, focusing on major institutional and micro-economic policy changes. Some SECALs have provided general import financing, while others have confined financing to the import needs of particular sectors.

Hybrid lending (HL). Bank lending for adjustment in a sector, but with an investment component. Hybrid lending may also finance a part of the sectoral investment programme, or may finance recurrent expenditures if the budget is temporarily strained.

¹ Source: *Adjustment lending: an evaluation of ten years of experience*. World Bank, 1989.



constraint. The strategy is that the policy changes on which lending is conditional induce asset-creating behaviour on the part of investors, ranging from small-scale farmers up to large businesses, by altering the matrix of economic incentives. If the policy packages prove unsuccessful — and both the World Bank and the IMF have unilaterally or bilaterally ended adjustment programmes (i.e. suspended loan disbursements) — the recipient government may be left with an increased debt but no material assets on the other side of the ledger. In this way, unsuccessful adjustment programmes have a potentially high cost.

As mentioned above, major policy adjustments were required by developing countries as a result of unsustainable national development policies in the context of the greatly altered international environment. Adjustment by the developing countries included adapting to the conditions created by external developments beyond their control, i.e. the recession of the early 1980s, high real interest rates, and budgetary deficits in some developed countries that affected the availability of international liquidity and its distribution among countries. Given that the economies of the developed countries are generally much stronger and more flexible, the pressure on developing countries to adjust is striking for its asymmetry. Relevant adjustments by the developed countries could have been a reduction in the excessive levels of farm support, freer trade in primary products, and measures to achieve private and public debt relief. While initiatives emerged such as the Baker and Brady debt plans, they did not result in a systematic adjustment of developed country policies. This gap highlights the relative absence in the international system of any mechanism for encouraging adjustment in the industrial countries, particularly the larger ones.

Unfortunately, the structural adjustment policy packages provoked contentious debate over abstract and generalized issues of economic philosophy. Too often, the emphasis focused on justifying normative judgements rather than on the actual behaviour of economies in the developing world. From the point of view of the developing countries, the debate over adjustment appeared all the more frustrating because of the asymmetry in pressures for policy change. For example, while governments of developing countries came under heavy external pressure to liberalize trade, the OECD countries became increasingly

protectionist with respect to many agricultural products and labour-intensive manufactures.

When one steps back from the heat of the debate over whether a particular set of policies brought improvement or deterioration in economic conditions, the most important lesson of the 1980s is the great diversity of developing country experiences. As shown in Part Three, II, in some detail, this diversity is quite striking with regard to agriculture, and correspondence between growth performance and policy regimes is not always easy to trace. In part, this may be because it is too soon to assess the impact of policy changes, particularly ones that act indirectly upon producers, such as deregulation and privatization. Furthermore, performance in agriculture is crucially dependent on the caprice of nature. This has been the case in Africa where apparent disaster cases have changed in a remarkably short time to become success stories as the result of favourable rains, then reversed again when drought returned. Others argued that unfavourable weather and falling primary product prices unveiled the underlying structural problems prevalent in some countries.

With the important exception of several Asian countries, the 1980s brought declining per caput incomes to most of the developing world. In terms of development, a "lost" decade has passed and both government and donor agency policy-makers look back to find little to inspire pride of accomplishment. After three post-war decades that involved grappling with the problems of economic growth, the 1980s introduced the grimmer task of confronting economic decline.



AGRICULTURE, ECONOMIC CRISIS AND STRUCTURAL ADJUSTMENT

Impact of economic crisis on agriculture

The previous section outlines how the combination of an adverse international economic environment and misguided domestic economic policies resulted in deep and widening economic imbalances in a number of developing countries. Experience has taught that, as empirically shown in Part Three, II, Macro-economic imbalances and agriculture, these developments and the accompanying economic crisis can adversely affect agriculture in several ways.

First, economic recession reduces the effective domestic or internal demand for food and other agricultural commodities, the magnitude of the reduction depending on the elasticities of demand with respect to income for these commodities. The effects of such price reductions depends on the ability of the country to channel the resulting surplus into export markets or, in the case of import substitutes, on the substitutability of imported and domestic commodities. To the extent that smallholders produce commodities primarily consumed in the domestic market, or commodities that have limited export potential, the reduction in effective demand results in proportionately larger price reductions. Thus, depressed demand may worsen the distribution of farm income.

Second, the general shortage of foreign exchange associated with an economic crisis also affects agriculture. Foreign exchange shortages reduce a developing country's ability to acquire modern inputs such as machinery, fertilizers, chemicals, etc., the majority of which are usually imported. The overall impact of such a shortage includes a reduction in yields and, depending on the substitutability of specific inputs (e.g. hand labour for herbicides), a reduction in total production. Although larger commercial farmers are the principal users of imported inputs, a number of intermediate and small producers also use them. Thus, such shortages could affect a wide spectrum of farm producers.

Foreign exchange shortages may also lead to a deteriorating infrastructure. The maintenance of agricultural markets, and access to them, requires continuous outlays on roads, storage facilities, communications and inspection of

graded exports like coffee. Reductions in government expenditure on such public goods and services as the result of a shortage of foreign exchange can negate the positive incentive effects arising from relative price changes.⁵

Another adverse consequence of foreign exchange shortages is the scarcity of consumer goods that it may entail. Since the limited amount of foreign exchange available is often allocated by the state in such a way that essential imports like food, investment goods or spare parts are given first priority, imports of consumer goods may be seriously curtailed. Hence, the quantity and variety of goods that can be acquired by the rural population may be restricted and may, therefore, constitute an additional (non-price) disincentive to the expansion or even maintenance of agricultural production.

Third, expansionary monetary and fiscal policies associated with an economic crisis, together with fixed nominal exchange rates, affect different sectors of the economy in different ways. The prices of goods and services produced mainly for the domestic market tend to increase under the pressure of the excess demand created by expansionary policies. Services in this case include public services, transportation and marketing services, housing and residential land, but also goods protected by import quotas, or goods with low values in relation to their transport costs. At the same time, nominal prices of exportable goods and import substitutes (i.e. tradables) do not change to the same extent since they are linked to those in world markets. Such goods include most agricultural commodities and a variety of manufactured products. Thus, tradables generally suffer a relative price loss *vis-à-vis* non-tradables. The effect on the prices of agricultural tradables relative to non-agricultural tradables depends, *inter alia*, on the differences in their levels of protection.

Thus, there is strong evidence that price incentives for agricultural producers generally

⁵ "... cuts in the public expenditure programmes [as part of structural adjustment] are often indiscriminate... affecting the supply of critical public goods and services. The results of this survey show that if these cuts are large they can negate the expected supply response from improvements in price incentives..." Ajay Chhibber, The aggregate supply response. In S. Commander, ed. *Structural adjustment and agriculture: theory and practice in Africa and Latin America*, p. 66. London, Heinemann, 1989.

TABLE 3.1 World Bank agricultural policy conditionality in 79 SALs and SECALs, financial years 1980-1987

Policy Area	Africa	Asia	Near East & North Africa	Latin America & Caribbean	Total
Agricultural pricing (input & output)*	30	3	3	9	45
Trade liberalization	16	8	5	23	49
Institutional reform	29	5	7	15	56
Credit and banking	11	3	1	9	24
Public investment budget	21	1	5	10	37
Macro-economic	20	2	6	10	38
Environment	3	1	1	2	7
Total loans evaluated	36	11	9	23	79

* Interest rate subsidies are included under "credit and banking".

Source: N. Ridley and C. Roberto, (Undated.) *Policy areas and trends in adjustment lending related to agriculture, FY 1980-87*. (mimeo) Washington, D.C., Agricultural Policies Division, World Bank.

suffer during economic crises such as those widely experienced during the 1980s. Also, the degree to which production incentives are affected varies widely between countries and commodities.

Finally, the general climate of instability associated with an economic crisis can be quite debilitating for agriculture, particularly because of the long cycles of crop and livestock production processes. The combination of unanticipated external shocks and inappropriate policy responses — responses that magnify rather than dampen the effect of the shocks — can produce extreme instability in the form of rapid inflation and sharply fluctuating relative prices. For example, if marketing and processing margins remain relatively constant, changes in crop prices following changes in exchange rates can result in much greater short-term changes in producers' returns.

To the extent that structural adjustment policies succeed in reversing or reducing the disequilibria that are at the root of the economic crisis, they can be expected to have beneficial effects on the agricultural sector by:

- reversing domestic demand contraction and increasing demand for agricultural products;
- increasing the return to tradables compared to non-tradables through devaluation;
- increasing foreign exchange availability;
- reducing the general climate of economic instability and policy uncertainty.

Agriculture under structural adjustment: agricultural policies and their effects

The general framework of agricultural policies.

As noted above, structural adjustment programmes can have a positive impact on agriculture and hence on rural populations by reducing or eliminating disequilibria in the general economy. The total impact also depends on the measures that directly influence the agricultural sector through their effects on

production, distribution, marketing and pricing of inputs and outputs.

In the 1980s, "structural adjustment" came to mean liberalization, deregulation, and privatization. In this approach, the key objective of adjustment is to improve resource allocation and to reduce or eliminate inefficiencies created by government intervention. Thus, in general, the programmes seek to reduce the government's role in the production, pricing and marketing of agricultural commodities.

Furthermore, agricultural adjustment lending aims at enhancing growth by changing the price and non-price incentive structure for agriculture in relation to other sectors, as well as within the agricultural sector itself, in ways that promote a more efficient use of resources. In practice, attempts to achieve this general objective have been made using a variety of policy instruments, with the release of the loan's funds being conditional on their implementation. A recent review of World Bank adjustment lending (SALs and SECALs) containing a degree of agricultural conditionality indicates that the major policy areas appearing in more than one-half of the 79 loans were institutional reform, trade, and agricultural input and output pricing (Table 3.1). There was considerable regional variation in the relative importance of the policy areas, with agricultural pricing being more important in Africa and trade policy more important in Latin America and the Caribbean.

Pricing policies: their objectives and possible impacts. Around 60 percent of all adjustment loans (80 percent in Africa) and virtually all agricultural SECALs included some form of agricultural pricing conditionality, with input and output pricing conditions assuming almost equal significance. According to the World Bank review, these pricing conditions have been considered critical to the success of loans in



almost one-third of the cases. However, successful implementation of agricultural pricing conditions occurred in only two-thirds of the cases reviewed and in less than one-half in the Latin America and the Caribbean region. The general thrust of pricing conditionalities has been to "get prices right", in the sense of adjusting domestic prices according to their border equivalents.

For the agricultural sector, the relative price is usually taken to be that between the sector as a whole and non-agricultural goods and services. Empirically, it is frequently expressed as the ratio of an index of prices received by farmers to an index of non-farm prices; that is, an indicator of the agricultural/non-agricultural terms of trade.⁶ In the developing countries, four instruments have been used as the primary tools to affect the terms of trade between agricultural and non-agricultural sectors: i) direct price controls on output; ii) trade protection (tariff and non-tariff); iii) input pricing and allocation; and iv) different taxation regimes between sectors.

Many developing countries attempt to apply direct price controls on agricultural products, but they are often ineffective except in the case of export crops. Administering comprehensive domestic price controls lies beyond the financial capability of a large number of developing countries. Even for export crops, the combination of taxation and low prices paid by marketing boards has often produced disincentives for these crops. In order to remedy this situation, adjustment programmes aim at raising producer prices to the levels of international prices, thereby also raising farmers' returns. The net effect of such policies on government tax revenue depends on the extent to which the reduction in revenues resulting from tax rate decreases is offset by the higher tax base brought about by increased exports. In addition, even if total export tax revenues decline, the net effect on the government budget depends on the changes in government outlays resulting from the reform or dismantling of inefficient parastatals as part of a general market liberalization policy.

Often, governments introduce price controls on major agricultural products to stabilize producer and consumer prices. Arguments for

intervention and price stability are based on considerations such as the effect of risk and uncertainty on agricultural production induced by price movements. Although the debate on the effects of price stabilization on consumer and producer welfare is inconclusive, the importance governments of both developed and developing countries attach to stability suggests that most would be reluctant to forego it as part of a structural adjustment programme if it were conditional to complete price decontrol. The policy measures chosen by governments attempting to achieve stability, however, can and should minimize the inefficiencies and financial costs associated with such interventions.

Trade liberalization may benefit agriculture directly and indirectly. The lowering or abolition of trade taxes improves the relative prices of exportable commodities. In addition, a reduction in trade protection of manufactured goods, which generally receive higher rates of protection than agricultural tradables, improves the terms of trade between agriculture and the manufacturing sector. Deregulation and privatization of trade and marketing channels may also favour agricultural producers (see the section, Institutional reform).

However, several factors may contribute to reversing these benefits either in part or completely. In the case of agricultural products which had benefited from import protection tariffs, trade liberalization would tend to reduce their relative prices.⁷ The net effect on the prices of such commodities will depend on the extent to which they were protected and on the degree of reduction in trade protection.

Existing evidence suggests that most policies preceding structural adjustment programmes (SAPs) have kept prices of agricultural commodities low compared to other sectors. This direct and indirect "taxation" (or negative protection) was usually stronger for exported commodities than for imported commodities (see Box 3.4). Thus, by eliminating the distortions induced by price incentives, structural adjustment policies improve the terms of trade of agricultural tradables; and within the agricultural sector, such adjustment would seem

⁶ Governments throughout the developed and developing countries influence this ratio; indeed, it is doubtful that there exists a country in which this ratio exclusively reflects market forces.

⁷ A thorough review of the issues arising from trade liberalization for agricultural commodities — sometimes called bringing domestic prices in line with "border" prices — is found in C. P. Timmer. 1986. *Getting prices right: the scope and limits of agricultural price policy*, particularly Chapter 4. Ithaca, Cornell University Press.

BOX 3.4

Discrimination against agriculture

It is by now commonly acknowledged that both economy-wide and sector-specific policies in many developing countries have discriminated against agriculture, resulting in a negative environment for agricultural production and investment opportunities.¹

The sources of bias can be classified as direct or indirect. Direct discrimination includes those policies, widely implemented by parastatal marketing boards, that drive a "wedge" between prices received by farmers and border prices of tradable commodities. Indirect discrimination, on the other hand, is the outcome of policies not directly aimed at agriculture, including exchange rate overvaluation that tends to depress prices of exportables and import substitutes, and policies that protect industry and favour industrial import substitution, thereby raising the prices of non-agricultural goods and reducing agricultural prices in real terms. The effects of direct policies are readily observable and can be measured by the difference between domestic and border prices at the prevailing exchange rates. Indirect discrimination is harder to measure, as is the degree of overvaluation and the effects of trade protection on non-agricultural prices.

Evidence of effective protection of agriculture compared to the manufacturing sector in selected developing countries during a 25-year period shows that, with the exception of the Republic of Korea, all countries have ratios of less than 1.00. This is a clear indication of discrimination against agriculture. Nevertheless, there has

been some improvement in the treatment of the agricultural sector during the latter period. The protection ratios reported incorporate policies directly affecting inputs and outputs but ignore indirect effects resulting from overvalued exchange rates.

An integrated approach that attempts to evaluate both direct and indirect protection or taxation of exported, as opposed to imported, agricultural commodities has been undertaken recently by Krueger, Schiff and Valdés.² The direct effect was calculated as the difference between the producer and border prices, while the total indirect effects reflected the discrepancy between the actual producer price and the one that would have prevailed in the absence of overvaluation and in

the absence of all policies influencing trade. The results of this study are summarized as averages in two five-year periods for export and imported food crops. Negative numbers (percentages) denote negative protection; that is, the price that producers actually received was below what they would have received under a free-trade regime at realistic exchange rates with no direct intervention. For instance, producer prices for cocoa in Côte d'Ivoire in 1975-79 were about one-third, and in 1980-84 one-half, of what they would have been in the absence of their negative protection.

The degree of negative protection compared with that of imported food products, which in most countries are positively protected, is noteworthy. The widespread drive for self-sufficiency in food staples is reflected by the lower negative or even positive protection provided for these products, usually through the use of import tariffs or licensing. In addition, the effectiveness of

² A.O. Krueger, M. Schiff and A. Valdés, Agricultural incentives in developing countries: measuring the effect of sectoral and economy-wide policies. 1989. In *The World Bank Economic Review*, 2:3(255-271).

Protection of agriculture compared with manufacturing in selected developing countries

Country and period	Year	Relative protection ratio ¹
In the 1960s		
Mexico	1960	0.79
Chile	1961	0.40
Malaysia	1965	0.98
Philippines	1965	0.66
Brazil	1966	0.46
Korea, Republic of	1968	1.18
Argentina	1969	0.46
Colombia	1969	0.40
In the 1970s and 1980s		
Philippines	1974	0.76
Colombia	1978	0.49
Brazil ²	1980	0.65
Mexico	1980	0.88
Nigeria	1980	0.35
Egypt	1981	0.57
Peru ²	1981	0.68
Turkey	1981	0.77
Korea, Republic of ²	1982	1.36
Ecuador	1983	0.65

¹ Calculated as $(1 + \text{EPR}_a)/(1 + \text{EPR}_m)$, where EPR_a and EPR_m are the effective rates of protection for agriculture and the manufacturing sector respectively. A ratio of 1.00 indicates that effective protection is equal in both sectors, a ratio greater than 1.00 means that protection is in favour of agriculture; and less than 1.00, in favour of industry.

² Refers to primary sector.

Source: *World development report*. World Bank, 1986.

¹ For a wide range of examples and evidence see *African agriculture: the next 25 years*. FAO, 1986; *Potentials for agricultural and rural development in Latin America and the Caribbean*. FAO, 1988; *World Development Report*. World Bank, 1986.

marketing boards is often limited, especially for those food crops involving large quantities traded through informal markets. Many export crops such as tropical beverages have only a small domestic market and generally

have to be processed before consumption, thus making single-channel marketing less difficult.

The magnitude of negative protection is striking, especially for exportables, as is the fact that

protection was greater in 1980-84 than in 1975-79 in most countries studied. The greater significance of indirect negative protection is also notable and implies that governments may be unwittingly penalizing agriculture.

Direct, indirect, and total nominal protection rates for exported products

Country	Product	1975-79			1980-84		
		Direct	Indirect	Total	Direct	Indirect	Total
(..... %)							
Argentina	Wheat	- 25	- 16	- 41	- 13	- 37	- 50
Brazil	Soybeans	- 8	- 32	- 40	- 19	- 14	- 33
Chile	Grapes	1	22	23	0	- 7	- 7
Colombia	Coffee	- 7	- 25	- 32	- 5	- 34	- 39
Côte d'Ivoire	Cocoa	- 31	- 33	- 64	- 21	- 26	- 47
Dominican Republic	Coffee	- 15	- 18	- 33	- 32	- 19	- 51
Egypt	Cotton	- 36	- 18	- 54	- 22	- 14	- 36
Ghana	Cocoa	26	- 66	- 40	34	- 89	- 55
Malaysia	Rubber	- 25	- 4	- 29	- 18	- 10	- 28
Pakistan	Cotton	- 12	- 48	- 60	- 7	- 35	- 42
Philippines	Copra	- 11	- 27	- 38	- 26	- 28	- 54
Portugal	Tomatoes	17	- 5	12	17	- 13	4
Sri Lanka	Rubber	- 29	- 35	- 64	- 31	- 31	- 62
Thailand	Rice	- 28	- 15	- 43	- 15	- 19	- 34
Turkey	Tobacco	2	- 40	- 38	- 28	- 35	- 63
Zambia	Tobacco	1	- 42	- 41	7	- 57	- 50
Average		- 11	- 25	- 36	- 11	- 29	- 40

Source: Krueger *et al.* 1989, op. cit.

Direct, indirect, and total nominal protection rates for imported food products

Country	Product	1975-79			1980-84		
		Direct	Indirect	Total	Direct	Indirect	Total
(..... %)							
Brazil	Wheat	35	- 32	3	- 7	- 14	- 21
Chile	Wheat	11	22	33	9	- 7	2
Colombia	Wheat	5	- 25	- 20	9	- 34	- 25
Côte d'Ivoire	Rice	8	- 33	- 25	16	- 26	- 10
Dominican Republic	Rice	20	- 18	2	26	- 19	7
Egypt	Wheat	- 19	- 18	- 37	- 21	- 14	- 35
Ghana	Rice	79	- 66	13	118	- 89	29
Korea, Republic of	Rice	91	- 18	73	86	- 21	74
Malaysia	Rice	38	- 4	34	68	- 10	58
Morocco	Wheat	- 7	- 12	- 19	0	- 8	- 8
Pakistan	Wheat	- 13	- 48	- 61	- 21	- 35	- 56
Philippines	Corn	18	- 27	- 9	26	- 28	- 2
Portugal	Wheat	15	- 5	10	26	- 13	13
Sri Lanka	Rice	18	- 35	- 17	11	- 31	- 20
Turkey	Wheat	28	- 40	- 12	- 3	- 35	- 38
Zambia	Corn	- 13	- 42	- 55	- 9	- 57	- 66
Average		20	- 25	- 5	21	- 27	- 6

Source: Krueger *et al.* 1989, op. cit.



to benefit export more than import substitution commodities. However, the extent of improvement in relative agricultural prices depends also on the changes in non-agricultural prices, including input prices. Hence, if price signals for agriculture are to be fully effective they should become part of an overall strategy that includes prices of both agricultural commodities and non-agricultural goods and services.

Liberalization and accommodating external changes by opening an economy further are not without cost, however. By definition, such an opening reduces the institutional arrangements that cushion the impact of external shocks on domestic producers and consumers. In the 1980s, this increased exposure to external changes coincided with a worsening of the terms of agricultural trade in international markets. Furthermore, to a large extent, the disincentive signals sent by world markets with regard to developing country agriculture reflect market interventions or price distortions introduced by protectionist policies in most industrial countries. While the costs of ignoring international prices should be taken into account, an additional question can also be raised regarding the extent to which developing countries should align their price structures to distorted world market prices.

Supply response to price incentives. Bringing domestic prices closer to their border equivalents often implies increasing the prices of both agricultural inputs and outputs. The incentive to farmers will be reflected in the net return per unit of output. Even if the net return is positive, most experts agree that price liberalization can induce changes in the composition of commodities produced but, by itself, it cannot prompt a substantial increase in sectoral or aggregate growth in the short term.

Three major reasons account for this assessment of the role of prices. First, a rise in the *aggregate* supply of the agricultural sector in response to agricultural prices is limited by the relatively inelastic supply of resources in many countries, especially land. However, when policies and governmental intervention have been distorting land-use patterns, a move toward liberalization can lead to rapid gains in aggregate output. Furthermore, despite considerable seasonal underemployment of rural labour in developing countries, evidence suggests there is little or no idle labour during peak planting and harvesting periods. These

shortages partly explain why various empirical studies have indicated that non-price factors are quite important in explaining agricultural growth. One recent study demonstrates that low levels of food stocks can influence both the area planted and use of non-household agricultural labour.⁸ Estimates of supply elasticities are much higher when price and non-price factors are combined, for example, in irrigation projects. Investment in non-price factors should thus be viewed as complementary to a pricing policy.

In addition, public goods such as roads, irrigation systems, and research and extension services typically take years to construct or establish, so that their potential contribution to agricultural growth will only be measurable in the long term. The neglect and limitations of physical infrastructure and the human resource stock (scientists, technologists, planners, managers etc.) in many countries since the 1970s have created an enormous backlog of requirements. Increasing the supply of these public goods and services may be a necessary condition for output to respond to price incentives. Ironically, meeting macro-economic conditionality requirements has frequently worsened the scarcity of such public goods, because governments have had to severely curtail public-sector investment and recurrent expenditures in order to reduce fiscal deficits. Such situations represent one of the many potential conflicts in the design and implementation of structural adjustment programmes. Unless the agricultural sector is given a sufficiently high priority in the allocation of public-sector funds, agricultural growth may be slowed during the adjustment process, despite relative increases in producer prices.

Second, adjustment of agricultural prices by a reduction in direct taxation can be of relatively minor importance if protection of other sectors continues and the exchange rate remains overvalued. A recent analysis of 18 developing countries over the period 1975-84 shows that the indirect taxation burdens caused by exchange rate overvaluation and industrial protection policies were generally much more important than the difference between domestic and international agricultural prices (see Box 3.4).

⁸ S.K. Kumar. 1988. Effect of seasonal food shortage on agricultural production in Zambia. In *World Development*, 16: 9 (1051-1063).



Finally, the effects of price adjustments are likely to have a greater impact on larger farmers. Smallholders tend to produce food and consume most of it, particularly in the low-income developing countries. Moreover, empirical evidence suggests that smallholders are severely limited in their ability to expand output, owing to a lack of land in some cases and a lack of labour in others. Apart from land reform, overcoming these constraints requires access to credit and appropriate technology. However, adjustment programmes usually implement a policy of monetary austerity by raising real interest rates, making access to credit more difficult for smallholders.

Another important supply constraint is the time available to women for carrying out their tasks in crop production. The case of weeding is illustrative. Timely weeding is critical for raising yields in the short term without requiring complementary inputs. Weeding is sometimes done by men but more commonly by women, even on crops managed by men. The weeding period coincides both with the rainy season when health hazards are highest, and the "lean period" when food stocks are lowest. In order to spend more time on weeding, women have to reduce time spent on child care, cooking, collecting firewood and water, and other household tasks.⁹ Women may be unable, or unwilling, to reduce further the time spent on these tasks, essential for the maintenance of health and nutrition standards, in order to devote more time to weeding.

The difficult trade-off between different uses of women's time may itself be exacerbated by non-price features of the adjustment package. Reductions in social expenditure may throw

more health and nutrition maintenance burdens on rural women, whose extremely long working day has been well documented. Rural women usually have little or no spare time; they can devote more time to crop or livestock production only by reducing time spent on child care and the maintenance of family health and nutrition.¹⁰

Finally, when analysing possible factors that enhance or weaken the effects of price incentives on agricultural production, it is useful to keep in mind that agricultural producers face circumstances quite different in several respects from those of other producers. No doubt, manufacturers, miners, and commercial agents face uncertain demand; competition; changing regulations; and, if they are employers, interruptions as a result of strikes. However, these sources of risk and uncertainty, which are also present in agriculture, pale by comparison with the greatest source of shocks: nature. A flood can damage a factory or a drought can close down a paper mill for lack of water. These are unusual and insurable events for manufacturing; in agriculture, however, such events are so frequent as to haunt continuously the decisions of the producer.

Particularly for the small- and medium-sized cultivators, fishermen, and pastoralists in developing countries, the relationship with nature is a struggle for survival that requires constant vigilance. Therefore, one should distinguish between the rational behaviour of producers in non-agricultural pursuits where uncertainty and risk are important considerations, and in agriculture where they predominate. This difference makes the farmer more prone to risk-aversion and more likely to put greater emphasis on survival. These in turn affect the impact of short-term market signals on farmers' decisions. Hence, the results expected from policy reforms under structural adjustment programmes, insofar as they rely on changing price structures, may take appreciably longer to materialize in the agricultural sector than in other sectors.

Producer and consumer subsidies. Fifteen of the 21 SECALs analysed by the World Bank included input pricing conditions, although complete price decontrol or an end to government involvement was rare.¹¹ This situation perhaps reflects the reluctance of governments to eliminate producer subsidies on crucial inputs, particularly fertilizer, water and credit. The motives for removing producer

⁹ R. Chambers *et al.* 1981. *Seasonal dimensions to rural poverty*. London, Francis Pinter.

¹⁰ An example from a recent Zambian study shows how this may constrain agricultural supply response. As part of the stabilization and structural adjustment measures, real per caput public expenditure on health provision was cut by 16 percent between 1983 and 1985. The result has been to shift more of the burden of health care on to women. Shortages of equipment and medical personnel in hospitals mean that women have to accompany other family members who are hospitalized to provide meals and care during their treatment. One woman reported missing the entire planting season for this reason (A. Evans and K. Young. 1958. *Gender issues in household labour allocation: the case of northern province, Zambia*. Research Report, ODA/ ESCOR).



subsidies are usually to reduce government budget outlays and allocate resources more efficiently.

Fertilizer is a frequently subsidized input and the cost of the subsidy is usually small in relation to the total government budget. One argument in favour of a fertilizer subsidy is that, given the limitations of price or other incentives for expanding agricultural productivity/supply in many developing countries, it is justifiable to encourage the use of a specific input — such as fertilizers. Other arguments include lowering private costs to reduce the risk premium attached to innovations, and the complementary view that fertilizer is necessary to overcome land constraints. On the other hand, it has sometimes been claimed that subsidized fertilizers do not reach smaller farmers and give rise to black marketeering and illegal cross-border trade. In any event, the general effect of increases in fertilizer prices resulting from the removal or reduction of subsidies is to turn the terms of trade against farmers and, at a time of overall credit restraint, this may lead to significant reductions in fertilizer use. The result may be a conflict between structural adjustment objectives, between "correction" of relative prices and increasing agricultural output and exports. At the least, a removal of subsidies may need to be phased with targeted credit allocations to maintain input use, particularly fertilizers which, at the low levels of application commonly found in developing countries, are environmentally beneficial.

Credit subsidies are also often discouraged in adjustment programmes. Eliminating credit subsidies may hurt precisely those producers whom the adjustment package seeks to encourage: modernizing and innovative commercial farms. If removing credit subsidies leads to a more efficient use and allocation of the available credit, it is to be welcomed, but it involves more expensive credit to producers. If combined with a policy of monetary restraint that results in the reduction of the general supply of credit, the elimination of credit subsidies can be quite debilitating to agriculture. This is particularly the case for private and public marketing agencies that, in many

countries, advance partial payment to farmers for the coming harvest. Higher real interest rates — frequently a goal of structural adjustment — can reduce the effect of higher crop prices at least in the short term. On the other hand, they can induce, over the longer term, the mobilization of national and rural savings and promote the creation of savings and credit organizations and cooperatives.

Several SALs and SECALs have called for the introduction of user charges for government services, previously supplied free of charge or at highly subsidized rates. Some of these services, such as the use of chemicals and drugs to treat and contain plant and animal pests and contagious diseases, might be considered public goods because of the externalities arising from non-treatment and the spread of the disease. In such cases, subsidies promote efficiency by bringing social benefits in line with social costs. Charging for other services might require administrative costs that could swamp the revenue generated by the charging scheme. Thus, a pragmatic approach is required with respect to user charges.

On the consumer side, food subsidies are a major item of government expenditure in some countries and thus are an important source of fiscal deficits. However, it would be naïve to ignore the danger that removing these subsidies can create severe political unrest. Food subsidies provide a clear example that all structural adjustment packages have implications for income distribution, for they are concerned with the reallocation and more effective use of a nation's resources. Adjustment brings "winners" and "losers" as does the period leading up to the crisis that provoked the need for adjustment. The policy challenge is to find methods of dealing with food subsidies that protect the most vulnerable people and promote economic efficiency, but that also minimize political instability. Steps taken in this direction could include targeted subsidies, food-for-work programmes and increased provision of educational and basic social services.

Institutional reform. In the original strategy for policy-based lending, SALs or broad-based SECALs were initially used to stabilize the economy and thereby to create a suitable environment in which sectoral policies would reinforce the policy changes of the stabilization phase. The intention was to "institutionalize" the policy process in order to create a foundation

¹¹ There have been cases of conditionality requiring the complete elimination of subsidies and price interventions for particular markets. Arrangements between the World Bank and some African governments are examples, sometimes as part of a pre-funding or "shadow" programme.



on which the economy could maintain stability, achieve long-term growth and respond more flexibly to external shocks. For the World Bank, a major aspect of policy regarding public institutions has not been their strengthening as such, but rather the transfer of their functions to the private sector. This approach would seem to be part of a more general aim to create a more favourable economic and political context for private investment.

In light of this approach, agricultural sector parastatals are frequently cited as causes of inefficiency in marketing and production. They often tax farmers indirectly by absorbing a large part of the prices of the commodities they handle. In some countries, the parastatal sector has generated large financial losses and is a major source of the government deficit. As a result, several SECALs have required the introduction of private-sector competition or even the closure of parastatals. With some exceptions, progress in improving efficiency or encouraging effective private-sector involvement has been limited to date, which can be attributed to a variety of economic, institutional and political causes. By their nature, state marketing agencies rarely concern themselves with commercial activities alone. Usually, they are also interventionist agencies through which government policies of resource allocation, employment absorption and income distribution are implemented. Very often, the inefficiencies and fiscal losses attributed to parastatal organizations are the outcome of implementing these wider objectives rather than performing marketing objectives. For example, food crop parastatals have been required to finance strategic reserves of basic staples from their own resources, or to operate within a marketing margin which would generate losses for the most efficiently run organization.

Four questions should be addressed to disentangle the controversial issues related to parastatals: i) what are the objectives of the marketing system; ii) which are the most cost-effective means of achieving these objectives; iii) what institutional structure, combining public and private agencies, is most appropriate for achieving these objectives in a cost-effective manner; and iv) how can the transition from the existing to the proposed structure be most effectively achieved?

Some governments have agreed to the reorganization, abolition, or divestiture of parastatals as conditionality for a SAL or SECAL. In many instances, however, there has been

reluctance because of divergent views on the part of the potential lenders and the recipient government. In some cases, this may derive from political considerations, but it is important to recognize the genuine differences of views on the appropriate role of a marketing organization and the ability of private agents to perform their functions adequately. A lender would be loath to encourage parastatals if they hindered the overall adjustment and growth of the agricultural sector. At the same time, the reasons advanced for retaining a state monopoly marketing structure require careful consideration, particularly for small countries in which the private marketing structure itself is, or would be, monopolistic and promises few of the efficiency gains of competitive markets.

Major policy objectives of many governments include food security and price stability. Food security is frequently attempted through a parastatal marketing agency with monopolistic power over the import or export of major staple foods as well as being the sole domestic buyer. Such agencies typically operate a buffer stock, buying and selling domestically at predetermined prices. While parastatals have had some success in import-export trade, they have been much less effective in the marketing and processing of foodstuffs. The reasons for failure can be traced to lack of financial resources, lack of infrastructure, lack of clear policy directives, lack of internal and regional consistency in pricing and other policies that parastatals are called to implement, and involvement in non-commercial but socially desirable marketing activities. Continued informal trade in foodstuffs, both within as well as across borders, have contributed to their ineffectiveness.¹² Thus, privatization of those parastatals frequently involves little more than a formal acknowledgement of the private sector's dominant position. Sub-Saharan African and Central American countries, where rural markets are dispersed and transport infrastructure limited, are clear examples. On the other hand, the privatization of imports and exports can lead to monopolization by the private sector. This is particularly the case in small countries

¹² For further discussion see: FAO, *Food Security Assistance Programme: preparation of comprehensive national food security programmes: overall approach and issues*. Document prepared for the Second Ad Hoc Consultation with FSAS Donors. Rome, 27 October 1989.



with a legacy from the colonial period of a few dominant trading houses.

Ghana and Nigeria are examples of two different outcomes of parastatal reforms. In Ghana, the government drastically reformed the cocoa marketing parastatal (COCOBOD) by reducing staff and streamlining operations. In Nigeria, the abolition of the government cocoa marketing board led to numerous problems, the worst being a drastic drop in the quality of exported cocoa.

In terms of food security, experience in some developing countries indicates that efforts to abolish government involvement in agricultural services has in several cases worsened access to food as a result of artificial food scarcities created by hoarding and speculative activities of private traders. In some countries, especially in sub-Saharan Africa, some public intervention is deemed necessary for managing occasional surpluses to avoid negative effects on prices and production, and to assure distribution of food supplies to groups at risk in years of shortages.¹³ Given the complexity of determining the correct mix of public agencies and private traders, a pragmatic approach is required in which future objectives are clearly defined and other forms of organization such as producer organizations and cooperatives are evaluated.

Another government motive for retaining control of marketing systems relates to credit, input supply, and maintenance of quality controls. With single-channel marketing, particularly of export crops, it is possible to lend seasonal credit against the security of crop deliveries with no other form of collateral — such as land titles — required. It is argued that this system would be unworkable with private traders. Experience suggests, however, that credit can be successfully channelled through traders who would be in personal contact with the farmers they are leading to. In the long term, a marketing system based on traders could prove to be more effective than relying on public agencies, but it is likely to require considerable time to evolve. There is also the

argument that private traders would be unwilling or unable to distribute the limited and variable quantities of agricultural inputs required by farmers. However, input provision could be combined with an effective private credit system as suggested above. Similarly, introducing private marketing agents means that the nature of the government's regulatory functions changes. In principle, there is no reason why governments should liberalize quality standards: rather in many cases they should insist on higher standards.

¹³ For instance, a SAL for Madagascar began a staged process aimed at encouraging the private sector to purchase and store rice, on the premise that a well-functioning storage market will stabilize prices optimally. As a first step, the government withdrew from domestic purchases and sales but operated a buffer stock of imported rice to prevent large speculative price increases.



PROBLEMS OF IMPLEMENTING STRUCTURAL ADJUSTMENT PROGRAMMES

Disappointing performance

After almost a decade of experience, it is difficult to avoid the conclusion that structural adjustment programmes (SAPs) have been associated with uneven economic performances within countries. Some argue that this inconsistency lies in the weakness of the theoretical underpinnings of the policy packages themselves.¹⁴ Others, on a more practical level, have argued that various governments have implemented SAPs in very different ways and have lacked a thorough understanding of the consequences of enforcing policy measures in different orders or "sequencing".¹⁵

A recent FAO study of four sub-Saharan African countries reveals that in only one has careful consideration been given to policy sequencing before the implementation of the structural adjustment programme.¹⁶

Among others, the FAO policy review identified the following key issues: i) the sequencing of stabilization policies *vis-à-vis* policies of structural change; ii) the sequencing of liberalization measures across sectors; and iii) the sequencing of liberalization measures within agriculture itself.

While problems of sequencing are to a great extent specific to each country, an analysis of the general nature of the problem is both possible and fruitful.

Stabilization and structural sequencing

As working definitions, it may be recalled that "stabilization policy" refers to monetary and fiscal measures taken to restrict aggregate demand in order to control inflation and correct an unsustainable balance-of-payments

situation; and that "structural adjustment policy" refers to measures that act on the supply side either directly, such as through agrarian reform or improving input supply, or indirectly — through market liberalization, for example. Broadly speaking, policy sequencing concerns the order in which these policy programmes are implemented. It is commonly perceived that stabilization measures should precede supply-side measures for a successful adjustment-with-growth programme.

Supply-side measures take time to produce changes in supply and, unless demand is restrained, such measures would result in an unmanageable current account deficit. Again, stabilization measures aim at restoring external and internal balances, and devaluation of the exchange rate is a major instrument toward this end. To sustain the exchange rate adjustment, appropriate monetary and fiscal policies have to be implemented. As this process proceeds, economic stability is essential for growth in savings and investment and for controlling inflation. Moreover, stabilization requires contractionary pressure on aggregate demand, and trade liberalization applies pressure on industries competing with imports. Simultaneous application of the two may increase business failure and unemployment and generate strong political opposition.

The sequencing debate has centred around the importance of stabilization programmes preceding structural adjustment measures and the need for stabilization policies to accompany supply-side measures during the adjustment process. In practice, there has been little disagreement over sequencing in this sense. Macro-economic reforms must be followed by certain elements of supply-side policies at the sector level, essential for ensuring an effective micro-economic response to the macro-economic incentive structure put in place. It is at this micro-economic level that major weaknesses have been identified in the sequencing of adjustment policies.

Sequencing of liberalization

The case for liberalization identifies government intervention in markets to be the cause of inefficiencies ("distortions"), and goes on to argue that ending these interventions improves resource allocation after the economy has fully adjusted. The sequencing issue arises because of the familiar problem that removing one intervention in an economy in which there are many others may worsen rather than improve

¹⁴ The theoretical issues are discussed in A. Fishlow, *The state of Latin American economics. In Economic and social progress in Latin America, 1985 Report*. Washington, Inter-American Development Bank, 1985.

¹⁵ Sequencing is treated in a non-technical way in J. Epstein, 1989. *Old wine in new bottles: policy-based lending in the 1980s*. In J. Weeks, ed., *Debt disaster?* New York, New York University Press.

¹⁶ The study covered Ghana, the Gambia, Kenya and Malawi. N. Spooner and L.D. Smith, *Structural adjustment and policy sequencing in sub-Saharan Africa*. July 1989. Rome, FAO.



the allocation of resources. Economic theory offers little guidance on an optimal sequence for removing market distortions. Nevertheless, some broad conclusions can be derived from the general principle that the objective of structural adjustment is to achieve a reasonable and sustainable rate of growth.

Liberalization can be analysed under five categories: i) the domestic market for goods and services; ii) the external market for goods and services; iii) the domestic market for factors of production — land and labour; iv) domestic money markets; and v) the link between these markets and the international financial system.

Much of the analysis of sequencing focuses on the liberalization of external accounts. It is usually argued that the current account should be liberalized first, and the capital account later. A more practical explanation is that early liberalization of the capital account when the economy has yet to stabilize results in disruptive capital flight. For the same reason, the domestic money market should be liberalized before the external capital account in order to bring domestic interest rates in line with international rates.¹⁷ However, liberalization of the domestic money market requires repressing inflationary pressures, which invariably means reducing the fiscal deficit. Thus, one arrives at a general rule for policy sequencing: liberalization of the domestic money market requires removing exchange controls on capital movements, which in turn requires establishing the fiscal deficit at the desired (non-inflationary) level.

This apparently commonsensical generalization is of little relevance for countries with very underdeveloped money markets, which is the case for virtually all of sub-Saharan Africa, many Asian countries and parts of Latin America and the Caribbean. In small countries particularly, but also in large low-income countries, money markets are very narrow and inefficient because of the limited range and quantity of financial assets and the small number of traders. In these countries, formal financial markets do not play a significant role in valuing the real capital stock of the country, most of which is not traded domestically because it is not actually a commodity (e.g. common property agricultural land in much of Africa) or because it is traded

on foreign markets (e.g. local assets of international firms). Furthermore, the competitive efficiency of foreign exchange markets can be severely compromised by the presence of a few private financial institutions, usually with international links, that dominate trading.

More relevant to countries across the range of development is the liberalization of commodity markets. Comparatively little emphasis has been given to the sequencing of domestic market liberalization compared to liberalizing economic relations with the rest of the world. But some steps must be taken to liberalize key domestic markets and allow export-increasing incentives to change the structure of production. Without first generating export growth, trade liberalization will put pressure on foreign exchange reserves and the process will be unsustainable. However, increased export production initially requires increased imports of essential inputs.

FAO analyses have revealed contrasting experiences in the management of trade liberalization. In Kenya, for instance, trade liberalization was the major element of the first SAL but the foreign exchange requirements associated with it became unsustainable and the liberalization process had to be abandoned. Ghana, on the other hand, allocated foreign exchange according to availability through auction, and the types of goods eligible for entry to the auction expanded over time in line with the rising supply of foreign exchange.

Since the purpose of adjustment is the reallocation of resources, flexible factor markets must be a part of general liberalization. With regard to labour markets, this flexibility would seem to be present throughout the developing world beyond the needs of adjustment. In the 1980s, real wages in Africa, Asia and Latin America have been flexible downwards, in many cases to an extraordinary degree.¹⁸

Sequencing of agricultural liberalization

Given the importance of foreign exchange availability, and given that the agricultural sector is the most important sector for foreign exchange generation in many low-income economies, the stimulation of agricultural production is required at an early stage in the reform programme. This implies that

¹⁷ S. Edwards, Sequencing and economic liberalization in developing countries. In *Finance and Development*, 24:1(1987)

¹⁸ For Africa see V. Jamal and J. Weeks. 1987. Rural-urban income trends in sub-Saharan Africa. In *World Employment Programme Working Paper Series*, Working Paper 18. Geneva, Labour Market and Employment Planning Section.



stabilization measures must take due account of the sector's resource needs. If agriculture is the lead sector for export expansion, the subsectors where conditions favour an early expansion in production must be identified and their constraints to growth in production removed. For example, a large proportion of the higher domestic prices resulting from devaluation will have to be passed on to producers and be accompanied by other non-price policies which allow the agricultural (export) sector to respond to increased prices. At the same time, credit restrictions, which are also an essential element of the stabilization phase, must be well managed if private investment is not to be constrained.

If the assumptions about agricultural sector reforms are correct, then the benefits to agriculture should occur at a relatively early stage and precede trade liberalization in the sequencing of policy. However, FAO studies suggest that agricultural liberalization has not always been given sufficient priority. In Kenya, agricultural reforms were absent from the first SAL programme; and in Malawi, the adjustment programme focused on the smallholder subsector which accounted for only a minor proportion of foreign exchange earnings.

In practice, the benefits of liberalization and increased participation by private traders in agricultural input and output markets can only come about if, as discussed earlier, domestic financial markets are sufficiently developed. In fact, improvement in financial intermediation has been a relatively neglected element of adjustment programmes. Recognizing this, the World Bank has begun to emphasize financial reforms in the latest SAL programmes developed in West Africa. But this emphasis clearly represents a suboptimal pattern of sequencing, particularly given the long time frame required for some of the financial sector reforms. In the meantime, it can be expected that lack of finance will constrain the response of private agents to the new incentive frameworks established in Africa.

On the basis of the foregoing discussion, a recommended sequencing can be formulated:¹⁹ i) relax controls on imported inputs essential to expanding production; ii) devalue to achieve a

competitive exchange rate, which simultaneously requires monetary and fiscal restraint to curb inflation and convert a nominal devaluation to a real devaluation; iii) allocate foreign exchange to the maintenance and repair of infrastructure required to facilitate production increases; iv) initiate policies to make credit markets more responsive to needs of producers; v) stimulate agricultural production by reducing market interventions. Trade liberalization then becomes the sixth phase of the process, eventually followed by the relaxation of controls on external capital flows. It should be noted that the first and second phases require either initial foreign exchange reserves (a happy but unlikely circumstance) or early inflows of foreign aid.

The fallacy of composition

The central element in the liberalization sequence is the reduction of trade restrictions and devaluation. The role of devaluation is to increase the production of tradables with particular emphasis placed on the expansion of exports. However, the proposition that devaluation, even if sustained in real terms, would substantially increase export volumes has been questioned. One of the more important criticisms, called "the fallacy of composition", is based on external demand-side constraints; that is, that markets would be incapable of absorbing the volume of exports of a commodity without a significant fall in its price if a large — or sufficient — number of countries producing the same commodity jointly undertook such an export-led structural adjustment strategy.²⁰ What is allegedly true for one country may not be true for many taken together (see Box 3.5). Such a concern is apart from that arising from possible constraints on the supply-side; that is, that the agricultural sector may have but a limited capacity to respond to changes in the structure of incentives, particularly in the short term.

The likelihood of a wave of devaluations resulting in small or even negative foreign exchange gains for all the devaluing countries taken together depends on several factors: i) the rate of growth in world demand for each product; ii) the elasticity of world demand for each product with respect to its price;

¹⁹ This sequence is a modified version of that found in J. Williamson. 1987. Discussion on Session One: Bank-Fund Papers. In V. Corbo, M. Goldstein and M. Khan, eds., *Growth-oriented adjustment programmes*, Washington, IMF and World Bank.

²⁰ See, for example, J.N. Bhagwati, Export promoting trade strategy: issues and evidence. In *OECD Research Observer*, 3:1(1988); and Fishlow, 1985, op. cit.



iii) the market shares of the devaluing countries; and iv) the reaction of countries to loss of export shares.

Promoting exports is obviously facilitated if world demand is reasonably buoyant. During the 1980s, this has not been the case for several agricultural commodities important to developing countries. Annual growth rates in world demand during 1980-90 were estimated at 1.6 percent for coffee and cocoa, 0.7 percent for bananas and 1.7 percent for cotton.²¹ Indeed, a typical problem facing African countries attempting to undergo structural adjustment has been to arrest the decline in their share of a market which is growing slowly at best. In such a case, stabilizing the market share would be a sign of success in promoting exports. A liberalization of agricultural imports on the part of the major and mainly developed importing countries would assist in expanding market opportunities, even if the underlying demand growth was weak. Removal of tariffs which discriminate against attempts to diversify

into export-oriented agro-industries would also stimulate developing country exports as a whole.

It cannot be stressed too much that the export markets faced by developing countries are far from efficient conveyors of allocative signals. On the contrary, they are often severely distorted by protectionist policies, particularly those of developed countries.

Low price elasticity of demand for many agricultural products lies at the heart of the fallacy of composition argument. Price elasticities are rather low for the quantitatively more important tropical products, namely tea, cocoa and coffee. Here again, protectionism plays an important role: for example, it is capable of cancelling the advantages of high price elasticity characteristic of horticultural products. During the 1980s, producers in Central America were encouraged by bilateral trade arrangements to export ornamental flowers, which apparently enjoy both high price and income elasticities, only to suffer subsequent trade restrictions.

The fallacy of composition is likely to apply to those commodities for which a few countries

²¹ *FAO agricultural commodity projections to 1990*. FAO Economic and Social Development Paper 62. (reprint)

BOX 3.5

The fallacy of composition

The premise of the fallacy of composition is that the exports of developing countries, particularly but not exclusively in Africa, are concentrated in a narrow range of primary agricultural commodities. For example, coffee, cocoa and tea accounted for 61 percent of the agricultural exports of sub-Saharan Africa during the period 1981-84.¹

The argument applies in principle to all exports, but is generally thought less relevant to manufactures because these are characterized by greater product differentiation. Over the last three decades, the composition of the exports of middle-income, oil-importing countries changed

dramatically: from 1960 to 1981 the share of manufactures rose from 17 percent to 59 percent, leaving non-energy primary products considerably less than half the total. For the low-income countries (apart from China and India), primary products were 91 percent of the total export value in 1981 (down from 95 percent in 1960). The relative decline of non-oil primary products in the exports of developing countries demonstrates a trade diversification which should reduce vulnerability to the fallacy of composition effect. However, one must be cautious because manufactures are not immune to suffering from world market gluts. Textiles, for example, are a highly differentiated commodity by some criteria; however, if all developing country textile exporters devalued simultaneously, it is not certain

¹ G. Koester, H. Schafer and A. Valdés, External demand constraints for agricultural exports: an impediment to structural adjustment policies in sub-Saharan Africa. In *Food Policy*, August 1989, on which much of this discussion is based.



have substantial world market shares and which, at the same time, account for a major proportion of the exporting country's foreign exchange earnings. Table 3.2 shows that among three major groups of exporting developing countries — Africa, South America and Asia — during the mid-1980s only cocoa (Africa), coffee (Africa and South America), tea (Africa and Asia) and cotton (Africa and Asia) satisfied both criteria: that is, the regions had significant shares of these world markets and the products had significant shares of the regions' agricultural exports. Groundnut oil and sisal were marginal in this respect. Some commodities satisfied the first criterion but not the second. For example, Africa had a 68 percent share of the small global market for palm kernels in 1985-87 but such earnings constituted barely 0.1 percent of Africa's total agricultural exports during those years.

Competing countries may react in one of two ways when confronted by falling prices resulting from increased supplies. They may attempt to retain market shares or diversify their exports and move out of this particular market. Several developing countries in recent

years have managed successfully to diversify their export portfolio and, in some instances, have moved into manufactures.

From the perspectives of market share and export importance the fallacy of composition argument would seem to apply only to cocoa and, perhaps, to coffee. Possibly the greatest danger to adjusting countries' attempts to expand their agricultural exports is increased competition from countries investing heavily in new crop production and processing capacity. Such investment not only leads to increased supplies, but also to lower production costs. As long as marginal revenue does not become negative, however, it may still be worthwhile for a country to continue to expand its exports of the commodity. However, export subsidies, explicit or implicit, may be required to induce producers to continue producing despite falling prices.

The reliance of SAPs on devaluation raises a broader issue of "composition" that needs to be addressed by the international community; namely the extent to which an export-oriented strategy for all developing countries (as implied by multilateral-financed programmes) fosters a

that the *ex post* price elasticity of demand for textiles would be very great in the aggregate, particularly in light of developed country protectionism.

The source of the "fallacy" can be shown by a hypothetical example. Assume that ten countries devalue simultaneously and the effect in each country is to induce producers to increase output by 10 percent. Now, let us consider two cases. In the first, each of the ten countries exports one product which is different from the product exported by the other nine, and each country accounts for one-tenth of the world market for its product. Each country would increase the world supply of its export by only 1 percent (10 percent of 10 percent). In this case, if demand remains unchanged, one would expect a small drop in the world price of each product; and when

this small decline returned to confront the producers, they would probably be content with having raised output by 10 percent.

In the other case, assume each country exports the same product. A 10 percent increase in output by each country would result in a 10 percent increase in world supply. At worst (from the exporters' point of view), the world price might fall so much as to reduce total export earnings, so the collective devaluation would have been self-defeating (in such a case, demand is said to be "inelastic"). Less extreme, but still serious, total export revenue might rise while the price decline communicated back to the producers might induce them to cut back on their initial output expansion because the price has fallen relative to costs. In this situation, even though demand is "elastic" (export revenue rises as the price falls), the net

increase in export value may be quite small once all producers have adjusted and the world price has reached a new equilibrium. The second case can be cited as a fallacy of composition: while each producer individually sought to increase output by 10 percent, the collective effect was that each discovered it profitable to do so by less than 10 percent because of the world price fall.

TABLE 3.2 Regional shares of world exports of selected commodities and shares of these commodities in regional agricultural export values, 1985-87

Commodity	World exports	Regional shares of world exports			Commodity shares of regional agricultural exports		
		Africa	South America	Asia	Africa	South America	Asia
	\$ million (..... %)						
Cocoa beans	3 008	62	14	12	16	2	1
Coffee	12 307	21	38	10	22	25	4
Tea	2 194	15	2	68	3	0.2	4
Palm kernels	16	68	9	15	0.1	—	—
Groundnuts	564	7	11	41	0.4	0.3	0.7
Groundnut oil	242	28	22	23	0.6	0.3	0.1
Cotton	5 992	18	5	25	9	2	4
Tobacco	3 963	11	13	17	4	3	2
Sisal	57	38	44	4	0.2	0.1	—

Source: *FAO Trade Yearbook 1987*, vol. 41. Rome, FAO, 1988. Adapted from Koester *et al.*, 1989, *op. cit.*, Table 2.

cooperative solution to the cause of development. According to the latest World Bank figures, the exports of low- and middle-income countries grew in real terms at an annual average of approximately 5 percent and 7 percent respectively during the period 1982-1988.²² There is clear evidence that these rates of export expansion, achieved during the longest post-war period of sustained growth in the developed countries, are insufficient to service debts and raise per caput incomes, except for in some countries — mainly in Asia. The 1990s are unlikely to be more favourable than the 1980s to developing country exports. Few would expect the growth of the OECD countries to exceed the average attained during the sustained expansion of the 1980s, and this situation would not bring stronger export demand. If the 1990s bring a liberalization of developed country markets with respect to developing country products, the harbinger of this change has yet to show. Yet with each passing year, loan conditionality for trade liberalization affects more developing countries.

Steady growth in developed countries with no change in protectionism, combined with increased export efforts by a growing number of developing countries, could possibly diminish the expansion of foreign exchange revenues for the aggregate of developing country exports. In such a case, the developing countries' liberalization efforts could lead to a continuous struggle to redistribute market shares. Such a situation would be analogous to the competitive devaluations by the developed countries during the 1930s, widely condemned as "beggar thy neighbour" policies. It is precisely

to forestall such a destructive policy conflict that the United Nations and its related agencies were established after the Second World War. In keeping with this objective, the multilateral agencies and the development community at large need to verify the contribution of devaluation to the general welfare of developing countries. While the expertise and information exist to do so, little more than hopeful opinion has been offered to support the policy of spreading currency devaluation throughout the developing world. The fallacy of composition raises the serious possibility that arguments valid for one country do not generally apply to many countries taken together.

²² *World Development Report 1986*, p. 158. Washington, World Bank, 1986; *World Development Report 1989*, p. 150. Washington, World Bank, 1989.



SOCIAL ISSUES IN ADJUSTMENT PROGRAMMES

Food buyers and food sellers

Structural adjustment programmes seek to reallocate resources and, in so doing, redistribute income. Whether the effect of this redistribution is toward more or less inequality and what its impact is on the poorest populations are matters of intense controversy. The focus of this section is the consequence of adjustment for the rural poor, who make up the majority of the poor in the low-income countries. Generalizations in the absence of systematically collected data must be ventured cautiously. As a first step, it is useful to divide the population in a manner relevant to the policy measures discussed previously.

A central goal of adjustment is to raise the return on tradables which, if successful, implies an increase in prices of tradable food items in relation to the general price level, although not necessarily in relation to all other tradables. A relative rise in food prices, explicitly advocated in some adjustment programmes, is sometimes alleged to carry with it a positive income-distribution effect given that most of the poor are rural and food production is their main economic activity.

This argument leads to an important question: other factors remaining equal, does an increase in food prices make most people better or worse off? In terms of direct welfare impact, this may be the most important policy question facing the majority of governments. The initial effect of an increase in food prices is to raise the real incomes of net food sellers and lower the incomes of net food buyers. While subsequent ramifications — "general equilibrium" effects, including the diffusion of higher incomes for food producers, increased employment opportunities and real wage increases — may soften this effect, they cannot counteract it if, indeed, food prices rise in relation to other prices.²³ Thus, in a country where the majority of the population is net food producing, an increase in food prices makes the majority better off, and vice versa.

In a successful adjustment scenario, a conflict between food buyers and sellers may be avoided. Adequate farm incentives and more

efficient marketing systems may bring about an increase in productivity and output, causing prices to fall without detriment to producers' incomes, and to the benefit of consumers.

However, this discussion focuses only on the first-round effects of food prices, which actually increase faster than other prices, and does not take into account subsequent developments.

Table 3.3 provides estimates of the proportion of net food buyers for 65 countries divided into four regions, for the years 1970, 1980 and 1985. A net food buyer is simplistically defined as anyone not engaged in agriculture. Therefore, the proportions underestimate in that they presume all farm households are at least self-sufficient in food. For Latin America and parts of Asia, this is not necessarily the case. The figures in Table 3.3 demonstrate quite a significant change: in 1970, only 20 of the 65 countries had a non-agricultural majority, but by 1985, the number had risen to 31. Given the underestimation inherent in this measure, it is safe to conclude that in well over one-half of the countries, net food buyers were a majority by the mid-1980s. Only in sub-Saharan Africa was the population still overwhelmingly agricultural by then — Mauritius is the single exception in the region.²⁴ Even in this region, however, several countries in the table will cross the 50 percent mark in the 1990s with regard to non-agricultural population, with likely candidates being Nigeria, Benin, Côte d'Ivoire, and Cameroon.

The information in Table 3.3 indicates that, for the majority of developing countries outside sub-Saharan Africa, increases in food prices would make most people worse off, at least in the short term, if other all factors remain the same. Furthermore, in these countries increases in food prices almost certainly affect the poor more than the non-poor.

There are a number of mitigating possibilities, however. First, increased food prices may result in higher wages and/or more employment in the food crop sector, thereby transferring income to net food buyers. This effect is probably confined to the farm household

²³ P. Hazel. 1987. *Agricultural growth linkages and the alleviation of rural poverty*. New York, Cornell University Press.

²⁴ A more detailed analysis suggests that the poor in sub-Saharan Africa are not net producers of food to the extent that Table 3.3 would imply. See M.T. Weber *et al.*, Enforcing food security decisions in Africa: empirical analysis and policy dialogue. In *American Journal of Agricultural Economics*, 70:5(1988).

TABLE 3.3 Non-agricultural population as a share of total population (net food buyers), 1970, 1980, 1985¹

Region	Number of countries	Net food buyers ²			Number of countries with net food buyers above 50% of total		
		1970	1980	1985	1970	1980	1985
		(..... %)					
Near East & North Africa	9	49.1	61.3	65.2	4	7	8
Asia	8	40.4	47.6	51.2	1	3	5
Latin America & Caribbean	20	58.1	65.0	67.8	13	16	17
Sub-Saharan Africa	28	18.3	23.9	26.4	1	1	1
	65	37.2	44.5	48.7	19	27	31

¹ The 65 countries in this sample are shown in Part Three, II (Table 3.5).

² Simple average of country percentages.

Source: FAO.

population, as measured in the table, given that much of the agricultural wage labour force in Latin America and Asia is made up of net food-buying farm families (microfarms or "minifundistas").

A second mitigating effect is the possibility that increased food prices in the short term will prompt investment and technical change, thereby generating lower food prices in the long term. Empirical evidence suggests that food supply is relatively price-elastic in the long term in most developing countries, but supply is not expanded by raising prices and waiting hopefully. It should be ensured that the adjustment programme that calls forth the higher prices does not cut public expenditure and restrict credit so that the desired supply response does in fact occur in the medium and long term. Even if the eventual supply response is favourable, there still remains the transitional period of high food prices that hurt the poor in most countries outside of sub-Saharan Africa. Therefore, during the transitional period there is the need to adopt measures to aid the poor with the same dedication and vigour used to implement market liberalization and fiscal austerity. A possible measure might be the introduction of programmes that use food aid to target nutritionally-vulnerable households and population groups, both in rural and urban areas. In any event, the high likelihood of a future decline in food prices should not prompt a complaisant dismissal of the certainty of increased suffering by the poor in the short term.

As regards the nutritional impact of higher food prices, the reduction in nutrient consumption may be somewhat mitigated by the substitution of cheap nutrients for expensive ones. Still, the overall negative effect may be significant if other desirable food attributes are foregone, as one would expect to be the case. Further, gender- and birth-order preferences in

nutrient allocation may expose the most vulnerable family members, often young girls, to greater risk of malnutrition.²⁵ In some cases, expenditure-switching policies may reduce domestic food production, namely where the output mix switches in favour of export crops and away from food staples. The effects on food availability at the national level will depend on whether or not increased export earnings enhance the country's ability to increase imports of food.

At the same time, the impact on household food security depends on the level of farm income and the control of its use. In any consideration of impact of price changes on household food security, it is also important to recognize that there are differences in distributional effects within households. Different members of the same household may be subject to different standards of living. While some pooling and sharing of resources takes place within households, this is far from complete and, in periods of stress, more vulnerable household members may suffer disproportionately. This is indicated by recent research showing that in a wide variety of settings in many developing as well as developed countries, men tend to retain a considerable portion of income accruing to them for discretionary spending on personal consumption and leisure activities, whereas income accruing to women is almost exclusively used to meet collective household needs.²⁶ Men and women frequently have different expenditure priorities and women most often have responsibility for provisioning the

²⁵ Overall and intrahousehold nutrition are treated in an FAO study: R. Gaiha, *Structural adjustment and rural poverty in developing countries*. 1989. Rome, FAO.

²⁶ J. Bruce and D. Dwyer, ed. 1988. *A home divided: women and income in the Third World*. Stanford, Stanford University Press.



household while lacking access to the required resources. In addition, these intrahousehold distributional differences suggest that household income by itself is, in many cases, inadequate as an indicator of an individual household member's welfare.

Structural adjustment and the rural poor

The continued and widespread process of urbanization together with falling urban (especially wage) real incomes in many countries has reduced the rural sector's disproportionate share of poverty in developing countries during the 1980s. Nevertheless, in the majority of developing countries most poor households still live in rural areas. Furthermore, the great majority of the rural poor can be presumed to be in farm households, though information on non-farm and farm rural incomes is quite limited. This discussion will refer primarily to the "farming poor", because of both their majority and the presumption that measures to aid them would promote growth of agriculture as a whole, thus spilling over to raise the incomes of the non-farm rural poor.

Key factors in assessing the distributional effects of adjustment programmes are real incomes of the poor, the price of agricultural products, particularly food, and access to government services and transfers.²⁷ It is also important to recognize the heterogeneity of the rural poor who are differentiated by age and gender and who comprise small-scale farmers, the landless, nomads, pastoralists and fishermen. In addition, many poor farm households derive a significant proportion of their income from non-agricultural activities. Nevertheless, the poor share the common disadvantages of limited assets, poor access to productive resources and public services, and vulnerability to adverse environmental conditions.

The foregoing considerations suggest that the actual welfare effects of policy reforms depend on a number of country-specific features:

- The structure of the agricultural sector in terms of the composition of output (tradables and non-tradables), the role of women in production, and the pattern of land- and other asset-holding.
- The distribution of net food producers and net consumers in the rural population. Evidence indicates that a majority of farm households in many developing countries are net food buyers.²⁸
- The functioning of factor markets, particularly the labour market. In many developing countries, especially sub-Saharan Africa, the labour market is likely to be segmented owing to a variety of factors. High transport costs may create geographical segmentation, exacerbated by tribal barriers to integration. There may also be plantations or large-scale farms with a formal labour force of regular wage earners, and a small farm sector which uses mainly family labour but hires or provides seasonal, casual labour. Within each segmented market there may be a greater or lesser degree of specialization by sex and age groups.²⁹

While bearing in mind that country-specific characteristics will determine actual outcomes, a generalized account of probable short-term welfare effects on sections of the rural population can be assembled (Table 3.4).³⁰ Consider agricultural producers with control over land. In the short term, producers of tradables,³¹ particularly crops for export and for import substitution, would be expected to benefit from an increase in the relative price of their output, mainly as a result of devaluation (assuming a real depreciation is generated) and the removal of export taxes and price stabilization levies. This outcome presumes that the government and merchants pass the price

²⁷ P. Pinstrip-Andersen. 1989. The impact of macro-economic adjustment: food security and nutrition. In Simon Commander, ed., *Structural adjustment and agriculture: theory and practice in Africa and Latin America*. London, ODI.

²⁸ A. de Janvry, E. Sadoulet and L. Wilcox, *Rural labour in Latin America*. ILO Working Paper 10/6WP79, Geneva, International Labour Organisation, June 1986; M.T. Weber *et al.* 1988. Informing food security decisions in Africa: empirical analysis and policy dialogue. In *American Journal of Agricultural Economics*, 70(5).

²⁹ L.D. Smith. 1990. *Agricultural labour markets and structural adjustment in sub-Saharan Africa*. Rome, FAO.

³⁰ This account is based on Commander, 1989, op. cit.; Azam *et al.*, 1989; Norton, 1987; and Pinstrip-Andersen, 1989, op. cit.

³¹ The classification of agricultural products into tradables and non-tradables, while convenient, cannot be adhered to rigidly in practice. Agricultural products range widely in their degree of "tradability" i.e. the extent to which world prices determine domestic prices. Moreover, a non-tradable can substitute an imported product and/or become exportable or importable with changes in the relationship between domestic and world market prices.

TABLE 3.4 Probable short-term effects of major policies on rural incomes

Category	Percentage of poor	Predominant sex	Major policies	Short-term effects	General effect
I. Producers of tradables					
<i>Exports</i>	Low	Male	Real devaluation	Positive	} Positive
<i>Domestic (food)</i>	High	Female	Trade liberalization	Positive	
			Removal of subsidies	Negative	
II. Producers of non-tradables					
	High	Female	Real Devaluation	Negative	} Negative
			Removal of subsidies (especially credit)	Negative	
III. Hired labour					
<i>Production of tradables</i>	High	—	(see category I	)	Positive
<i>Production of non-tradables</i>	High	—	(see category II	)	Negative
IV. Net food buyers					
	High	—		(see text)	Negative

Source: This table is based on Commander, 1989, op. cit.; Azam *et al.*, 1989; Norton, 1987; and Pinstrup-Andersen, 1989, op. cit.

increase on to farmers, although this is not always the case if parastatals act as market intermediaries. The boost to agricultural incomes may also be tempered by factors such as an increase in input prices through devaluation; trade liberalization and the removal of input subsidies; and an increase in risk if price stabilization schemes have been dismantled — all of which tend to reduce supply response. Overall, real incomes of these producers should rise, with the degree of increase depending on the price responsiveness of supply and on the constraints imposed by non-price factors.

On the other hand, as a result of devaluation and the removal of price distortions, producers of non-tradables suffer a loss, both from the drop in relative price of their output and the rise in production costs. That part of the small farm sector which is market-oriented often engages in the production of both tradables and non-tradables; the net welfare effect depends on whether income gains from the former outweigh losses in the latter. The intrahousehold distribution of gains and losses can also have important implications for the welfare, and especially the nutritional status, of family members. Particular difficulties may arise where men have direct control of cash crop income and how it is to be spent, while women have to manage household consumption with the income from non-tradables.³² Furthermore, there may be a section of the small farmer population, located in regions with poor infrastructure or in areas unfit for the production of major tradables, which is largely bypassed by the adjustment process.

³² See footnote 31.

Turning now to the impact on agricultural labourers, some further generalizations can be made, again bearing in mind the possible complications that poorly functioning markets might introduce. Changes in the labour market would mirror those in production. Workers in the tradables sector would be expected to enjoy an increase in the demand for labour services, with employment and wage rates rising, while the demand for labour in the non-tradables sector would decline. However, expenditure-reducing policies which cut the demand for non-agricultural labour might induce an expansion in the supply of labour in rural areas. This reverse migration would in turn put downward pressure on rural wage rates. The most favourable outcome for labourers is when their employment is required in agriculture's tradable sector and the expansion of the demand for labour overcomes the contraction of employment elsewhere in the economy. Again, aggregate demand is the key.

The rural poor may be affected in other ways by changes in the non-agricultural sector. When contractionary policies reduce employment in the non-agricultural sector, transfers in the form of remittances — an important source of income for the rural poor — will be curtailed. However, an expanding agriculture can stimulate growth in the non-farm sector through the need for marketing, processing and distribution services. Where these goods and services can be provided locally, there will be an injection of income in the rural economy, some of which may be captured by poor, self-employed producers.

This discussion might leave the impression that the effect of adjustment on poverty is indeterminate, implying limited cause for alarm



with respect to the probable consequences for the poor. Such is not the case. All scenarios yielding favourable outcomes for the poor require that the overall aggregate demand as well as the overall levels of employment and income do not contract. If they do, the demand for the commodities produced by the poor also contracts, and the labour markets in which the poor participate become burdened with an influx of income-seekers. Without exception, structural adjustment programmes seek to restrict demand through the reduction of government fiscal deficits, and this is frequently associated with reductions in the real value of government expenditure. When a government's contribution to aggregate demand falls in real terms, the total demand for goods and services will fall unless the private sector compensates. In the short term, investment is unlikely to fall because of the rise in real interest rates brought about by a tighter monetary policy. Everything then turns on whether real export demand increases sufficiently to compensate for the decline in government expenditure, plus the falling incomes and unemployment that may be caused by trade liberalization (which exposes domestic producers to greater competition).

In addition to the income and employment effects on cuts in government expenditure, there is the direct impact on the provision of public goods and services. Empirical evidence demonstrates that the reduction of food subsidies hurts the poor much more than the non-poor.³³ In this case, the targeting of specific groups has proved successful in reducing total subsidy outlays while still subsidizing the poor.³⁴ Cuts in health and education tend to harm the poor disproportionately even when the initial provision of the services is extremely inequitable. This apparent contradiction results from the pattern of political influence in services — meagre though they may be — for the poor who bear a disproportionate share of reductions. In addition, the non-poor are in a better position to turn to the private sector to recover lost access to public health services

and education. A recent survey indicates that scaling down public health programmes might have quite a serious effect on infant and child mortality.³⁵ To the extent that women's unpaid labour is substituted for publicly provided services, either women's crop production capacity is curtailed or their working day is extended even further with adverse consequences for their health a likely result.

Rural poverty alleviation under structural adjustment

Available evidence as well as common sense suggest that structural adjustment programmes are initially likely to worsen the condition of the poor.³⁶ Therefore, as structural adjustment enters its second decade, the time is perhaps overdue to introduce direct measures to protect the poor along with efforts to close current account deficits and fiscal budgetary overruns.

By their very nature, SALs and SECALs concentrate on the monetized agricultural sector, with considerable emphasis on pricing policy. As such, the supply-side reforms discussed so far are at best irrelevant to the very many farmers who are mainly engaged in the production of non-tradables because of their limited access to resources such as land, water, purchased inputs, transport and appropriate technology. This group also includes the majority of women farmers.

Structural adjustment programmes began as temporary measures and, therefore, equity issues were not given adequate attention. Experience now shows that the macro-adjustment process is often long and difficult. Unless firm action is taken the danger remains that, in their present form, SALs and SECALs will encourage governments and donor agencies to concentrate resources on commercial agriculture and neglect the rest of the rural population. This tendency is accentuated where there is pressure to service external debts.

If concern with poverty and equity are not to be discarded, structural adjustment should be seen as only part of, and not a substitute for, general economic development. To the maximum extent possible, structural adjustment should adopt policies that will encourage

³³ Pinstrup-Andersen found that the removal of food subsidies substantially worsened the distribution of real income in all the surveyed countries: Sri Lanka, Thailand, Egypt and Nigeria.

³⁴ This conclusion was obtained in a study of Egypt: H. Alderman and J. Von Braun. 1985. *Egypt: implications of alternative food subsidy policies in the 1980s*. Washington, International Food Policy Research Institute.

³⁵ Gaiha, 1989, op. cit., p. 57.

³⁶ See, for example, R. Jolly and A. Cornia, eds., *The impact of the world recession on children*. *World Development*, March 1984; and studies by UNICEF.



general economic development, with particular attention paid to enabling smallholders and the poor to participate in this process.

In particular, emphasis should shift from attempting to compensate for poverty intensification after it occurs toward redesigning the adjustment programmes themselves so that poverty alleviation becomes an integral part of the adjustment process. This in turn would require protecting the poor in the transitional period and also in the long term.³⁷ This approach is discussed further in the following section.

Groups unable to benefit from the adjustment process may be protected by targeting income or consumption transfers. Where adjustment programmes succeed in accelerating agricultural growth, they can make a significant contribution to poverty alleviation. But poverty groups must be drawn into the restructuring of production and must participate directly in the adjustment process. It cannot be assumed that benefits will automatically spread to the poor.

Conscious targeting of poverty groups is all the more important in light of the growing evidence that poor women are bearing much of the stress of adjustment. In their capacity as household managers, responsible for the daily care and feeding of household members, women have to make fewer resources stretch further. The hidden cost of adjustment is the extra demand it makes on women's time, which is unrecorded through lack of systematic collection of data on women's unpaid labour. Available case-studies show that poor women have no spare time — they already have a working day which is considerably longer than that of men.³⁸

Benefiting the poor requires: i) adding to their assets through agrarian reform; ii) improving their productivity by better access to productive resources (fertilizer, irrigation, credit, extension services); iii) improving employment opportunities for those without sufficient land through functioning labour markets, adoption of appropriate technologies, and specific employment schemes; and iv) maintaining

health and education services. Agricultural price policies are much too often implemented without detailed information on likely supply responses. Indeed, information from one country is frequently used as a guide in other countries.

A major problem is that SAPs are often implemented in a crisis atmosphere. Governments are struggling to obtain a political consensus to undertake reforms while "vested interest groups" feel unjustly penalized. This is not a situation conducive to carrying out reforms benefiting the poor. It has also been argued that the poor would have been worse off if a SAP had not been implemented, since sooner or later a worse economic crisis would have emerged. But policies aimed at correcting imbalances should be applied in ways which minimize the negative social effects. Rather, the atmosphere of policy reform and adjustment can be exploited to improve the situation of the poor while correcting imbalances. It is a domestic political choice, but the international community can assist by ameliorating the external economic environment.

³⁷ A useful approach is found in T. Addison and L. Demery, *The economics of rural poverty alleviation*. In Commander, 1989, op. cit.

³⁸ N. Heyser. 1988. *Economic crisis, household strategies and women's work in Southeast Asia*. Workshop on Economic Crisis, Household Strategies, and Women's Work. Cornell University.



THE IMPLICATIONS OF STRUCTURAL ADJUSTMENT FOR AGRICULTURE AND ECONOMIC DEVELOPMENT AND THE ROLE OF FAO

Lessons emerging from the past decade of SAPs

The preceding chapters describe the process through which national policy-makers and international lending agencies have introduced far-reaching structural reforms since the early 1980s. During the past decade, declining economic productivity, shrinking export earnings, and debt-service costs have dominated discussions on how economic adjustment should proceed. Consequently, the period has witnessed the adoption of structural adjustment and stabilization policies by one country after another in an attempt to attain macro-economic balances by bringing government expenditures in line with national revenues; improve resource allocation through more market-oriented policies; and create a solid foundation for sustainable economic growth.

Developing countries have employed a wide variety of policy instruments to obtain stabilization and adjustment goals. Over the past decade, institutional reforms, trade liberalization measures and price policy shifts have been common. However, while the approaches of adjustment packages have not differed greatly between countries despite their widely varying situations, after ten years of experience, the results have been mixed. Individual country performances have varied according to a number of internal and external factors. Internal factors include: the importance given to specific objectives; the choice of policy instruments, the nature and size of existing economic imbalances and distortions; and political acceptability. External factors have included, at different times: deteriorating terms of trade; rising protectionism; historically high interest rates; declining markets because of recession in the developed countries; as well as other events beyond a government's control such as prolonged droughts. In fact, the 1980s clearly demonstrated that external factors alone are enough to push the adjustment process completely off course.

While economic adjustment often produces results unique to each country's particular circumstances, a number of common lessons have emerged which provide valuable insights

for both lending agencies and developing countries. It is now recognized that stabilization and structural adjustment are long-term, complex processes, requiring years before results can be expected. The process is even more problematic when adjustment problems have been ignored for too long and imbalances allowed to develop to a point where the adjustment process becomes long and painful. It is also realized that stabilization policies alone are inadequate to promote renewed economic growth and development, and even macro-economic policy changes coupled with structural adjustment and sectoral reforms have so far proven insufficient in many cases. Policy-makers have drawn two important lessons from these experiences and have attempted to improve implementation procedures as well as adopt new and innovative policy measures which were not initially considered.

First, by the mid-1980s, adjustment programmes gave more attention to issues of implementation and emphasized what the World Bank referred to as "a well defined set of implementable policies rather than broad and rapid programmes of reform".³⁹ During this period, lending agencies began to provide additional funds as part of adjustment loans for technical assistance to develop implementation management skills, to better define how the public sector can promote private sector activities, and to find ways of creating confidence in the rapidly changing economic structure.

Second, the political difficulties, social problems, and economic stress created by structural adjustment have come to be better appreciated and understood. It is now recognized that, in the past, SAPs have had a negative effect on the "chronically poor" while creating a "new" poor sector, and that the burden of adjustment may fall unequally on already disfavoured categories of the rural population such as women, low-income groups and small farmers. More recent SAPs make social considerations a basic objective of the adjustment programme, not just for equity and humanitarian reasons, but because of a long-overdue recognition of the uneven impact that deteriorating social welfare has on economic growth and the programme's overall success.

³⁹ P. Nicholas. 1989. *The World Bank's lending for adjustment*, Washington, D.C., World Bank.



Special efforts are now being made to minimize the effects of policy reforms on the poor and to address directly the social dimensions of adjustment programmes. For example, the World Bank's social dimensions of adjustment (SDA) project is attempting to find the appropriate mix and sequencing of policy instruments available under adjustment in order to achieve the dual objective of sustainable economic growth and poverty reduction. The UNDP and other UN agencies, including FAO, are also introducing a programme on how to monitor social welfare status during the adjustment process, involving a planned series of four country case-studies. Countries themselves have also been experimenting with different sets of policy prescriptions designed to achieve adjustment while minimizing social hardship. These experiments include individual countries such as Ghana's Programmes of action to mitigate the social costs of adjustment (PAMSCAD) and the ECA's proposed African alternative framework to structural adjustment programmes for socio-economic recovery and transformation (AAF-SAP) launched in 1989.

The experience of the 1980s has shown that, for many countries, the attainment of the desired adjustment objectives — economic recovery, sustainable economic growth and long-term development — is crucially dependent upon a viable solution to the debt issue. Despite many initiatives, including negotiations, debt-relief proposals and, at times, crippling efforts on the part of indebted countries to restore economic balance while repaying debts, to date, little progress has been achieved in reducing the level of indebtedness or even interest charges. Many developing countries have become increasingly net capital exporters to the lending — mainly industrialized — countries.

A growing consensus now suggests that the various debt-relief programmes need to be defined within a broader political dimension that includes an effective partnership between the industrial and the indebted developing countries and presupposes a sharing of the impact of high indebtedness as well as the burden of debt repayment. Debtor country losses have been disproportionately large compared to those incurred by the industrial countries' financial sectors with regard to loan defaults, debt reduction and debt forgiveness.

Similarly, debt repayment efforts through adjustment policies have been heavily

one-sided. Many debtor nations have undertaken difficult policy reforms while the major industrial countries have moved rather slowly to reduce their own macro-economic imbalances, open up their markets to debtor country exports or reduce interest charges through some form of debt forgiveness. Many industrialized countries have actually raised their non-tariff barriers over the past decade. Developed countries could also do more to increase general public awareness of the interests shared by creditor and debtor nations. Nevertheless, this does not exonerate debtor countries from the need to pursue reforms and adjustment, while seeking formulas for collective and coordinated action that might enhance their position in intragovernment negotiations.

Another common lesson emerging from the past ten years' experience is that a strong agricultural performance is often fundamental to economic recovery and the adjustment process. The agrarian societies of many developing countries continue to depend on agriculture for employment, income, food, and foreign exchange earnings. While agriculture has been negatively affected by the economic crisis during the 1980s, it has also been the most resilient economic sector in the adjustment period.

In the Latin American region, for example, agricultural exports increased at an annual rate of around 3 percent between 1983 and 1988, compared to only 1.6 percent for total merchandise exports. Similarly, agricultural growth rates for the region largely exceeded those of GDP for the same period. This relative improvement in agricultural economic performance highlights the importance of the sector during a period of economic crisis and structural reform. At the same time, however, rural poverty has increased, spreading to more than 60 percent of rural households. Ironically, one reason for the improved agricultural trade balance in many developing countries has been the fall in real incomes which has reduced the demand for imports.

To understand better how the agricultural sector has performed in individual countries and regions, Part Two of this special chapter (Macro-economic imbalances and agriculture — an empirical review) provides a detailed analysis of changes in a broad range of economic variables for a group of 65 developing countries. The discussion that follows raises some of the issues and questions identified by



researchers attempting to evaluate adjustment programmes.

Evaluating SAPs: methodological problems and issues

The relationship between agricultural performance, policy reforms and adjustment goals is difficult to quantify for a number of reasons. To start with, agreeing on the basis for evaluation is difficult. Comparing the performance of critical variables before and after adjustment measures are implemented is informative and useful, but as a method of comparison it has a strong static bias. For instance, one should be interested in estimating how the economy would have performed had the policies not been implemented and then to compare the resulting outcome with what actually occurred. To date, most studies of this type have utilized simplistic trend extrapolations from data series, thus reducing the usefulness of the comparisons. In addition, the choice of time period greatly affects the results of such comparative studies.

Comparing "adjusting" to "non-adjusting" countries is also problematic because these studies ignore the conditions existing when adjustment policies are initially implemented; the different economic, social and political characteristics of each country; and the different types of policies chosen. Part Two of this chapter argues that adjustment can occur by way of a "healthy" or an "unhealthy" process.

A healthy adjustment pattern is characterized by a reduction in domestic and external imbalances without jeopardizing growth prospects; that is, the domestic gap is reduced by increasing savings rather than reducing investment, while the external gap is reduced by generating export earnings rather than compressing imports. Unhealthy adjustment, on the other hand, closes the external gap through the restriction of imports and investment, thereby threatening the economy's long-term capacity to expand adequately.

Separating the adjustment programmes' effects from those of external factors is the next difficulty facing policy analysts. Relying on simple inspections of data may incorrectly attribute the consequences of non-policy factors, such as weather or international price movements, to adjustment policies. Even when external factors are known and taken into account, there remains the problem of calculating the extent of their effect. Finally, the

collection of reliable data remains an obstacle to sound empirical studies.

Despite these limitations, FAO is supporting the development of more practical methodologies so that developing countries may better understand the adjustment process and its potential implications for different social groups in rural areas, as well as for agricultural performance (see Box 3.6).

Evaluations and modelling exercises are needed to assist countries in determining the kinds of policies and resources required to meet development objectives and promote effective economic planning and monitoring. At present, computable general equilibrium models (CGEs) represent the most rigorous approach for accurately assessing the effects of structural adjustment programmes on agriculture. CGEs provide both *ex post* evaluations of adjustment programmes as well as *a priori* examinations of the short-term effects and long-term implications of policies for growth and development. CGEs are capable of providing information on a wide array of relationships between macro-economic and micro-economic variables and of detailing sectoral interactions. The structure of internationally traded goods, institutional characteristics, production patterns, input-output markets and income distribution may all be incorporated in these models.

Adjustment programmes and development strategies in the future

While more useful and sophisticated models continue to be developed, policy-makers still face the immediate challenges of creating an economic environment favourable to agricultural producers. As outlined earlier, the various types of stabilization and structural adjustment policies are by now well defined. The major task facing governments over the past decade has been finding the appropriate mix of policies and the optimum sequencing for introducing the policy changes.

Today, policy-makers are attempting to improve the usefulness of adjustment programmes by establishing development strategies and policies designed to enhance their effectiveness. One challenge is how to incorporate a broader base of rural society into the adjustment process. Rural women, small farm households, rural labourers, migrant workers and landless families need better defined policies which deal directly with their constraints and their capacity to contribute to economic recovery.

BOX 3.6

Role and contribution of FAO in regard to structural adjustment programmes (SAPs)

Why FAO should be involved in structural adjustment programmes

The key reasons for FAO's involvement in the structural adjustment process include:

- i) The mandate of the Organization and the associated scope of its activities: to raise levels of nutrition and standards of living; improve the efficiency of the production and distribution of food and agricultural products; improve the condition of rural populations; and contribute to an expanding world economy.
 - ii) The major economic weight of the agriculture, forestry and fisheries sector in developing countries, and hence its essential role in the structural adjustment process.
 - iii) The major impact that the structural adjustment process has on rural people, food security, agricultural production, natural resources and the environment; and the realization that the process can adversely affect standards of living, levels of nutrition and employment opportunities for the poor.
 - iv) The widespread consequences of structural adjustment programmes across different sectors of the economy. This factor makes consultation and coordination among national agencies, as well as with multilateral and bilateral funding and technical assistance partners, essential. SAPs are truly multisectoral and interdisciplinary, requiring the technical input of all internal and external bodies.
- Provided technical assistance at the request of member countries to help them: assess socio-economic effects of their SAPs; prepare for negotiating a SAP with their financing agencies and donors; conduct sector or subsector policy and strategy reviews; collect and analyse data required for policy formulation; and, through direct assistance and training in policy analysis, strengthen their capacity to monitor and continuously assess the socio-economic effects of policies, including those guiding sector structural adjustment programmes (SSAPs) or SAPs.
 - Formulated on behalf of multilateral financing agencies, especially the World Bank, investment projects in the natural resource sector which reflect agreed national structural adjustment programmes and implement specific aspects of sectoral adjustment in agriculture, fisheries and forestry.
 - Collaborated with other organizations in structural adjustment studies and reviews. FAO participates in the social dimensions of adjustment (SDA) project in Africa, which seeks the full integration of social dimensions into economic and financial decision-making. It also participates in the Informal Group of Multilateral Agency Representatives on the Impact of Economic Adjustment on Food Security and Nutrition in Developing Countries, a group established at the initiative of the World Food Council (WFC) in collaboration with UNICEF and the International Labour Organisation (ILO) in May 1987, and which also includes the IMF and the World Bank among its members.

The structural adjustment activities of FAO

Recognizing the need for structural adjustment while being aware of the possible adverse impacts of adjustment programmes, FAO has:

- Conducted studies to improve understanding of the structural

adjustment process and its socio-economic impacts and thereby provide a firmer basis for the provision of advice and assistance requested by member countries.

FAO can execute and technically support field projects to strengthen national capacity for assessing and monitoring the effects of policies, including those associated with SAPs and SSAPs on food security; nutritional status; employment and welfare of rural people; agricultural production and internal trade; the external agricultural trade account; and the fiscal budget.

Some specific areas where FAO's policy-related technical assistance could be of particular value include:

- reforming or strengthening institutions in the food and agricultural sector and in training local staff;
- undertaking monitoring and evaluation studies, including nutritional surveillance to assess the impact of adjustment;
- establishing appropriate relationships between state marketing agencies and the private sector, as well as defining the role of cooperatives in the production and marketing of agricultural commodities.
- overcoming bottle-necks in the marketing infrastructure, including credit, storage, handling and distribution facilities;
- designing appropriate investment strategies and implementing incentive pricing policies for food and export crops, while taking into account internal physical and institutional bottle-necks, resource limitations, the need to keep consumer prices at reasonable levels, and existing distortions in world markets;
- designing compensatory mechanisms such as special nutritional intervention schemes and employment-creation activities required to mitigate short-term negative effects of adjustment while ensuring that such schemes do not discourage domestic production; and
- assessing the effects of macro-economic factors, both domestic and external, on the food and agricultural sectors and particularly on food security of the poor and vulnerable sections of the population.

Recent FAO activities

The following reports serve as examples of the studies produced by FAO in 1990.

R. Gaiha.

Structural adjustment and household welfare in rural areas — a micro-economic perspective.

A.H. Sarris.

Guidelines for monitoring the impact of structural adjustment programmes on the agricultural sector.

J.M. Boussard.

The impact of structural adjustment on smallholders.

L.D. Smith.

Structural adjustment policy sequencing in sub-Saharan Africa.

A. Thompson.

Institutional changes in agricultural product and input markets and their impact on agricultural performance.

L.D. Smith.

Agricultural labour markets and structural adjustment in sub-Saharan Africa.

C. Kirkpatrick.

The effects of trade and exchange rate policies on production in agriculture.

Salin & Claassen.

The impact of stabilization and structural adjustment policies on the rural sector — case-studies of Côte d'Ivoire, Senegal, Liberia, Zambia and Morocco.

FAO is also involved in numerous training activities aimed at improving policy analysis capacity in developing countries. Training projects are currently under way in various countries in

Africa, Asia and Latin America and the Caribbean.

Finally, FAO is participating in a wide variety of sectoral policy analysis and planning assistance projects. The objectives of these projects include reformulating agricultural policies, identifying and evaluating structural adjustment impacts on food and agricultural production and on marketing systems, and implementing new policy and planning processes.

BOX 3.7

Structural adjustment programmes and the environment

In addition to the socio-economic implications of structural adjustment programmes, policy-makers are increasingly concerned about the potentially negative consequences of macro-economic policies for developing countries' natural resources. The debt crisis demonstrated how efforts by some countries to repay loans could lead to unsustainable agricultural practices. For example, encouraging logging or land clearing for agriculture in humid tropical lowlands in order to generate export earnings may only provide a short-term solution for debt repayments. When these areas are not reforested or cultivated properly they rapidly lose their economic potential. Too often, environmentally sensitive areas are never capable of returning to their initial state after being modified by logging or cultivation.

Policy-makers are beginning to identify how structural adjustment policies affect a country's natural resource base and to design programmes and policies to deal more adequately with environmental problems. Both special programmes such as debt-for-nature swaps, and analyses to identify the potential environmental impacts of policy changes are now addressing these important issues. For instance, in 1987, a non-governmental organization purchased \$650 000 of Bolivian debt for \$100 000 on the secondary debt market in return for a government guarantee to establish three conservation and sustainable-use areas in the Amazon region. All three areas received Congressional Law Status which is the highest legal protection status in Bolivia. At present, five countries (Bolivia, Costa Rica, Ecuador, Madagascar and the Philippines) have participated in debt-for-nature swaps, reducing their external debt by about \$100 million.

Similarly, current research is examining how basic market failures in some developing countries limit the usefulness of adjustment policies that would otherwise encourage

environmentally sound agricultural practices. These failures include: market prices that do not reflect environmental costs; a divergence of the private and social discount rate leading to a misallocation of resources; and property rights leading to inconsistent economic incentives.

For example, the property rights structure affects not only access to land but also whether that land is farmed in a sustainable manner. Landless agricultural labourers may be forced to farm on fragile hillsides because land market imperfections limit their access to more cultivable farmland. At the same time, insecure land rights influence whether those hillsides are planted with permanent tree crops or annual crops which eventually lead to serious soil erosion.

Each individual policy change associated with structural adjustment programmes can have environmental implications. Fiscal policies, government spending and subsidies influence land use, crop choice, input levels, credit availability and public infrastructure investments. Monetary policies, such as interest rate levels, affect investment behaviour and demand. Likewise, exchange rate and trade policies influence the cost of imported inputs, including machinery and fertilizers as well as the profitability, and hence the scale, of export crop production.

While policy-makers are still unclear about how these individual and combinations of policy changes affect the natural resource base, it is now recognized that the environmental effects of macro-economic policies should be addressed in structural adjustment programmes.



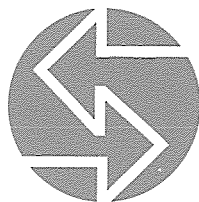
Another challenge is how to accommodate the constant pressure for reduced government expenditures. A more efficient use of limited government resources and sound economic policies that do not discriminate against agriculture are clearly needed. At the same time, agricultural producers still require improved rural infrastructure, research and extension services, and access to credit so that new technologies may be adopted. In addition, the slow improvements in rural education — so painfully gained — must be continued.

One final lesson can be drawn from shifts in the perception of principles and instruments of economic and agricultural development. The past two decades have witnessed radical changes in development strategies. After the disastrous experience of financial permissiveness and debt accumulation in the 1970s, structural adjustment became the

dominant strategy. Whether designed primarily as a development or a loan-repayment strategy, the problems it was intended to address remain unsolved. Indeed, the 1980s have been termed a lost development decade for many countries and the problem of debt has not subsided. Agriculture has helped buffer the effects of economic shocks, but its contribution to recovery and growth has been uneven. At the same time, beyond the many initiatives and schemes proposed, no comprehensive, alternative strategy has evolved. As we enter the 1990s, the international community, and in particular the developing countries concerned, has yet to find an overall strategy that balances the needs for economic efficiency, debt reduction and the incorporation of large segments of low-income population and rural society into the growth and development process.

PART THREE
STRUCTURAL ADJUSTMENT AND
AGRICULTURE

II. Macro-economic imbalances and agriculture
— an empirical review



STRUCTURAL ADJUSTMENT AND AGRICULTURE

II. Macro-economic imbalances and agriculture — an empirical review

INTRODUCTION

The purpose of this section is to present an empirical overview of the development experiences of 65 developing countries and to examine the following five major issues:

- How did internal and external macro-economic imbalances of developing countries evolve after the 1981-83 crisis?¹
- Among countries that succeeded in reducing such imbalances, which succeeded in doing so in an economically "healthy" manner?²
- What general features characterized internal and external adjustment in the different country groups?
- What role has agriculture played in the above issues?
- What was the impact of the different adjustment and stabilization patterns on economic and agricultural performance?

The 65 developing countries, selected mainly on the basis of the quality of the data available, have been divided into three analytical groups: "healthy" patterns of internal and external adjustment after the critical period 1981-83 (group A); "unhealthy" adjustment patterns (group B); or, as in the third group of countries, a continuing deterioration in macro-

economic imbalances (group C). These country groups are presented in Table 3.5.

As in any grouping of countries, some approximations are inevitable, in particular, the need to use standard reference periods. Some countries have a long history of macro-economic imbalances calling for adjustment while, for others, deficits only became unsustainable and adjustment compelling during different periods in the 1980s. However, it is in the critical period 1981-83 that imbalances and performances had more markedly deteriorated in a large majority of countries, underlining the widespread negative impact of the recessive international economic environment. The years 1981-83 were therefore taken as the most representative "central" time frame for examining macro-economic imbalances at their worst; the years 1970-80 for reviewing previously prevailing conditions; and 1984-87 as "adjustment years", recognizing that the process of adjustment is still unfolding and that this period of time is far too short for a definite assessment.³

This exercise does not aim at evaluating SAP performance. The country groupings have been based on simple macro-economic accounting aggregates, devoid of any normative or judgemental assessments of policies behind — and social implications of — adjustment patterns, and regardless of whether or not these policies were introduced in the context of SAPs supported by international financing agencies.

Although the relevance of the groupings varies according to the issue examined, they are used throughout the review as a

¹ Macro-economic imbalances are defined as large and persistent differences between current account (and saving/investment) deficits and long term inflows of capital.

² A "healthy" pattern of stabilization and adjustment is defined as one that reduces domestic (saving/investment) and external (export/import) disequilibria without jeopardizing growth prospects. In other words, one that succeeds in closing the "domestic gap" mainly by increasing savings rather than by contracting investment; and closes the "external gap" mainly by generating export earnings rather than by compressing imports. Conversely, economically "unhealthy" stabilization/adjustment is one that fails to switch expenditures in favour of investment and exportables, but resorts to restricting investment and imports, without having the domestic capacity to substitute the latter efficiently.

³ The year 1987 is the latest for which consistent data series are available. When data series for a specific country were not complete, averages for the respective country groups were estimated either excluding the country or on the basis of extrapolations. All time period and country group averages are simple arithmetic averages, in line with the principle of giving all countries equal weight. When extreme variations in one or a few countries distorted the group averages, these countries were excluded from the average.

TABLE 3.5 Distribution of countries according to patterns of change in external (export/import) and domestic (saving/investment) balances, 1981-83 to 1985/87

Region	Number of countries	Improving		Deteriorating
		A (19)	B (29)	C (17)
Latin America and the Caribbean	20	Brazil ¹ Chile Colombia Guatemala Guyana Jamaica Paraguay Venezuela ¹	Argentina ¹ Barbados Costa Rica Haiti Panama Peru Trinidad/Tobago	Bolivia Ecuador Honduras Mexico ¹ Nicaragua
Africa	31	Botswana Burkina Faso Gambia Madagascar Mauritania Mauritius Morocco Nigeria	Benin Burundi Côte d'Ivoire Congo Kenya Liberia Malawi Rwanda Senegal Sierra Leone Sudan Tunisia	Algeria ¹ Cameroon ¹ Central African Rep. Ethiopia Gabon ¹ Guinea-Bissau Mali Niger Tanzania Togo Uganda
Near East	6	Turkey	Cyprus Egypt Jordan Syrian Arab Rep. Yemen Arab Rep.	
Far East and the Pacific	8	Korea, Rep. of Thailand	Bangladesh Fiji Malaysia Philippines Sri Lanka	Indonesia ¹

¹ Countries with positive balances in most years.

Source: FAO, based on data from World Bank, *World Tables* (1988-89 edition).

convenient analytical framework. Some consistency is generally found in the direction of the results obtained, however, which confirms the pervasive influence of macro-economic imbalances on overall and agricultural performance.

The main findings of the review are:

- Macro-economic imbalances worsened markedly in the early 1980s, but a large majority of countries reduced them through some form of stabilization and adjustment in more recent years. These are countries in groups A and B.
- Among the 48 countries that reduced such imbalances, only a minority of 19 were able to do so in an economically "healthy" way. These are countries in group A.
- Countries in group A showed a more favourable profile than the others in recent years, by most traditional measures of growth and trade performance, both overall

and in agriculture. In particular: i) their growth in GDP was significantly higher, in the aggregate and within regions; ii) their reduction in external imbalances was achieved mainly through a successful export effort. The volume of their exports strongly expanded, more than compensating for a pronounced deterioration in their terms of trade — this feature also applied to agricultural exports. Countries in groups B and C were noticeably less successful on this account; iii) investment was a major casualty of adjustment and stabilization. Nevertheless some countries, particularly in group A, achieved a remarkable domestic saving effort after the period 1981-83, which permitted some recovery in investment. The most outstanding increase in domestic savings was in the Latin America and the Caribbean region, but as much of the savings were used to finance debt-service payments, national savings available for investment were



greatly eroded; iv) fiscal imbalances were reduced through a less traumatic pattern of fiscal management in group A, compared with groups B and C, with a more gradual reduction in expenditure and some recovery in revenues. While a considerable share of fiscal expenditure was being channelled to finance interest payments in many countries, those in group A were able to maintain a stable, if relatively low, share of productive expenditure in recent years; and v) better comparative performance in food production, together with lower reliance on external food supply, enabled countries in group A to achieve greater self-sufficiency in food, yet maintain stable levels of per caput calorie intake.

- Nearly all countries in group A significantly devalued their currencies in real terms, while most of group B did not and currencies in the group C countries generally tended to appreciate.
- Agriculture played a significant role in mitigating the worst effects of the 1981-83 crisis in all groups. The secular decline in the

share of agriculture in GDP was arrested in the early 1980s and even reversed subsequently. All groups shared in this trend. Agricultural trade appeared to be more affected than trade in other sectors by the recession of the early 1980s, but its share in total merchandise trade rose more recently.

- Although budgetary difficulties imposed widespread cuts in government productive investment, agriculture was less penalized in relation to other sectors during the 1980s. In most countries central government development expenditure in agriculture rose both as a share of agricultural GDP and as a share of total central government development expenditure.
- Agriculture and external debt: external financing flows to agriculture added little to the debt overhang of developing countries, and the sector maintained positive net transfers throughout the 1980s. Furthermore, agriculture provided a positive contribution to external balances in most cases. Surpluses from agricultural trade enabled a significant share of the aggregate debt-service payments of developing countries to be financed.

BOX 3.8

Two country cases

While entirely different in their socio-economic and political context, the experience of two countries, Chile and Egypt, provide typical examples of opposing patterns of stabilization and adjustment. In the case of Chile, the trade balance turned positive between 1981-83 and 1984-87 thanks to a sharp increase in exports, which exceeded import growth. The trade surplus offset net factor payments, enabling a reduction in the current account deficit as a percentage of GDP. On the domestic balance side, there was a strong expansion in domestic private savings and comparatively lower, but still significant, increases in capital expenditures — despite reduced

government expenditure relative to revenues.¹

In Egypt, by contrast, the external trade deficit declined mainly as a result of a sharp contraction in imports — while the domestic capacity to substitute them efficiently and rapidly was lacking. The improved domestic balance was achieved with much lower levels of domestic savings and investment — the contribution of gross domestic investment to growth of GDP expenditure was actually negative in 1986 and 1987 — and a slightly reduced fiscal deficit. While in Chile private consumption as a percentage of GDP declined from 75 percent to 68 percent, in Egypt it increased from 66 percent to 72 percent —

the mirror image of diverging trends in saving rates. While the full impact of these features on GDP growth can only be assessed in a longer-term perspective, it may be noted that such contrasting patterns of stabilization were accompanied by equally contrasting growth trends: in Chile per caput GDP fell 4.8 percent yearly during 1981-83, but rose nearly 3 percent a year in 1985-87, over 5 percent in 1988 and almost 7 percent in 1989; while in Egypt the per caput annual growth rate in GDP declined from 4.2 percent in 1981-83 to 1.4 percent in 1985-87 and turned negative in both 1988 and 1989.

¹Chile was among the very few countries that moved from a deficit to a surplus fiscal balance position between 1981-83 and 1985-87.



MACRO-ECONOMIC OVERVIEW⁴

External (export minus import of goods and non-factor services) and internal (saving minus investment) balances widely differed among countries, ranging from surpluses representing up to 5 percent of GDP to deficits as large as 40 to 50 percent of GDP (Table 3.6). Behind this diversity it is not necessarily the size or sign of the balance *per se* that determined critical payments situations. Indeed, Table 3.6 shows that several countries, particularly in Latin America and the Caribbean, actually had positive trade and internal balances representing over 3 percent of GDP in the period 1985-87 (and this was the case throughout the 1980s), but they were among those where problems calling for adjustment became more acute. By now it is well known that such problems were rather on the financial side — current account gaps filled through foreign borrowing until the early 1980s and, subsequently, repayment obligations that could not be financed by new capital inflows. Thus, in the following discussion changes in external and internal balances are reviewed in relation to changes in net factor income (i.e. interest payments, foreign investment profits and foreign remittances).

Domestic (saving minus investment) balances

During the 1980s, the overall saving effort (gross domestic savings as a share of GDP) in Africa and Latin America and the Caribbean declined sharply from the levels of the 1970s (Figure 3.1). Savings in these regions were severely constrained by the economic recession and related factors (lower household incomes, higher inflation rates, very low or negative real interest rates which reduced external financing and affected business and public saving). This tendency was less pronounced in the Far East where, although the domestic saving rate during the 1980s fell below the high average levels of the period 1976-80, it remained significantly higher than in the early 1970s. In the group of Near East countries, heavily reliant

on external financing flows for investment, the domestic component of saving remained very low, with only a modest increase after 1984.⁵

- The level of gross national savings (gross domestic savings plus net factor income) available to finance investment declined more markedly than domestic savings in all regions because an increasing share of the overall saving effort had to be diverted toward external debt payment obligations.
- While investment rates (gross investment as a share of GDP) during the 1970s were relatively constant at around 23 percent in both Africa and Latin America and the Caribbean, they tended to rise in the Far East and Near East, peaking at 29 percent and 34 percent respectively in 1981. In the following years, however, the volume of investment became a major victim of stabilization and adjustment in all regions. By the period 1985-87 investment/GDP ratios were on average: 18 percent in Latin America and the Caribbean; 23 percent in the Near East; 20 percent in the Far East; and 18 percent in Africa.

In group A, domestic savings and, to a lesser extent, investment and national savings staged a substantial recovery after the period 1981-83 while remaining below the average levels of the 1970s. The most outstanding improvement concerned domestic savings in Latin America and the Caribbean, which enabled the eight countries in the group to close their aggregate saving/investment gap to the smallest margin since 1974. Nevertheless, as much of this remarkable saving effort was used to cover debt-service payments, only a modest and uneven increase was achieved in national savings. In Africa, the improvement observed in the eight countries in group A needs to be qualified in the context of the region as a whole. Indeed, while savings did recover, investment rates merely stabilized at the depressed levels to which they had fallen in 1983.

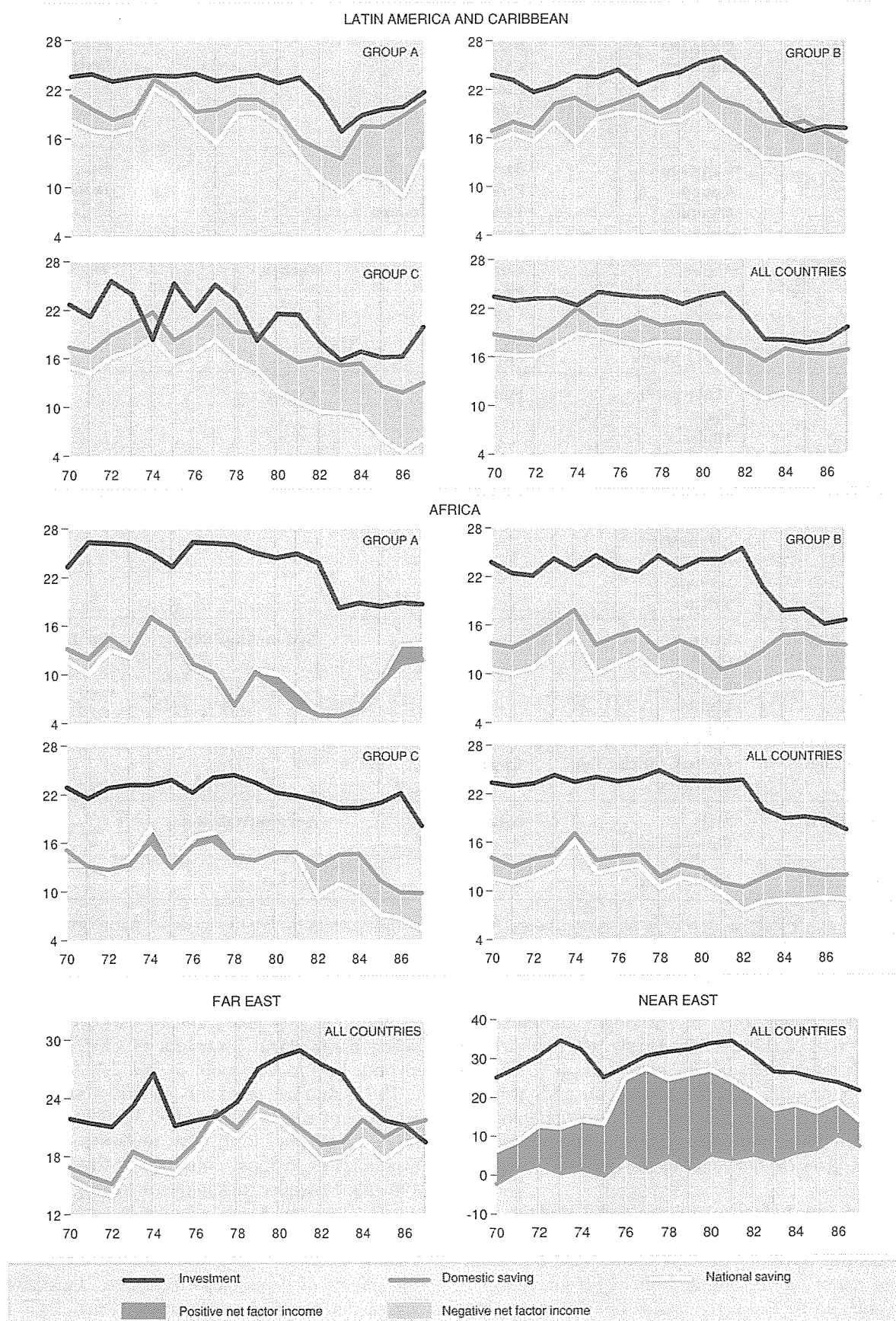
Among the countries that reduced domestic imbalances in an economically “unhealthy” manner (group B), the seven countries in Latin America and the Caribbean experienced an almost uninterrupted fall in investment and saving rates throughout 1982-87, coupled with a widening net income payment gap. Those in Africa experienced a similar collapse in investment after 1982 despite some recovery in

⁴ A set of interdependent accounting identities indicating the fundamental relationships among the internal and external dimensions of adjustment is used as a conceptual framework for this section (see Box 3.10).

⁵ The limited country sample for the Near East and Far East and Pacific regions cannot be disaggregated (all but four countries fall in group B). Averages are therefore presented for the region as a whole.

Figure 3.1

DOMESTIC (SAVING/INVESTMENT) GAP 1970-87 Percentage of GDP



Note: Net factor income is also broadly seen in Figure 3.6 (external balances) as the gap between net trade and current accounts balances. However, the two NFI figures are not identical as they were derived from independent estimates.

TABLE 3.6 External and internal balances as a share of GDP, selected developing countries, average 1985-87¹

Balance as share of GDP (%)	Region			
	Africa	Latin America & Caribbean	Near East	Asia & Pacific
3.1 and more	Côte d'Ivoire Botswana Liberia	Argentina Brazil Chile Colombia Mexico Venezuela		Korea, Republic of Philippines Malaysia
0.1 to 3.0	Cameroon Gabon Nigeria	Barbados Peru Trinidad & Tobago Panama		Fiji Indonesia
0 to -4.0	Algeria Congo Kenya Malawi Sierra Leone	Guatemala Honduras Costa Rica Ecuador Jamaica	Turkey	Thailand
-4.1 to -7.0	Madagascar Niger Tunisia Uganda	Bolivia	Cyprus	
-7.1 to -10.0	Ethiopia Burundi Mauritania Morocco Senegal Sudan	Paraguay Haiti		Bangladesh
-10.1 to -13.0	Benin Egypt Rwanda Gambia Togo		Syrian Arab Rep.	Sri Lanka
-13.1 to -20.0	Central African Rep. Tanzania	Guyana		
-20.1 to -30.0	Mali Burkina Faso	Nicaragua	Yemen Arab Rep.	
-30.1 to -50.0	Guinea-Bissau		Jordan	

¹ External balances = exports-imports of goods and services; internal balances = saving-investment. The balance of trade and that of domestic saving/investment are *ex post* identical (see Box 3.10).

Source: World Bank, *World Tables* (1988-89 edition).

saving, mainly of domestic origin, during the first half of the decade. Finally, the countries with deteriorating imbalances (group C), in both Latin America and the Caribbean and Africa, combined the worst features of a widening saving/investment gap: reduced investment rates and growing net income payments.

Domestic balances and the fiscal budget

For the 65 countries reviewed as a group, total central government expenditure accounted for a major (about one-quarter in recent years) and, up to the early 1980s, steadily increasing proportion of GDP. Growth in government revenues lagged behind expenditures in virtually

all countries and years, the typical overall fiscal deficit being about 5 percent of GDP. (See identity iii) and comment in Box 3.10.)

The economic recession and domestic adjustment measures brought about a pronounced decline in both revenues and expenditures in most countries in the period 1981-83. However, difficulties in raising the tax base — not the least because of weak tax administrations — and a reduction in non-tax income and external grants, more than offset the effects of expenditure restraint. The result was a deterioration in the fiscal deficit, to 7 to 8 percent of GDP in 1982. Subsequently, uneven degrees of improvement were achieved.



The fiscal deficit followed similar patterns in the three country categories. However, while their deficits relative to GDP were comparable during the 1970s, trends and patterns tended to diverge in more recent years (Figure 3.2). Overall, the deficit was reduced in groups A and B, but worsened in group C.

In group A the deterioration in the deficit was less pronounced by the period 1981-83 than in the other two groups, and the subsequent improvement was relatively more significant. Shifts in the revenue/expenditure balances also differed. Group A showed a more gradual reduction in expenditures, coupled with a recovery in revenues during 1985-86. In group B, deficit trimming was mainly achieved through expenditure contraction although revenues also significantly increased in 1986; while in group C government expenditure actually accelerated strongly during 1982-85, outpacing revenue growth and bringing the fiscal deficit to almost 9 percent of GDP in 1985. It is only in 1986, the latest year for which data are available, that government spending was restrained in this group of countries. The broad picture appears to confirm the symmetry between patterns of adjustment — successful or otherwise — in macro-economic balances and those achieved through fiscal management.

The implications of fiscal balances on external accounts may be recalled. Since the fiscal deficit can only be financed internally by a private-sector saving in excess of investment or

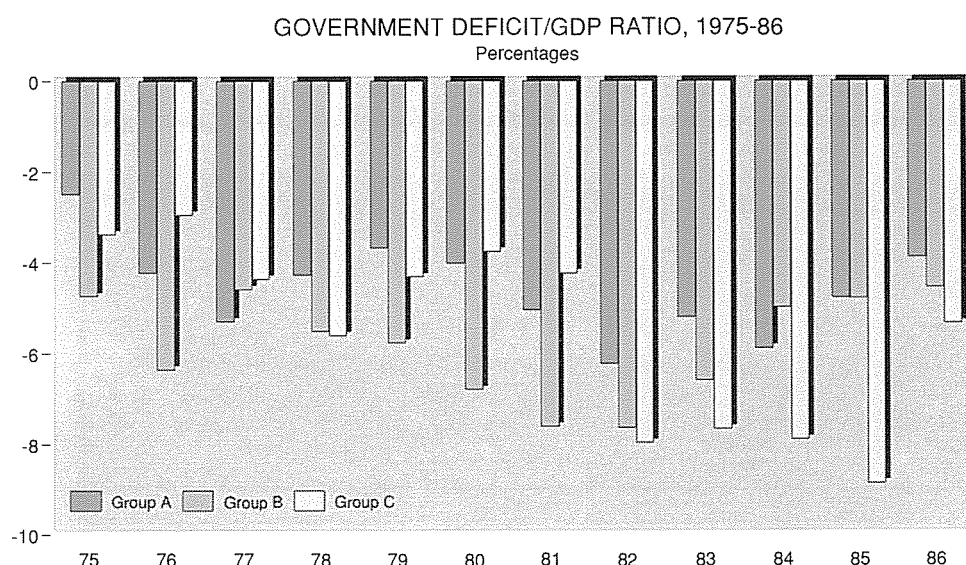
by an external current account deficit, in a period of depressed domestic saving a marked correlation is to be expected between the fiscal and current account deficits (Figure 3.3).⁶

Changes in government expenditure composition were even more striking than those in fiscal balances. In many countries interest payments on public debt came to represent a disproportionately high item in public budgets. This was particularly the case in Brazil, Mexico, Côte d'Ivoire and the Philippines. This process resulted from a greater reliance on domestic financing of the budget deficit although substituting internal for external debt did little to reduce the servicing burden. The counterpart to soaring interest payments was a reduction in the share of productive and social service expenditures in the public sector budgetary allocation (Figure 3.4).

Inflation is closely related to fiscal deficits. Faced with the inability to generate fiscal resources to finance their budget deficit, many governments resort to issuing currency faster than the increase in money demand at the prevailing prices and interest rates. Inflation may, in turn, worsen the deficit to the extent that expenditures follow the pace of price

⁶ In a sample of 35 countries, two-thirds of the fiscal deficit for 21 countries was financed domestically and one-third externally by foreign loans and grants (data for 1983). See Special chapter on Financing agricultural development, in *The State of Food and Agriculture*, 1986.

Figure 3.2



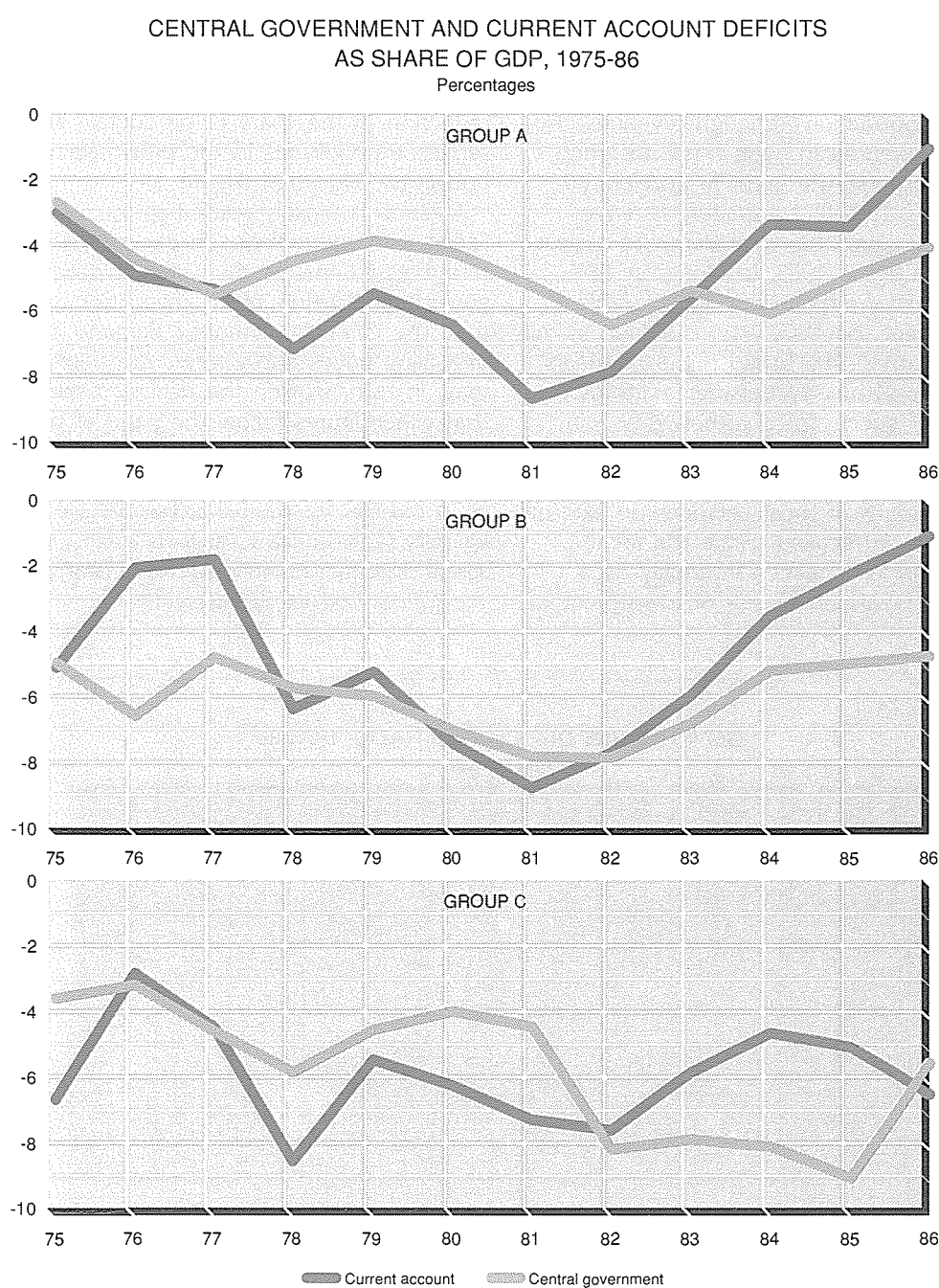
Source: FAO, based on IMF data



increases, but taxpayers tend to delay their payments. This again prompts money creation and closes the vicious circle — fiscal deficit/price inflation. Such a process has become all too familiar in many countries during the 1980s, mainly in Latin America and the Caribbean but also in Africa and some Asian countries. However, aggregate data do not show any clear relationship between changes in the central government deficit and rates of price increase

during the “adjustment” period. Inflation rates steadily accelerated in all regions and country groups, not the least in group A which had shown a relatively more favourable fiscal profile (Figure 3.5). As usual, however, these aggregate observations conceal exceptions. There were several cases of successful anti-inflation programmes, largely based on fiscal reform and austerity, of which Bolivia is the most outstanding recent example.

Figure 3.3



Source: FAO, based on IMF data



External (export minus import) balances

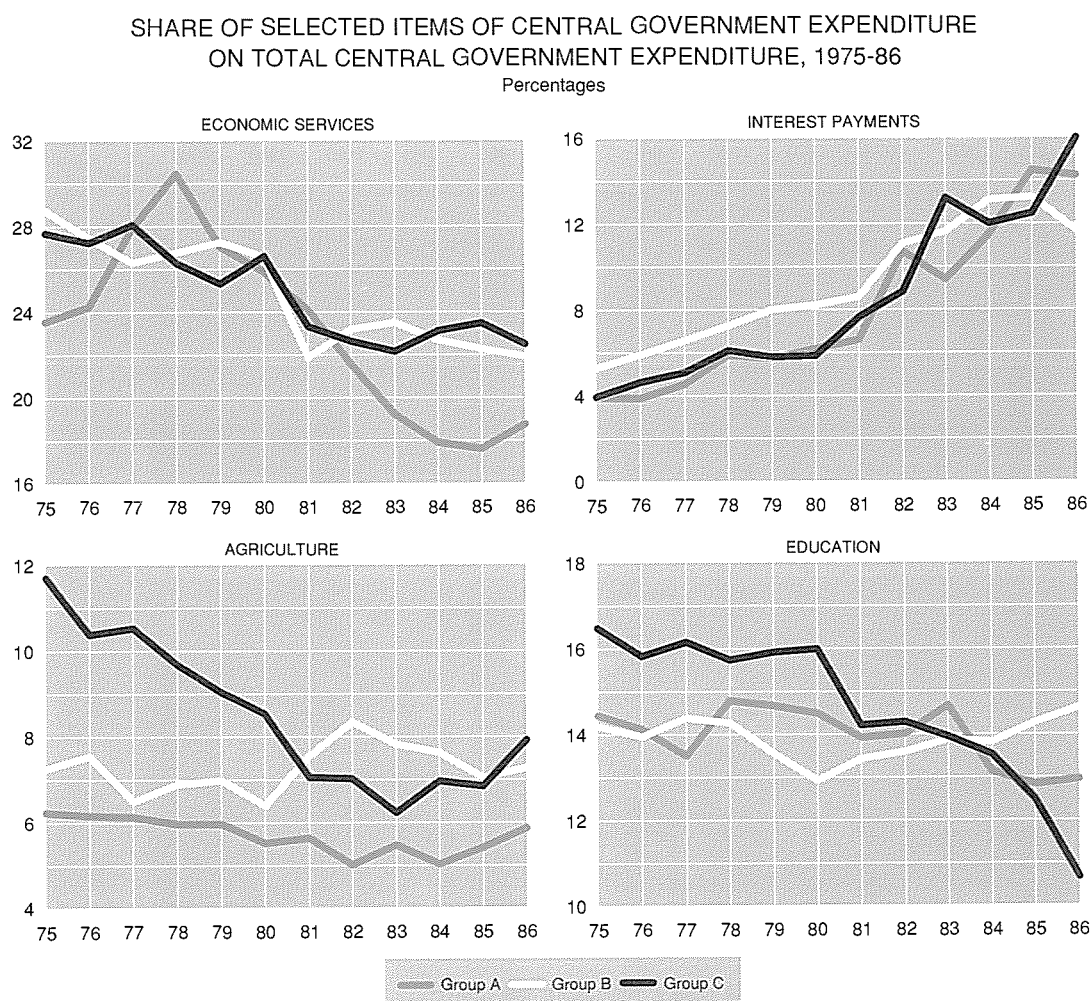
There were widely differing patterns in exports, imports and current account balances in the sample of 65 countries reviewed (Figure 3.6). In particular, there were pronounced deficits in trade accounts in the Near East and, to a lesser extent, Africa throughout the 1970s and 1980s, contrasting with comparatively smaller imbalances in their current accounts (implying a surplus in net factor income). This is explained by the presence of several large remittance-recipient countries in the Near East group and low-income economies benefiting from interofficial transfers in Africa. In Latin America and the Caribbean, where deficits in trade balance are consistently smaller than those in current accounts, the gap was closed by factor income payments. In the case of the Far East region, the balances of trade and

current accounts have moved close together, underlining the region's relatively small reliance on external sources of financing for investment.

There had been a steady growth in the importance of developing countries' total trade in relation to GDP during the 1970s. This was true for all developing country regions, despite wide variations in the degree of openness of their economies. Aggregate trade balances were generally negative during this period, with the deficit fluctuating around a relatively stable range of 1 to 5 percent of GDP in most years, except in the Near East where it averaged approximately 20 percent.

The economic recession of the early 1980s caused a reversal of these earlier trends. Despite the varying degree of economic openness, a widespread aggravation of external deficits occurred in all regions, together with a

Figure 3.4



Source: FAO, based on IMF Finance Statistics, 1988

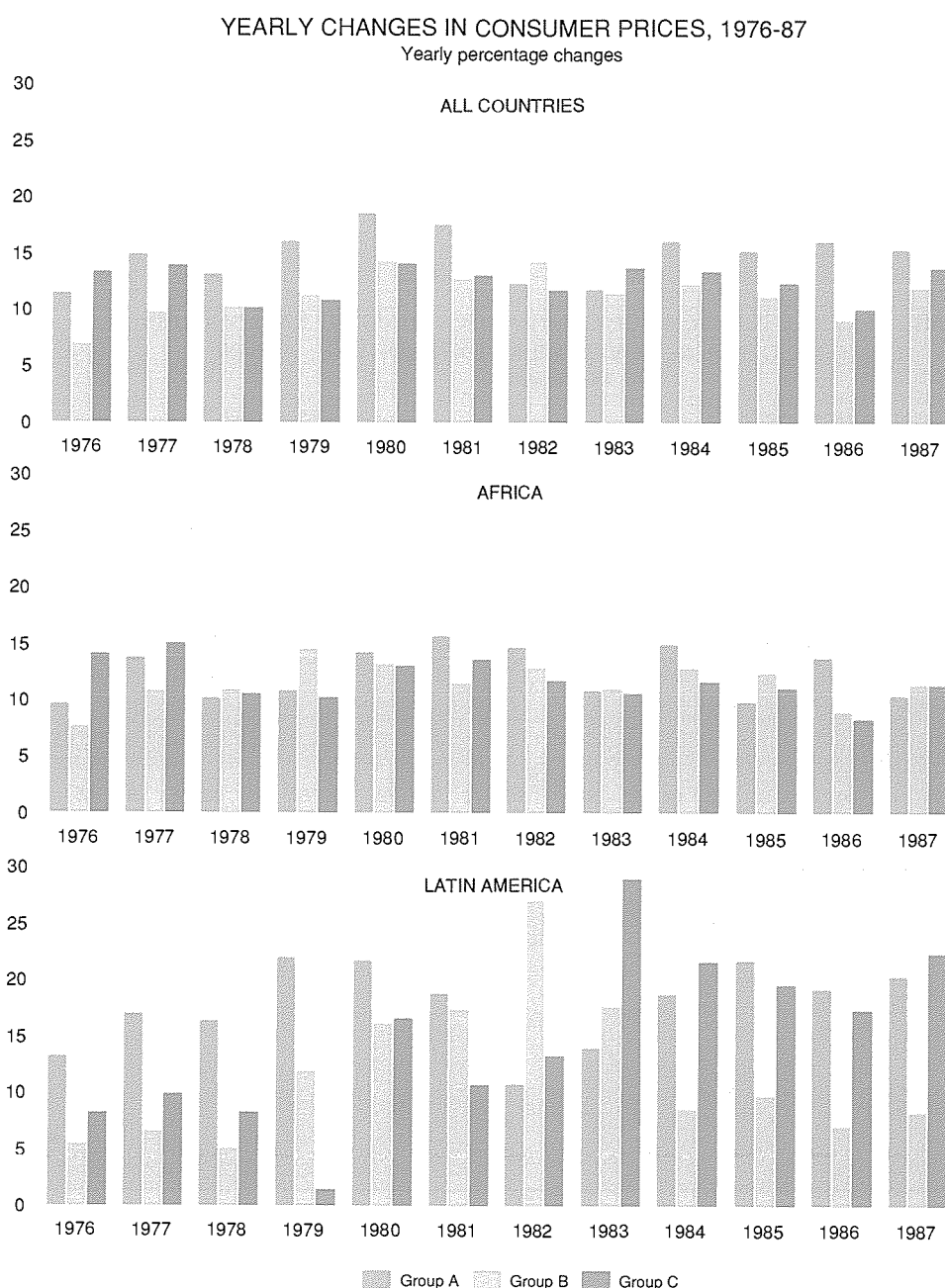


decline in the overall share of total trade in GDP. While widening deficits, mainly the result of an upsurge in imports, had already been noticeable in the late 1970s, the tendency was accentuated during 1981-83, as imports continued to expand but export growth slowed.

At their largest in the period 1981-82, trade deficits as a share of GDP reached 6 percent in Latin America and the Caribbean, 10 percent in Africa, 8 percent in the Far East and as much

as 30 percent in the Near East. The ensuing pressure to reduce external imbalances and generate trade surpluses triggered a process of measures to promote exports and contract imports. Between 1981-83 and 1985-87, trade balances improved in three-quarters of all Latin America and the Caribbean countries, two-thirds of those in Africa and all but one — Indonesia — in the Near East and Far East regions. By the years 1985-87 the trade account

Figure 3.5

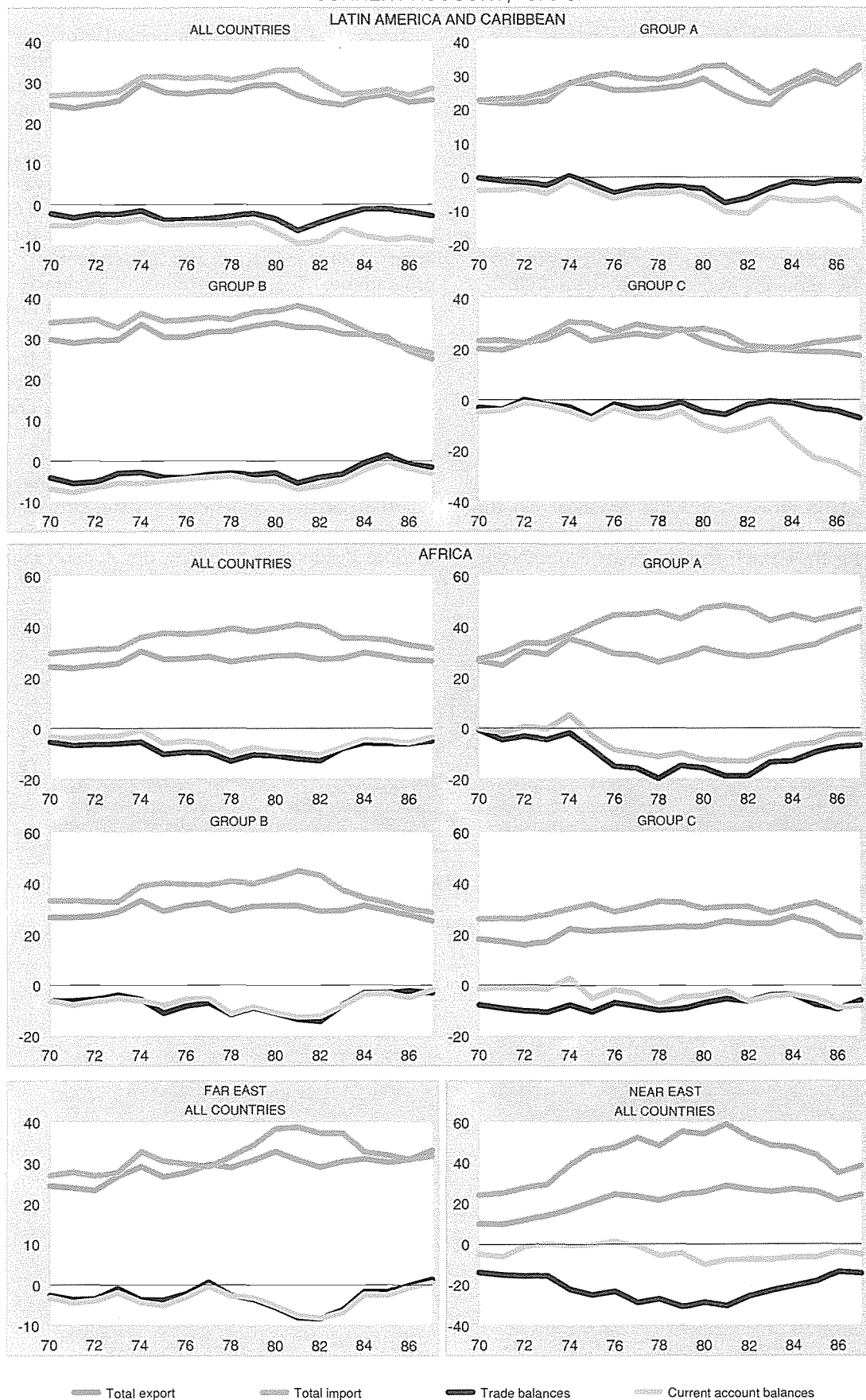


Source: FAO, based on IMF data

Excluding ten countries for which inflation rates were more than double their respective group average.

Figure 3.6

EXTERNAL (EXPORTS/IMPORTS) BALANCES AND BALANCES OF
CURRENT ACCOUNT, 1970-87



Source: FAO, based on data from World Bank World Tables 1988-89 edition.



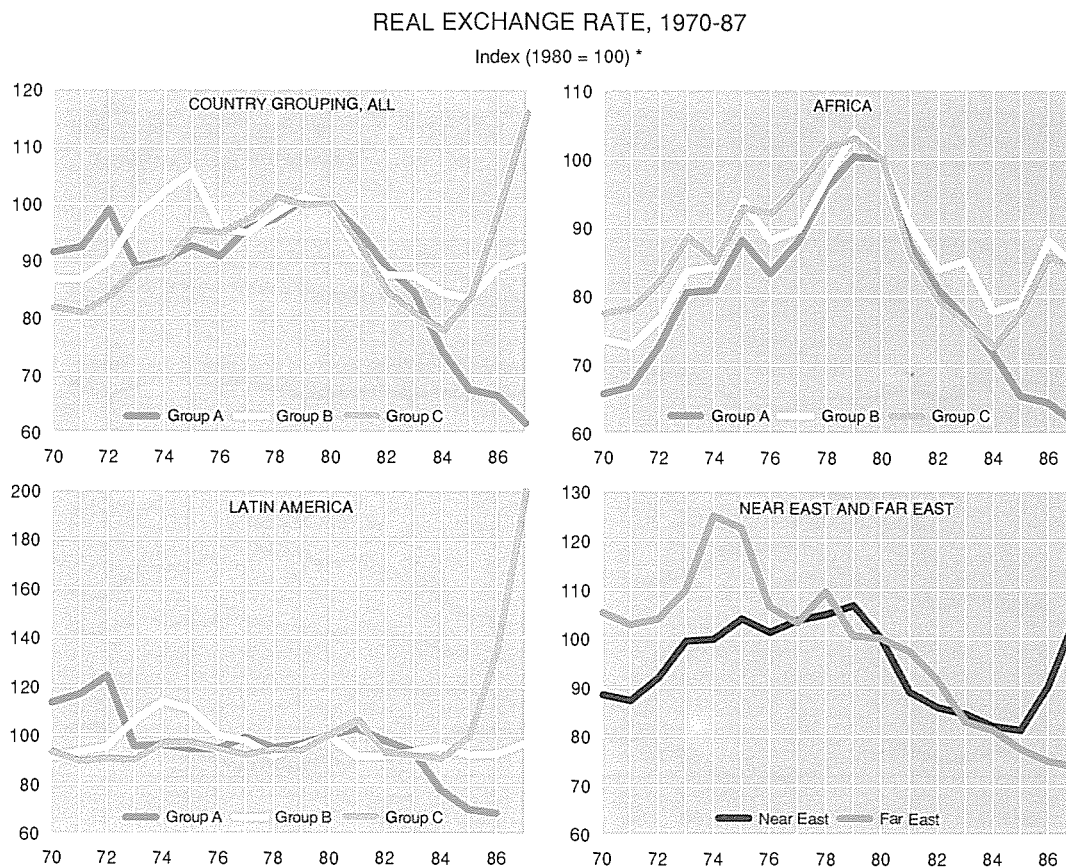
had been brought close to a balance in Latin America and the Caribbean and the Far East, while in Africa and the Near East the deficits were reduced to their lowest levels in relation to GDP since the early 1970s.

As noted earlier, in most cases this reduction was initially achieved through a process of import-contraction — with the prevailing economic and market environment preventing a rapid growth in exports, and export-promotion measures requiring some time to bear fruit. Furthermore, with the wide deterioration in international financing and lending conditions coupled with a mounting problem of debt servicing in many countries, the improvement in trade balances was not always rewarded by a commensurate improvement in current accounts. Indeed, Figure 3.6 shows an actual deterioration in the current account position of countries in group A in Latin America and the Caribbean, even though they had succeeded in reducing their trade deficits in an economically "healthy" way.

Among the many factors behind movements in external balances, two influences of common and major importance can be explored in the aggregate: movements in real exchange rates and shifts in terms of trade.

Exchange rate misalignments can be a major cause of imbalances because of their pervasive effects across all sectors of the economy. For this reason, exchange rate policies are at the heart of all stabilization and adjustment programmes. The interpretation of evidence regarding aggregate currency movements and changes in macro-economic disequilibria is subject to some caution, however. While the distorting effects of overvalued exchange rates on the allocative efficiency of production and trade are widely recognized, the ultimate growth and trade effects of devaluation are difficult matters to assess. Some authors have pointed out that, depending on the structure of incomes in the different saving groups, shifts in income distribution following devaluation can lead to a recession, at least in the short term.

Figure 3.7



Source: based on IMF data

* Calculated as the ratio of nominal exchange rates vis-à-vis the US dollar and local vis-à-vis US inflation rates.



A recessionary impact is also to be expected from the restrictive effects on imports of capital/intermediate input goods. It is only under quite restrictive assumptions about intersectoral flexibility, and the ability to check domestic inflation in relation to that of trading partners through appropriate fiscal and monetary policies, that devaluation will yield positive growth and trade results.

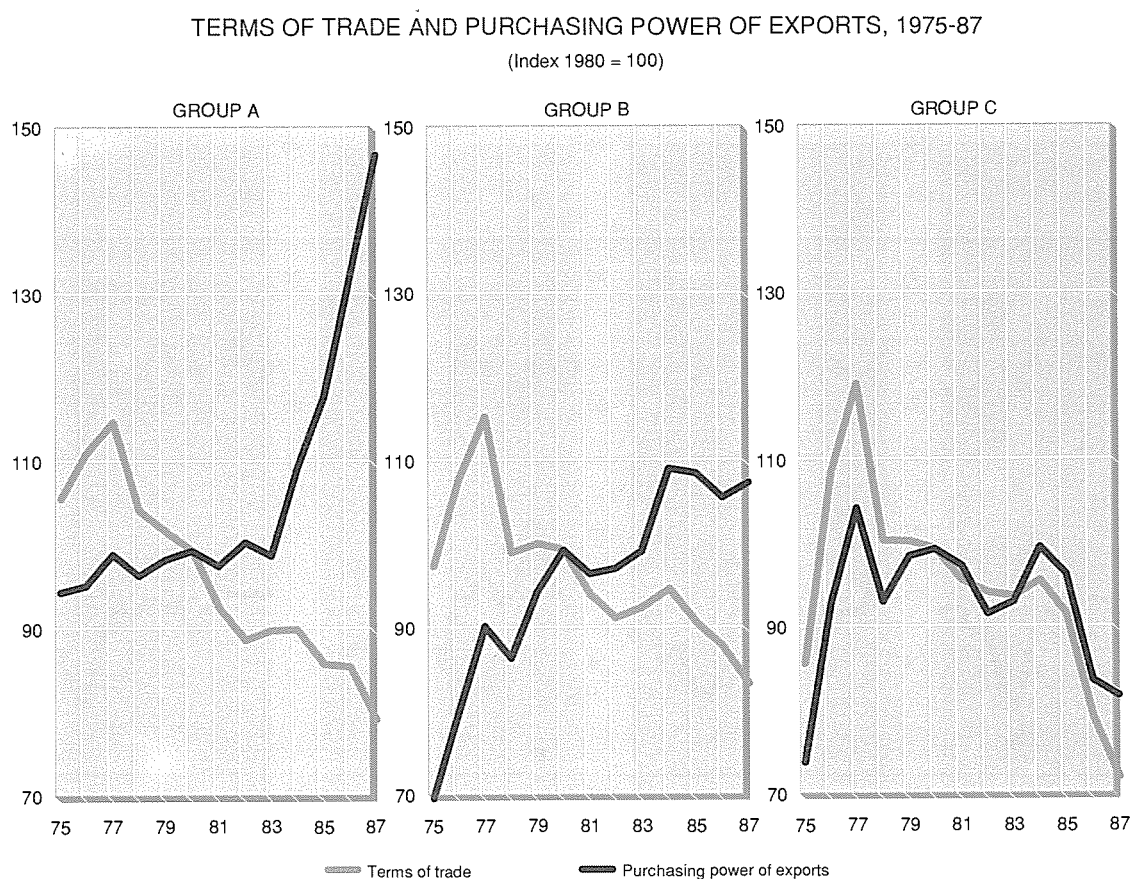
Despite these reservations, the experience of the 1980s seems to show a positive relationship between currency devaluation and the ability to reduce external imbalances successfully. In both Africa and Latin America real exchange rates followed similar patterns in the three groups of countries during the 1970s — with a marked tendency for currencies to be overvalued in Africa (Figure 3.7). However, trends widely diverged after 1984. Countries in group A significantly devalued their currencies, but those in group B did not, while currencies in group C significantly appreciated. Real exchange rates in countries in the Far East and Near East regions

showed a similar downward slope since the late 1970s but, while in the former the trend continued unabated until 1987, the latter's currencies appreciated in the period 1986-87.⁷

Another factor explaining the diverging experiences of external adjustment was the ability to adjust to adverse movements in international terms of trade. Despite the differences in the structure of their exports, all regions and country groups were hit by a

⁷ The presence of extreme cases of appreciation or depreciation sometimes influenced the unweighted country group averages. For instance, the sharp appreciation of currencies in group C in Latin America between 1985 and 1987 was largely caused by the presence of Nicaragua. Similarly, the regional appreciation in the Near East during 1986-87 was largely influenced by the experiences of Egypt and the Syrian Arab Republic. However, the diverging patterns in the three groups remain evident, if somewhat attenuated, even after elimination of these extreme cases. In particular, the strong currency devaluation in group A was common to nearly all countries.

Figure 3.8



Source: FAO, based on IMF data



severe deterioration in the prices of their exports compared to those of imports (net barter terms of trade). From 1980 to 1987 the decline was in the order of 20 percent in group A, 15 percent in group B, and 27 percent in group C. What clearly made the difference between these groups was their capacity to expand the volume of their exports so as to maintain or even expand their purchasing capacity (Figure 3.8). Group A was very successful in this respect with its income terms of trade (or purchasing capacity of exports) improving by nearly 50 percent between 1980 and 1987. By contrast, in groups B and C, net barter fell almost *pari passu* with income terms of trade, implying little compensation through expanded export volumes. It is in Africa that group A achieved the most significant improvement in income terms of trade, particularly during 1985-87, although some improvement also benefited countries in group B. Strong gains were widespread in group A, the notable exception being Nigeria where the fall in oil prices severely reduced the purchasing power

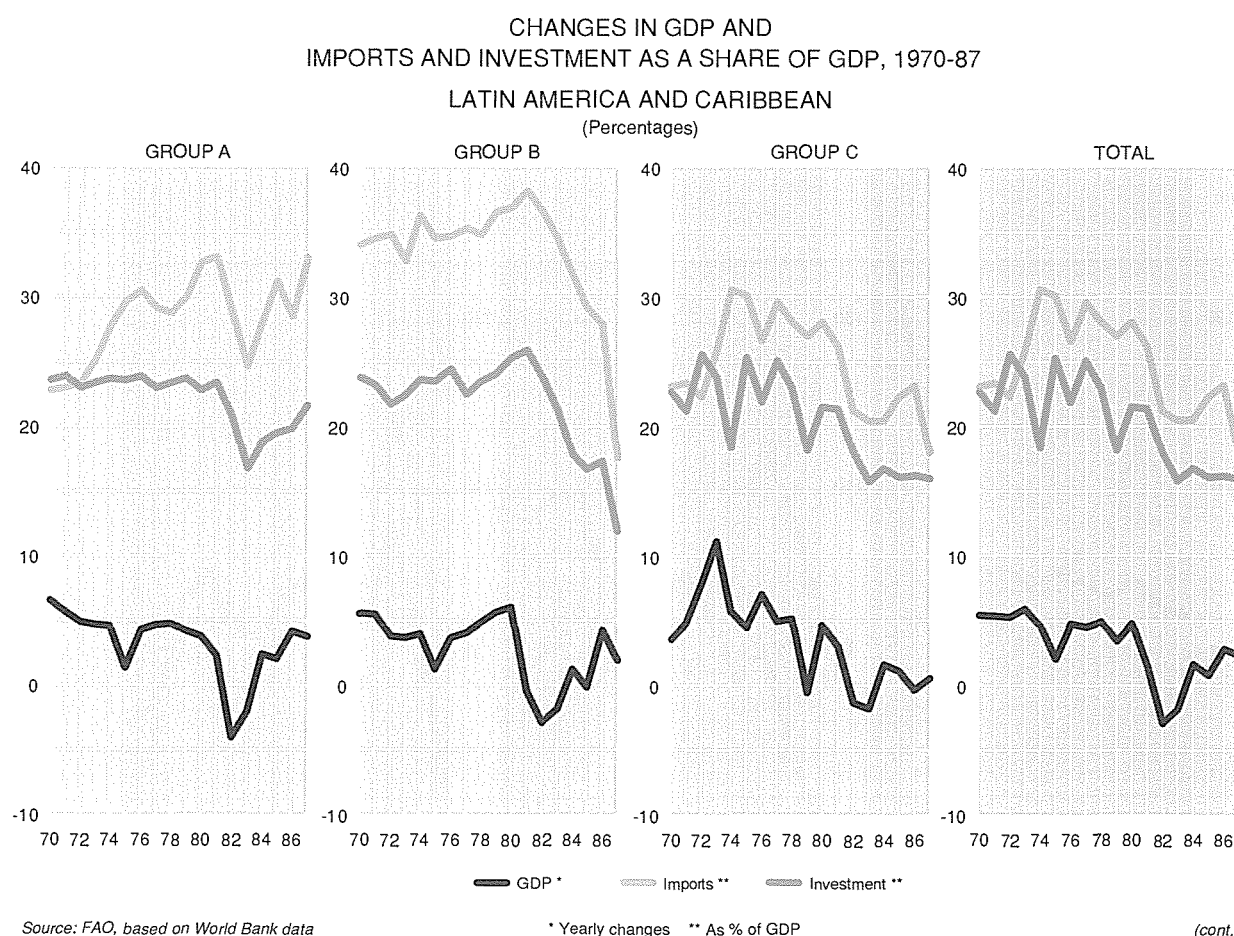
of its exports. Improvements in net income terms of trade were found less frequently in group B (such cases were mainly concentrated in Asian countries) and even less so in group C.

Adjustment and growth

To the extent that imports and investment — the most likely twin victims of adjustment — are basic ingredients for growth, their association with changes in GDP can be explored, though bearing in mind that shifts in the allocation or efficiency of investment and the composition of imports are equally important determining factors for growth. In addition, the growth response may lag so that conclusions regarding recent trends can only be tentative.

Despite these reservations, the typical experience of "growth-disequilibrium-adjustment", common to many developing countries, can be clearly traced from Figure 3.9. At the aggregate regional level the overall tendency was an upward trend in imports and investment during the 1970s, supporting variable

Figure 3.9



Source: FAO, based on World Bank data



but by and large (except in Africa) high and sustained rates of GDP growth; a marked downturn in the three variables in the early 1980s; and a very uneven recovery in recent years with all three variables remaining at a lower plateau than during the 1970s. Behind this overall pattern, varying situations are observed within regions. The contrasting growth performances between groups of countries in recent years were particularly significant in the context of adjustment. GDP growth in group A in Latin America and the Caribbean averaged 3.1 percent yearly between 1985 and 1987 compared to 2.2 percent for group B and only 0.9 percent for group C. In Africa the respective growth rates were 4.8 percent, 2.4 percent and 2.2 percent during the same three-year period. Comparisons are less meaningful for the fewer Far East and Near East countries reviewed, most of which fall into category B. However, the Republic of Korea, Thailand and Turkey, the three countries in group A in these regions, were among those achieving the most impressive growth performances in recent years.

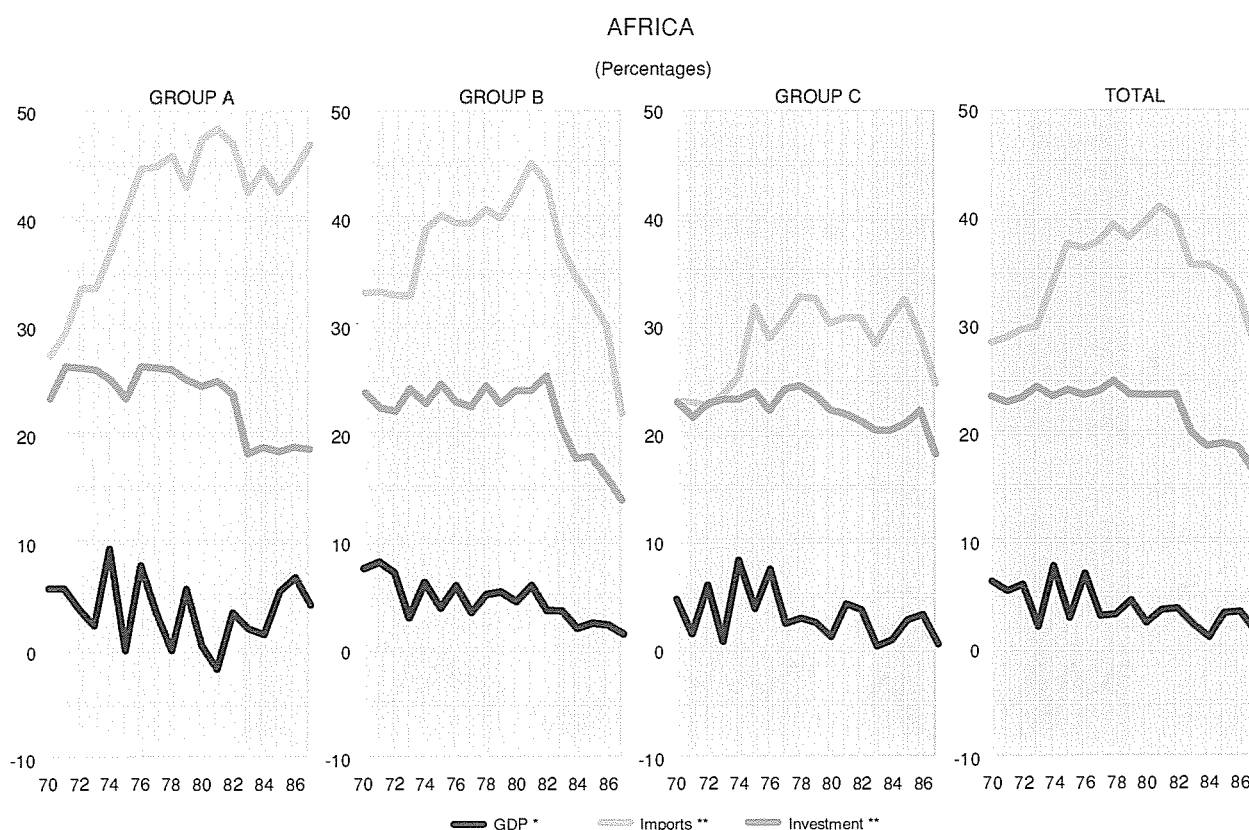
IMBALANCES, ADJUSTMENT AND AGRICULTURE

The role of agriculture in the process of adjustment is examined here in terms of the sector's contribution to growth; as well as its capacity to generate trade surpluses; its position with regard to external debt; and its position with regard to government expenditure. The net effects of changes in agricultural production and trade on food availability and self-sufficiency are finally explored.

GDP and agricultural growth

A first indication of the role of agriculture in the process of adjustment can be seen from movements in the share of agricultural GDP in total GDP (Figure 3.10). The secular decline in this share, an expected consequence of development, was arrested during the economic crisis of the early 1980s and even reversed during the following years. This pattern was common to Latin American and African

Figure 3.9 (cont.)



Source: FAO, based on World Bank data

* Yearly changes ** As % of GDP

(cont.)



countries, with all subgroups sharing in it; it was less so in the Near East and Far East regions where the agricultural GDP/total GDP ratio levelled off after the period 1981-83.

This can be further explored by comparing yearly changes in GDP, agricultural GDP and the share of agriculture in total GDP in the four developing country regions (Figure 3.11). Agricultural growth lagged behind that in other sectors in most years, more markedly during the 1970s, but its contribution to growth was positive except in years of exceptionally severe production shortfalls.

These features would generally confirm the traditional role of agriculture as a support rather than an engine of economic growth in periods of expansion, as the 1970s generally were; and, by virtue of the sector's inertial qualities, its capacity to absorb shocks and preserve resources for recovery in periods of depression.

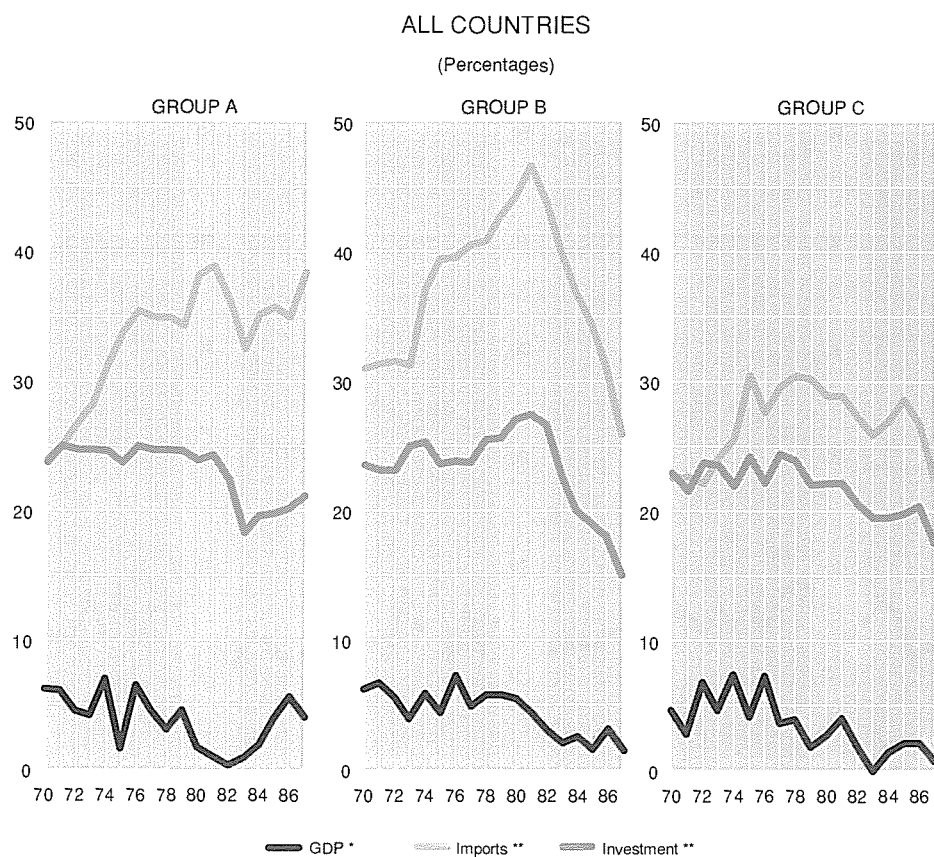
With regard to production performances, a common feature of most country and

agricultural product groups was a slow-down in the rate of output growth during the 1980s in relation to the previous decade (Table 3.7). Notable exceptions were African countries in group A which achieved faster growth in total food and agricultural production during the 1980s. It is only in group A that the growth rate in food production during the 1980s came close to that of population in Africa, and still exceeded it by a substantial margin in Latin America and the Caribbean.

Agriculture and external balances

Agricultural exports. Against the background of generally depressed overall trade conditions during the early 1980s, agriculture maintained or gained relative importance in total merchandise trade of developing countries between 1981-83 and 1985-87. In developing countries as a whole there was a slight increase in the share of agricultural exports in total exports from 26 percent to about 27 percent; a rising share of manufactures from 11 percent to

Figure 3.9 (cont.)



Source: FAO, based on World Bank data

* Yearly changes ** As % of GDP

TABLE 3.7 Average yearly changes in agricultural production, total and selected agricultural products, 1970-80 and 1981-89

Item	Africa						Latin America & Caribbean						Near East			Far East		
	1970-80			1981-89			1970-80			1981-89			1970-80			1981-89		
	A	B	C	A	B	C	A	B	C	A	B	C	All	All	All	All	All	All
Agriculture	1.1	3.1	1.5	2.7	2.5	1.8	3.6	1.2	3.5	3.0	0.9	2.2	3.2	1.9	3.5	3.0	3.0	3.0
Food	1.1	3.3	1.8	2.7	2.3	1.8	4.1	1.3	3.8	3.1	0.9	2.3	3.4	2.1	3.8	3.2	3.2	3.2
Crops	0.8	2.8	1.3	2.7	2.3	1.7	3.7	2.1	2.6	3.5	1.7	1.0	3.5	1.8	3.4	2.8	2.8	2.8
Cereals	0.9	1.5	2.6	5.2	3.4	3.1	4.8	0.8	3.9	3.3	2.4	1.4	3.4	—	2.9	3.4	3.4	3.4
Stimulants	-0.4	5.6	-0.6	1.5	5.4	1.5	5.2	3.1	3.9	5.7	2.3	4.0	9.8	8.1	3.7	4.3	4.3	4.3
Sugar	2.9	10.2	1.8	3.8	4.9	2.7	5.7	2.1	1.6	5.8	-1.2	0.2	5.1	5.0	2.9	0.4	0.4	0.4
Oil crops	-2.9	4.2	-0.7	4.0	0.2	0.6	12.6	10.6	3.1	5.9	6.6	1.0	11.8	3.6	7.1	4.4	4.4	4.4
Livestock	2.5	4.1	1.9	2.7	3.2	2.1	3.6	0.6	5.1	2.2	0.2	3.7	2.3	2.3	4.7	4.7	4.7	4.7

Source: FAO.

TABLE 3.8 Total merchandise and agricultural trade as a share of GDP, developing regions, 1970-80, 1981-83 and 1985-87

Item	Period	Latin America & Caribbean			Africa			Far East & Pacific			Near East		
		Total	A	B	C	Total	A	B	C	All	All	All	
(% of GDP)													
Total exports	1970-80	21.9	21.7	22.6	21.3	21.2	21.9	23.4	18.0	22.2	22.2	10.2	
	1981-83	19.9	18.6	20.9	20.5	20.8	19.6	23.0	19.0	23.9	23.9	13.7	
	1985-87	18.2	21.0	15.8	17.2	22.0	24.7	26.0	15.7	25.1	25.1	11.4	
Agricultural exports	1970-80	8.7	8.5	7.4	11.0	10.0	12.2	10.6	7.9	9.3	9.3	4.6	
	1981-83	6.8	6.6	6.5	7.7	7.4	7.7	7.6	6.8	6.7	6.7	4.0	
	1985-87	6.6	7.9	5.0	6.8	7.2	7.2	8.3	5.9	6.2	6.2	2.7	
Total imports	1970-80	26.3	22.4	33.5	22.5	27.3	28.7	31.1	21.8	26.1	26.1	34.0	
	1981-83	25.9	23.3	31.9	19.7	30.0	33.2	33.9	23.2	31.3	31.3	45.2	
	1985-87	22.3	23.7	22.6	19.6	26.4	32.0	25.9	23.6	26.7	26.7	33.1	
Agricultural imports	1970-80	3.8	3.4	3.7	2.7	5.6	7.2	5.7	4.3	5.5	5.5	9.3	
	1981-83	3.6	3.1	4.7	2.9	6.4	10.0	6.0	4.7	4.5	4.5	10.0	
	1985-87	2.9	2.6	3.7	2.2	5.7	9.5	4.7	4.5	3.7	3.7	7.3	

Source: FAO.



13 percent; and a pronounced fall in that of fuels from 64 percent to 51 percent. Agriculture contributed a greater share of total export earnings in all developing country regions except the Far East.

Agricultural trade was particularly affected by the economic recession of the early 1980s. Indeed, the share of agricultural exports in GDP declined proportionally more than that of total merchandise exports during 1981-83 in relation to the average levels of the 1970s (Table 3.8).

By 1985-87 this pattern shifted. While the share of agricultural exports in GDP continued to decline in all regions on the aggregate, the decline was less marked than that in other sectors. There were significant variations to this trend among country groups, however. In Latin America and the Caribbean, agricultural trade appeared to have played a major role in both successful and unsuccessful attempts at adjustment and stabilization. In group A countries in Latin America the agricultural

BOX 3.9

Expenditure in agriculture

Data limitations prevent the comprehensive analysis of the effects of domestic adjustment on agricultural saving and investment, particularly from private sources. Some insight can be gained nevertheless by examining government agricultural investment.

Agricultural development expenditure has a typically low share of total central government expenditure (about 6 to 7 percent of the total) and a correspondingly low share of agricultural GDP.

From a regional perspective, the highest shares were in the Far East and Pacific and Near East countries (about 8.5 percent in each), with the share falling to 7.5 percent in Africa and 6.5 percent in Latin America and the Caribbean.

There were wide variations between countries in these averages, ranging from 20 to 25 percent in Guyana, Botswana, Cyprus and Sri Lanka to less than 2 percent in Costa Rica, Sierra Leone, Bolivia and Uganda during 1984-86. Trends are perhaps more

interesting than country differences in levels of development expenditure. Comparing the averages for 1975-80 and 1981-86, the share of government development expenditure in agriculture increased in 26 out of 43 countries (61 percent), declined in only 14 countries and remained stable in three. On the other hand, agricultural current expenditure remained stable, or even tended to decline, suggesting that most governments attempted to protect the investment component of agricultural expenditure. The perceived importance of agricultural investment in most countries is thus indicated by the fact that, despite strong pressure to reduce government expenditure, and a sharp reduction in the part devoted to development activities, agriculture maintained or increased its share, both in real terms (in relation to agricultural GDP) and *vis-à-vis* government expenditures on other sectors.

Government development expenditure in agriculture as share of agricultural GDP, 1975-80, 1981-83 and 1984-86

Country groups (No. of countries)	1975-80	1981-83	1984-86
	(..... %)		
A (11)	7.5	9.1	7.9
B (12)	5.1	7.6	8.2
C (11)	4.9	4.5	5.2

Source: IMF, *Government Finance Statistics*, several issues.



trade/GDP ratio increased, while in groups B and C it declined. In Africa, by contrast, the relatively successful overall trade performance of group A countries was mainly spearheaded by non-agricultural exports, as the ratio of agricultural exports to both GDP and total merchandise exports continued to fall in all countries of this group. In the Far East and Pacific and Near East regions, agricultural exports lagged behind total export growth, with these two regions experiencing the sharpest fall in the contribution of agricultural exports to GDP in relation to the averages of the 1970s. This was the case both for countries where export earnings had an important agricultural component — Sri Lanka, Fiji, the Philippines — and for those where this was relatively less so.

This uneven performance of the sector is to be seen in the context of the international market conditions for agriculture prevailing during this period. It may be recalled that various structural and temporal factors combined to depress commodity prices throughout the decade. They included: excess supply in relation to effective demand; increased market competition following the entry of new exporters; and widespread export subsidies and protectionism. The recession of the early 1980s accentuated the effects of these factors. Export prices for agricultural products fell strongly, both

from the levels of the early 1980s and in relation to prices of other tradables.

The general observations made with regard to total terms of trade largely apply to agricultural terms of trade — expectedly, given the significant weight of agricultural trade to the total in most countries reviewed. That is, while a large majority of countries faced a deterioration in net barter agricultural terms of trade, many of them succeeded in expanding the volume of their agricultural exports, thus underlining the responsiveness of the sector on the side of supply, and the pressure to generate export earnings despite adverse conditions. Out of the 65 countries reviewed, only four showed an unambiguous upward trend in agricultural terms of trade between 1980 and 1988 (Burkina Faso, Mauritius, Senegal and Bolivia). All the others faced a deterioration in terms of trade, in some cases partially compensated by an increased export effort, as shown by the diverging trends in agricultural export volume and value. Figure 3.12 reveals a significant difference in the three groups, however. Group A increased the volume of its exports by about 40 percent between 1980 and 1985-87 (in contrast with the stagnation of the previous five years) and, despite depressed prices, export value also rose by 25 percent during the same period. Group B achieved a 20 percent increase

Figure 3.10

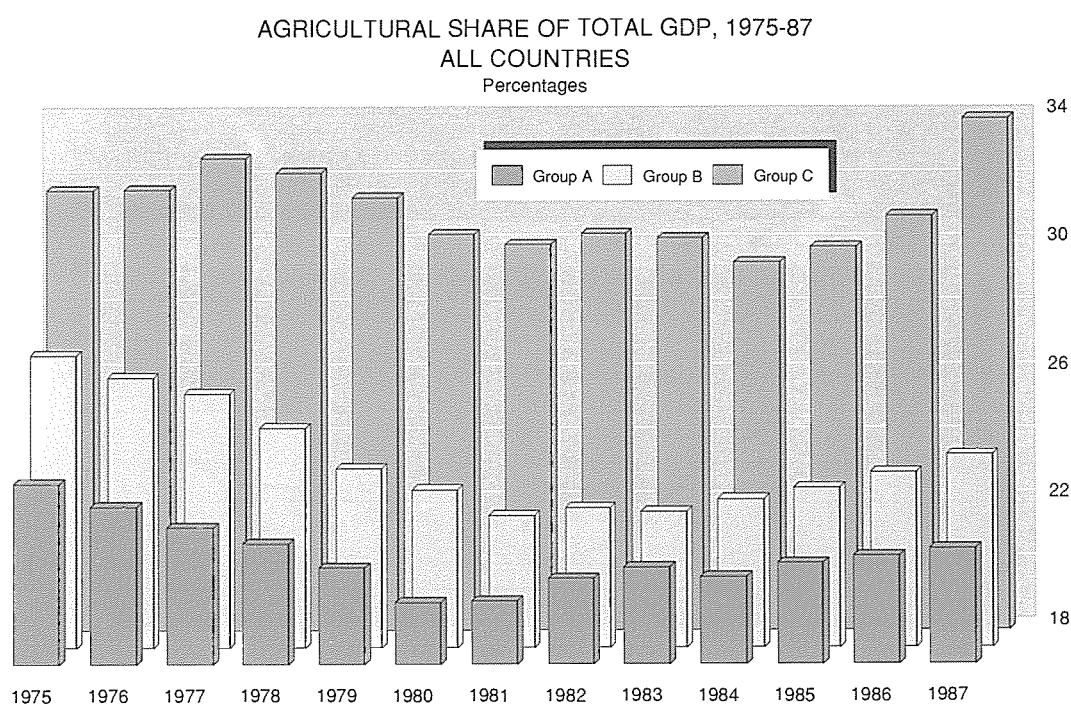
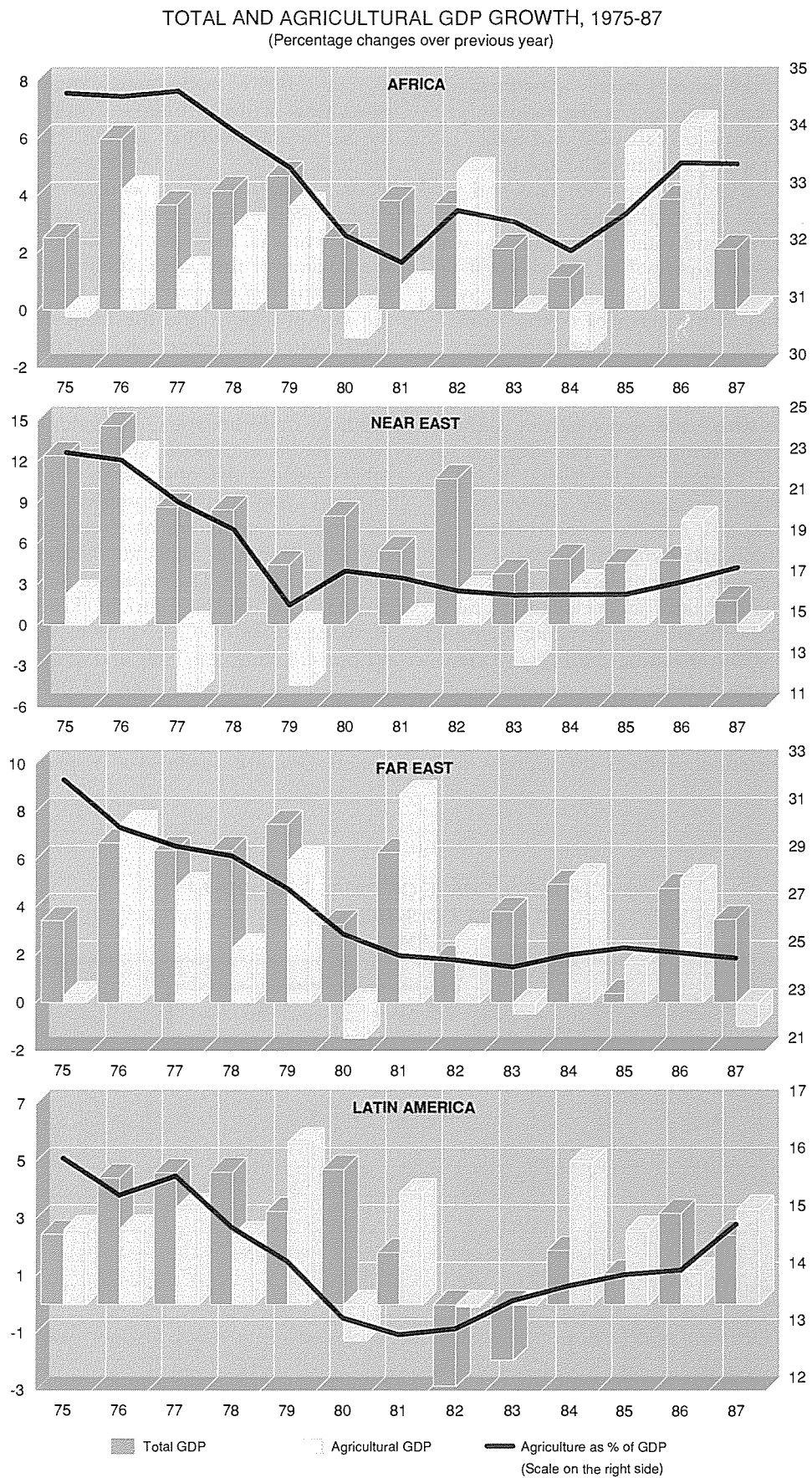




Figure 3.11





in the volume of exports but this achievement was unrewarded in terms of increasing export earnings; while in the third group, volumes only showed a tentative revival after years of decline and export values fell about 15 percent.

A similar picture is provided by net barter and income terms of trade in the three groups of countries (Figure 3.13). It shows that, while the behaviour of net barter agricultural terms of trade did not markedly differ in the three groups, their respective capacity to expand the volume of shipments determined contrasting trends in their purchasing power. With some qualification, this general trend is also observed at the regional level (Table 3.9).

What was the potential value of export earnings from agriculture foregone as a result of the decline in export prices? In other words, what is the difference between what countries actually received in payment for their agricultural exports during the 1980s and what they would have received from the same volume of exports had prices remained at 1979-81 levels?⁸ It can be seen that, despite wide variations, losses were considerable in all years and regions (Table 3.10). Countries in the

Near East experienced the largest potential losses, equivalent to 30 to 60 percent of their actual export earnings from agriculture. Even in Latin America and the Caribbean, however, where losses in relation to actual agricultural exports were lowest, their amount was substantial in the context of the region's financial problems. As a reference, the total debt-service payments (payments on total long-term, short-term and IMF credit) in 1987 amounted to \$46 208 million in the group of 20 Latin American and Caribbean countries. Therefore, the potential losses in agricultural export earnings that year — \$4.83 billion — would have covered over 10 percent of those payments.

Agricultural imports. The other dimension of agricultural trade adjustment concerns food and

⁸ This theoretical exercise is only intended to illustrate the major impact of price changes on export earnings. Indeed, with generally inelastic demand and expanded volumes of exports, international prices were unlikely to remain at the relatively high levels of 1979-81.

Figure 3.12

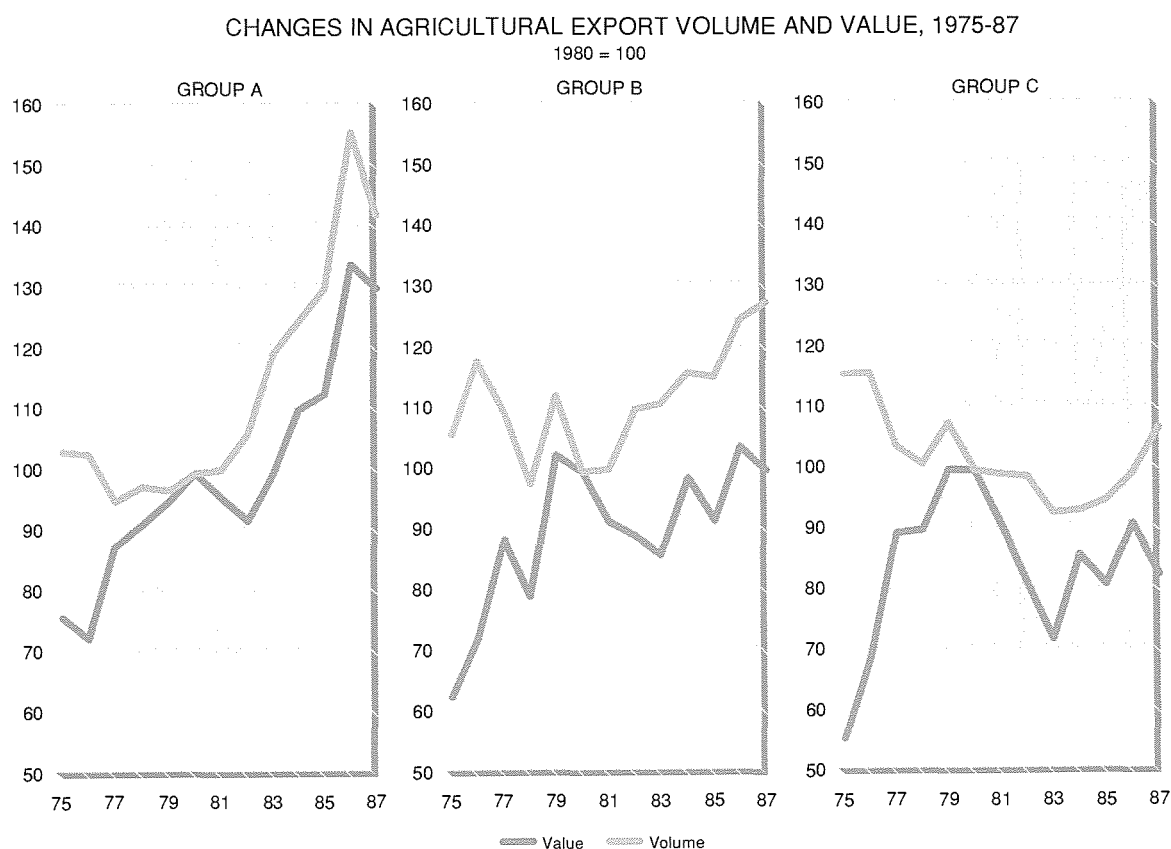


TABLE 3.9 Net barter (NB) and income (I) terms of trade, 1985-87 (base 1980 = 100)

Country groups	Latin America & Caribbean		Africa		Near East		Far East	
	Net barter	Income	Net barter	Income	Net barter	Income	Net barter	Income
A	95	130	122	147				
B	90	83	93	128	79	84	90	97
C	92	89	87	82				

Source: FAO.

agricultural imports. A common feature to all developing regions, and all but a few individual countries, was a sharp slow-down in the growth of such imports during the 1980s compared to the average rates of the 1970s (Table 3.11).

This slow-down occurred despite markedly lower import unit values, underlining the financial incapacity of many countries to take advantage of relatively abundant supplies and low market prices. It also took place during a period of constrained domestic supply conditions, as the increase in food production during 1981-88 barely kept pace with population growth in the Near East and failed to do so in much of Latin America and the Caribbean and Africa. Also, while there is some correlation in individual countries between levels of domestic food production in a given

year and food import volumes the following year, this was less so after 1981, suggesting a greater importance of financial constraints influencing import decisions in many countries.⁹

Turning to the 65 selected countries used in this review, the slow-down in agricultural import growth during the 1980s is also seen in nearly all regions and groups (Table 3.12).

Drastic reductions were experienced in group A, particularly in Latin America where, in contrast to the relatively sustained growth in

⁹ For instance, Latin America and the Caribbean reduced its volume of food imports by a cumulative 14 percent between 1983 and 1987, but food production only rose by a 1.3 percent yearly average (or 5.2 percent cumulative) during the same period.

Figure 3.13

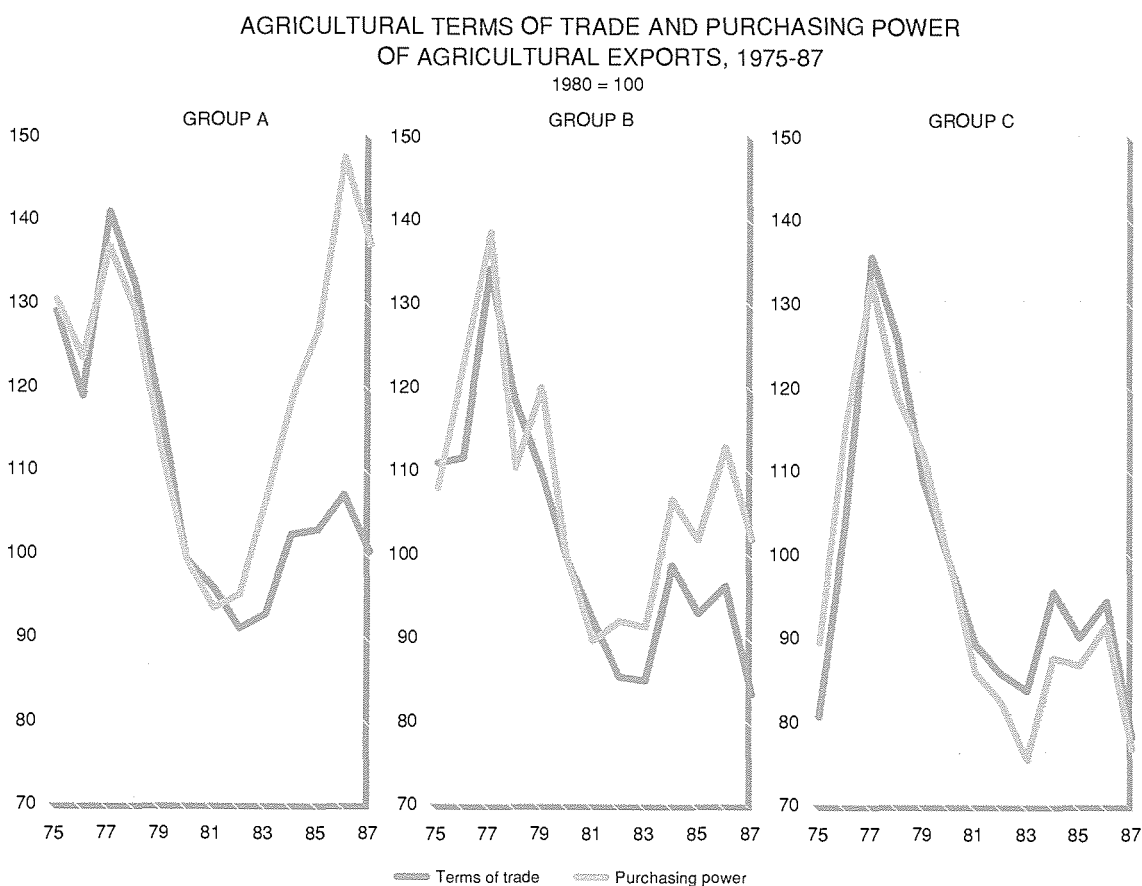


TABLE 3.10 Potential losses in export earnings from changes in agricultural export prices, millions of dollars and as percentage share of agricultural exports¹

Regions and country groups	1982	1983	1984	1985	1986	1987	1988
<i>Latin America & Caribbean</i>							
A	\$ million	-1 957.7	-2 033.8	294.9	-2 579.5	-2 486.8	-890.8
	%	17.6	17.3	2.2	20.3	21.0	6.8
B	\$ million	-1 029.1	-2 356.0	-1 403.0	-2 591.3	-1 266.5	-511.0
	%	17.5	34.5	19.6	38.4	25.8	7.8
C	\$ million	-469.9	450.2	12.2	-510.3	-1 077.6	-1 141.7
	%	16.8	19.8	4.1	16.7	30.9	31.3
All countries	\$ million	-3 456.7	-4 840.0	-1 819.0	-5 681.1	-4 830.9	-2 543.5
	%	17.4	23.2	7.7	25.2	23.8	10.9
<i>Africa</i>							
A	\$ million	-185.7	-75.2	-11.0	-6.5	42.4	-2.8
	%	16.2	5.9	1.0	0.6	3.2	0.2
B	\$ million	-835.9	-1 086.4	-193.8	-512.8	-1 004.6	-792.0
	%	25.9	34.8	4.7	13.0	26.6	20.4
C	\$ million	-408.2	-397.7	-237.8	-392.6	-531.2	-563.2
	%	22.1	22.7	11.9	21.7	30.0	31.1
All countries	\$ million	-1 429.8	-1 559.3	442.6	-911.9	-1 493.4	-1 358.0
	%	23.0	25.3	6.1	13.4	21.7	19.1
<i>Near East</i>							
All countries	\$ million	-1 101.6	-1 594.2	-1 515.0	-854.2	-991.1	-2 579.8
	%	30.0	46.4	43.2	27.4	28.5	65.1
<i>Far East</i>							
All countries	\$ million	-2 396.4	-1 801.8	-303.2	-2 798.7	-3 766.1	-2 523.0
	%	34.8	22.5	3.1	34.1	43.5	23.8

¹ Obtained as the difference between total agricultural exports at current prices and agricultural exports at 1979-81 prices. Negative numbers show that exports in a given year would have been larger by that amount, had the prices remained at 1979-81 levels.

Source: FAO.

TABLE 3.11 Average annual changes in agricultural imports, all developing countries, 1971-80 and 1981-88

Region	1971-80		1981-88	
	Value	Volume	Value	Volume
	(..... %)			
Africa	22.3	7.3	-1.6	2.2
Near East	29.7	10.7	2.5	4.6
Far East	18.0	5.5	5.1	5.1
Latin America & Caribbean	21.5	10.4	-2.3	-1.7
Asian CPE	28.9	5.5	2.8	5.6
Total developing countries	22.4	8.7	1.5	2.9

Source: FAO.

TABLE 3.12 Average annual changes in agricultural imports, sample developing country groups, 1971-80 and 1981-88

Region	1971-80		1981-88	
	Value	Volume	Value	Volume
	(..... %)			
Latin America & Caribbean				
A	17.6	7.1	-9.5	-3.9
B	15.4	5.0	-1.9	1.7
C	21.8	13.1	-6.3	-1.6
Africa				
A	22.5	8.4	-6.0	1.8
B	17.4	5.1	-2.7	1.9
C	17.5	6.8	0.2	5.1
Near East, all countries	4.3	4.3	1.9	5.8
Far East, all countries	5.8	5.0	-2.3	3.5

Source: FAO.

imports of other merchandise products, agricultural imports were reduced by over one-fourth in volume during 1981-88. Such reductions could not be justified by vastly improved domestic food supply conditions. As seen above, growth in food production in group A did fare generally better than the others, but still remained below that of the previous decade.

In group B the growth in food imports slowed almost in line with other imports, despite a poor food production performance in the aggregate; while in group C, also characterized by generally faltering production, restraint on growth of food imports was more visible.

Regarding the financial implications, i) the position of food *vis-à-vis* other imports; that is, an indication of shifts in import priorities; and ii) the financial burden represented by food imports in terms of their weight in earnings from total exports were examined (Table 3.13).¹⁰ The Far East and Near East regions fared best in this respect, maintaining a relatively high growth in food import volumes throughout the

1980s, but strongly reducing the weight of these imports during the period 1985-87, in relation to both total imports and (even more so) export earnings. By contrast, in many countries in Latin America and the Caribbean and Africa, the severity of agricultural import restraint appeared to be out of proportion with the financial relief — if any — that this potentially socially harmful course brought about. Groups A and B in Africa did somewhat reduce the agricultural import/total trade ratios during 1985-87 in relation to the 1970s, and this was achieved through sharp reductions in the value of their food imports.

In the "deteriorating" group, however, the collapse in export earnings far outweighed the effect of agricultural import restraint, with agricultural imports in the period 1985-87 rising

¹⁰ These ratios are approximate to the extent that food imports include food aid. In developing countries as a whole, food aid accounted for about 10 percent of total cereal imports in recent years, the share for low-income food-deficit countries being 15 to 20 percent. About three-quarters of these were in the form of grants.

TABLE 3.13 Agricultural imports as share of total merchandise imports (a) and as share of total exports (b), 65 selected developing countries

Region and country groups	1969-71		1973-75		1979-81		1985-87	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
(..... %))								
Africa								
All countries	16.1	17.8	18.1	18.4	15.6	16.4	17.2	18.2
A	16.4	16.3	18.1	12.6	15.2	13.6	15.7	14.2
B	18.9	22.1	18.0	22.6	14.7	20.8	16.3	17.8
C	13.1	14.9	18.2	20.0	16.8	14.7	19.5	22.7
Latin America								
All countries	9.9	10.9	11.5	14.3	11.2	12.3	11.1	9.0
A	11.6	10.1	11.2	10.8	11.5	11.4	10.2	7.4
B	10.9	11.5	10.5	11.6	9.8	10.4	11.8	11.2
C	7.6	11.2	12.8	20.5	12.2	15.0	11.3	8.4
Near East								
All countries	21.2	31.5	21.9	47.5	19.4	48.4	18.6	39.4
Far East								
All countries	24.2	29.1	22.1	22.7	14.2	13.4	10.8	9.5

Source: FAO.

to an equivalent of almost one-fifth of total imports and one-fourth of total export earnings. In Latin America and the Caribbean, where the cut in imports of agricultural products was particularly drastic, these still accounted for about 10 percent of the total value of imports and exports in the years 1985-87, although the ratio fell considerably more in group A.

External debt and agriculture

To what extent have external financing flows channelled to agricultural-related projects contributed to the debt overhang of developing countries? This can be discussed by assessing the share of agriculture in total debt and debt-service payments, as well as the interest and principal component of such payments (Table 3.14).¹¹ In order to assess these indicators against the perspective of total debt, the table also shows the overall debt-service ratio (total debt service as a share of total exports of goods and services).

It can be seen that external agricultural debt accounted for a minor part of the total debt overhang in all country groups. This was so despite the fact that agriculture received a substantial part of total debt-creating external financial flows. In a sample of 35 countries it was found that gross disbursements of external loans to agriculture during 1980-84 accounted for about 7 percent of total gross

disbursements; however, given the typically higher concessionality of loans to agriculture — most of which are provided by official rather than private sources — debt-service payments on agricultural loans only accounted for about 4 percent of total debt-service payments.¹²

Table 3.14 confirms those findings. The agricultural sector's share of total debt was in the range of 2 to 7 percent during 1984-88 (lowest in Latin America and the Caribbean, highest in Africa), with an even smaller share of agricultural debt servicing in total debt-service payments. Also, agriculture contributed far less than other sectors to the dramatic aggravation of the debt problem during the 1980s, as its share of total debt and debt servicing tended to decline in relation to the 1970s. These shares are out of proportion with the importance of the agricultural sector in these countries' economies; as seen earlier their share of agriculture in GDP is typically in the order of 25 percent, with agricultural exports contributing 7 percent of GDP.

Furthermore, while developing countries as a whole had become net providers of resources after 1983 (see Box 3.1), the fact that agriculture enjoyed more favourable terms of borrowing permitted the sector to maintain a positive net transfer position throughout the 1980s (Table 3.15).

Finally, the role of agriculture in the context of debt should also be considered in terms of

¹¹ Data refer to long-term official credits (bilateral and multilateral) and private credits officially guaranteed (supplier credits, nationalization, financial institutions and public loans).

¹² See Special chapter in *The State of Food and Agriculture*, 1986.

TABLE 3.14 Indicators of agricultural external debt, 65 selected developing countries, averages 1974-80, 1981-83 and 1984-88 (percentage shares)

Region	Agricultural external debt/ total external debt				Agricultural debt service/ total debt service			Agricultural repayments/ principal repayments			Agricultural interest payments/ total interest repayments			Memorandum Total debt service/ total exports G & S		
	1974-80	1981-83	1984-88		1974-80	1981-83	1984-88	1974-80	1981-83	1984-88	1974-80	1981-83	1984-88	1974-80	1981-83	1984-88
(..... %)																
Africa	All	7.9	7.3	7.0	6.3	6.4	4.9	5.7	6.0	4.1	7.1	6.8	6.0	8.9	19.3	29.2
	A	9.4	7.7	7.7	9.2	9.3	6.8	7.4	8.6	5.0	11.2	9.5	8.6	7.8	17.9	23.2
	B	10.7	9.2	7.5	8.9	8.6	5.7	8.0	9.2	5.3	10.2	8.1	6.2	10.4	20.3	27.7
	C	4.8	4.9	5.5	3.2	3.0	3.0	3.5	3.2	3.0	2.7	2.6	2.9	8.0	19.3	35.2
Latin America & Caribbean	All	3.0	2.2	2.5	3.1	1.9	2.3	3.4	2.4	2.9	2.7	1.5	1.9	22.0	32.6	31.9
	A	1.5	1.2	1.7	1.7	0.9	1.9	2.1	1.2	2.8	1.3	0.8	1.5	22.5	33.4	34.0
	B	3.5	1.9	2.0	3.9	2.1	1.1	4.1	3.4	1.3	3.6	1.4	0.9	19.2	24.2	24.7
	C	5.1	3.5	3.9	5.0	3.2	3.4	5.0	4.1	4.0	5.3	2.7	3.0	25.4	43.0	38.5
Far East & Pacific	All	4.8	4.4	6.2	3.6	2.6	3.9	3.3	2.9	3.5	4.0	2.4	4.8	12.2	18.1	24.8
Near East	All	3.1	3.0	3.3	3.2	2.5	3.9	3.4	3.2	4.7	3.2	1.9	3.0	12.2	15.9	20.8

Source: World Bank and FAO, Policy Analysis Division (ESP).

TABLE 3.15 Net transfers of resources,¹ averages 1974-80, 1981-83, 1984-88

Region	Agriculture			Total		
	1974-80	1981-83	1984-88	1974-80	1981-83	1984-88
(..... \$ billion)						
Africa	0.7	0.6	0.6	6.1	4.2	-0.9
Latin America	0.4	0.2	0.1	8.2	-4.2	-25.0
Asia	0.6	1.0	0.4	5.8	7.2	-4.0
Near East	0.1	0.2	0.1	2.8	1.4	0.2

¹ Net transfers are net flows minus interest payments (or disbursements minus total debt-service payments).

Source: World Bank and FAO.

the sector's contribution to external balances. The fact that developing countries are net agricultural exporters in the aggregate, and in a majority of individual cases, implies that the sector is a net gainer of foreign exchange and a positive contributor to debt financing. Overall, surpluses from agricultural trade for developing countries during 1982-88 represented 10 percent of their aggregate debt-service payments.¹³ This was so despite the fact that Near East countries as a group remain major net deficit countries, notwithstanding a pronounced slow-down in food imports during the 1980s; while Africa showed alternating surplus and deficit situations in agriculture during the 1980s, the net result being a rough balance overall. By contrast, agricultural trade surpluses in the other developing regions were major sources of external financing and debt alleviation. In Latin America and the Caribbean the net surplus from the sector during 1982-88 totalled over \$147 billion, that is nearly one-half of the aggregate debt-service payments of the region during this period. In the Far East the agricultural trade surplus was about \$40 billion, representing 20 percent of debt-service payments by the region during the same period.

Food availability and self-sufficiency

The impact on food availability of changes in domestic food production and trade is briefly examined through changes in per caput calorie consumption or dietary energy supply (DES) (Table 3.16). The overall trends were lower average growth in DES during 1980-86 than during the previous decade in Latin America and the Caribbean and Africa, but higher growth in Near East and Asia and the Pacific. However, while the successful performance of

TABLE 3.16 Changes in dietary energy supply, 1970-80 and 1980-85 yearly averages, 65 selected developing countries

Region and country groups	1970-80	1980-85
(..... %)		
Latin America and the Caribbean		
A	0.5	0.0
B	0.4	0.7
C	0.5	0.5
All countries	0.5	0.3
Africa		
A	0.6	0.2
B	0.6	-0.4
C	0.8	-0.6
All countries	0.6	-0.5
Near East		
All countries	1.4	2.1
Far East		
All countries	0.6	0.8

Source: FAO.

the two latter regions mainly reflected the situations in a few countries (in particular Cyprus, Jordan, Bangladesh and Sri Lanka), the experiences in Africa and Latin America were lower growth or a decline in DES in nearly two-thirds of the countries. The African situation was particularly poor, as DES fell during the 1980s in three countries in group A, nine in group B and seven in group C.

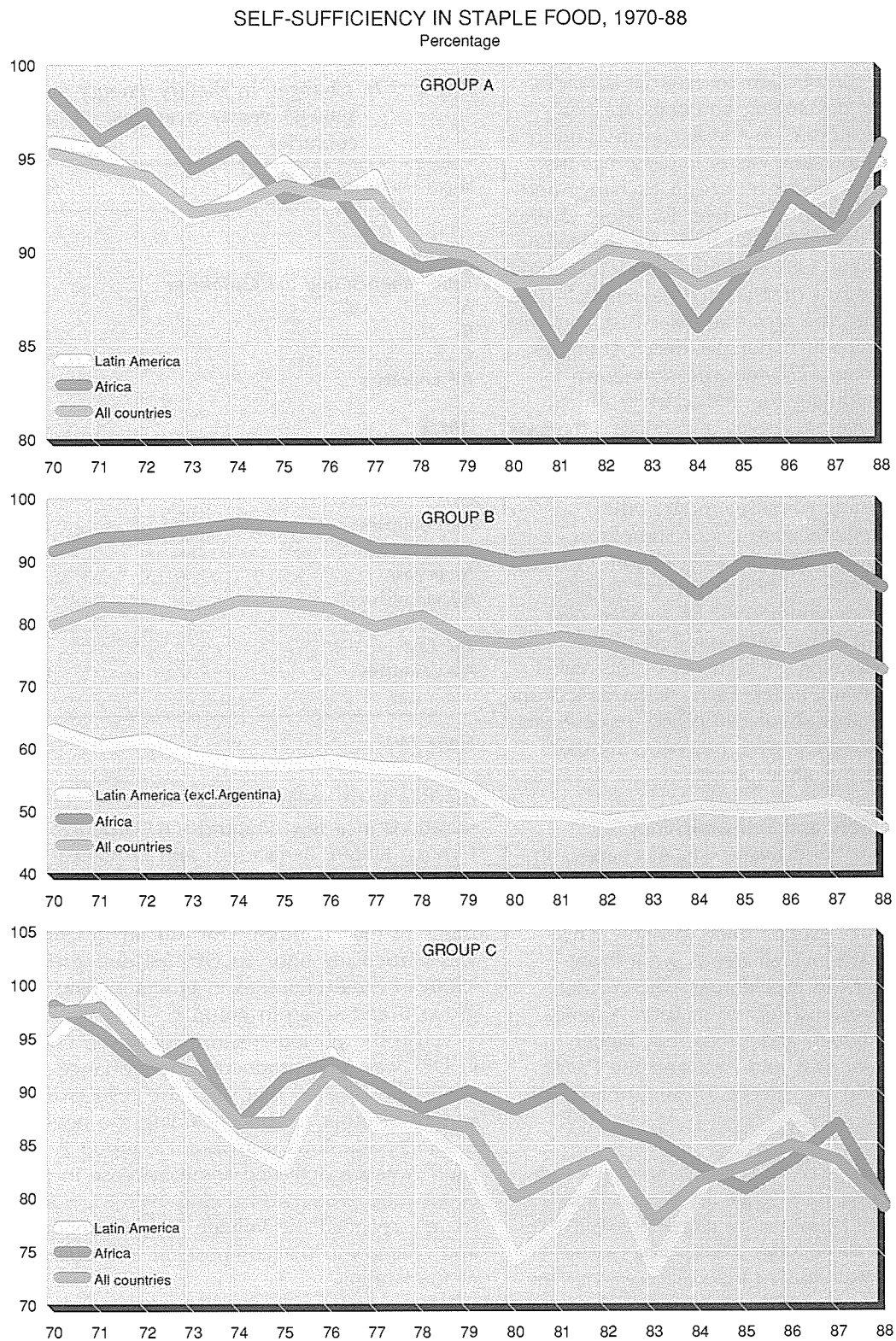
While the obvious main influence in changes in DES was food production performance, it should be recalled that DES also reflects a variety of other factors, including the net effect of food trade flows (for instance, group A in Latin America achieved some increase in per caput food production during 1980-85, but sharply reduced the volume of food imports) and changes in the composition and utilization of food supply.

With regard to changes in staple food self-sufficiency in the different groups, the main

¹³ The data covering developing country agricultural trade (FAO) and debt (World Bank) are not identical. However, the 102 countries included in the debt-service figure (111 countries in the World Bank's DRS less nine countries in Europe and the Mediterranean) account for over 95 percent of total agricultural trade by developing countries, as defined by FAO.



Figure 3.14





patterns were:¹⁴ a declining trend in self-sufficiency until the early 1980s in group A but a strong reversal of this trend in more recent

¹⁴ Staple food includes cereals, roots and tubers and pulses converted into a grain equivalent. Self-sufficiency is defined as the ratio between domestic production and total supply (supply = production + imports – exports).

years; within wide fluctuations in group B, a pronounced fall after 1985; and a steady decline in self-sufficiency in the third group, although year-to-year fluctuations became more pronounced during the 1980s. These trends are remarkably consistent within the three country groups in Latin America and the Caribbean and Africa (Figure 3.14).

BOX 3.10

Analytical framework

The internal and external components of the macro-economic balance are related by the following *ex post* accounting identity:

$$i) (X - M) + R = S_n - I$$

where: X = exports of goods and non-factor services

M = imports of goods and non-factor services

R = net factor income, i.e. interest payments on external debt; profits and dividends on foreign direct investment; and remittances from residents working abroad

I = total investment, including variations in stocks

S_n = national savings, i.e. business, and households at home and abroad, and government savings.

This identity is derived from the national accounting identity:

$$ii) Y = C + G + I + (X - M)$$

where Y is national income, C is consumption expenditure by the private sector and G government current expenditure. Saving may be defined as $S = Y - C - G$. If saving is disaggregated into its private (S_p) and government (S_g) component, the latter being the difference between fiscal revenues (T) and expenditures (G), i.e. $S_g = T - G$, the relation i) can be written:

$$iii) (X - M) + R = S_p + (T - G) - I$$

This identity implies that, other things remaining unchanged, an increase (or vice versa, a decline) in government current expenditures (relative to net taxes, private saving and total investment) will result in a deterioration (or an improvement) in the trade balance. Conversely, a budget deficit may also reflect external factors: for instance, a fall in export earnings (X) caused by a deterioration in terms of trade may result in lower tax income (T) and a worsening fiscal balance.

Turning to equation i), for a country experiencing excessive macro-economic imbalances, stabilization and adjustment measures will generally tend toward the closure of the external account gap through an increase in exports and/or a reduction in imports (left side of the equation); and closure of the investment-savings gap through an increase in savings and/or a reduction in investment (right side). Reducing such imbalances inevitably entails some degree of economic and social hardship in the short to medium term. In a longer perspective, the difference between a growth-promoting and a recessive path of adjustment will hinge on the ability of the different countries to minimize reductions in imports and investments, and to close the gap through greater exports and domestic savings instead.



Becoming more or less self-sufficient in food may or may not be a positive development for a specific country, depending on its comparative advantage in food production and import financing capacity, and the implications of changes in the components of self-sufficiency on domestic food supply. In other words, an increase in self-sufficiency supports successful adjustment only if it is the consequence of improved domestic food supply conditions allowing large exports, import cuts and increasing — or at least stable at acceptable levels — per caput food supply. Such cases

were the exception rather than the rule during the 1980s when both domestic supply and trade conditions combined to depress calorie intake in most countries. Nevertheless, the positive "exceptions" were more concentrated in group A. Indeed, the scenario for the countries in group A, as compared to the other groups, was better performance in food production together with reduced supply from external trade (lower growth, or decline, in the volume of food imports coupled with larger volumes of food exports), leading to greater self-sufficiency but stable levels of DES.

ANNEX TABLES

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

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
.....THOUSAND METRIC TONS.....	PERCENT											
WORLD												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	1553333	1565693	1650349	1709405	1643288	1802469	1839358	1855581	1789884	1740188	1870161	1.72
WHEAT	428368	445972	455081	481638	492958	516033	504618	535298	509719	505959	540229	2.06
RICE PADDY	376768	399221	412100	423670	451488	469460	472257	471326	464977	490013	508448	2.71
BARLEY	158075	159876	151556	163984	161646	172155	176183	181461	179746	166477	168934	1.18
MAIZE	420396	397898	452580	452259	349926	455098	485778	481091	452869	399892	472326	.96
MILLET AND SORGHUM	91126	82327	100572	95625	94125	94762	105624	95498	91559	94255	88219	.19
ROOT CROPS	588279	537014	556140	559274	562178	594059	579579	583186	586770	571591	591062	.50
POTATOES	299125	241654	268543	266118	265432	292040	283709	291072	284698	269843	277111	.44
CASSAVA	118915	124708	129244	129863	126499	132883	136616	133765	136881	141588	148067	1.75
TOTAL PULSES	41301	40701	41459	45685	47192	49289	50443	52668	54872	55227	57457	3.76
CITRUS FRUIT	53110	58822	59097	58124	62116	57587	60762	63553	66608	68234	71796	2.41
BAHANAS	35087	37072	37948	38056	37349	39414	40200	42072	44282	44357	44313	2.41
APPLES	36642	34197	32881	41622	39541	40182	38895	42098	38916	41784	40902	1.71
VEGETABLE OILS,OIL EQUIV	51366	50063	53820	57255	53469	59543	64664	64768	67670	67922	71523	3.70
SOYBEANS	88678	81036	88201	92088	79461	90718	101135	94389	100755	93453	107056	2.02
GROUNDNUTS IN SHELL	18027	16908	20432	17929	19006	20002	20864	21121	21509	24968	23040	3.10
SUNFLOWER SEED	15246	13648	14359	16429	15698	16609	18877	20820	20475	20318	21112	4.60
RAPESEED	10646	10762	12485	15210	14146	16709	19244	19857	22688	22092	22484	8.77
COTTONSEED	26434	26613	28652	28032	27401	34910	32202	28230	30954	33815	31102	2.00
COPRA	4229	4439	4632	4786	4689	3874	4441	5446	5076	4510	4594	.87
PALM KERNELS	1634	1774	1795	2161	1991	2354	2599	2760	2714	2911	3358	7.13
SUGAR (CENTRIFUGAL,RAW)	88364	84222	93279	102817	98361	100090	99291	101225	101800	103686	104495	1.75
COFFEE GREEN	4947	4812	6038	4973	5567	5153	5840	5163	6350	5507	5657	1.36
COCOA BEANS	1676	1666	1740	1607	1602	1761	1953	2080	2045	2457	2411	4.25
TEA	1818	1873	1875	1946	2043	2185	2299	2293	2422	2487	2483	3.62
COTTON LINT	13938	13848	15248	14931	14249	18220	17359	15171	16525	18282	17460	2.49
JUTE AND SIMILAR FIBRES	3702	3557	3610	3209	3429	3569	6328	4405	3502	3330	3704	.82
SISAL	509	533	495	497	408	446	492	469	401	381	426	-2.52
TOBACCO	5416	5305	5965	6894	5944	6490	7022	6076	6169	6817	7175	2.23
NATURAL RUBBER	3838	3797	3785	3807	4110	4184	4338	4560	4732	4981	4984	3.21
TOTAL MEAT	130573	134598	136943	138146	142381	146011	151310	155364	160325	164984	168260	2.63
TOTAL MILK	456086	462465	464562	475418	495205	498605	509376	518795	517913	526717	533652	1.68
TOTAL EGGS	26526	27278	27928	28766	29276	30749	32456	33622	34512	35753	35487	3.32
WOOL GREASY	2705	2774	2836	2867	2883	2867	2958	3003	3079	3152	3192	1.56
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	7699	8073	8598	8901	9746	10303	11241	11860	13103	13774	14453	6.83
MARINE FISH	55030	55317	56995	58353	57949	63267	64216	69458	68511	72062	73628	3.25
CRUST+ MOLLUS+ CEPHALOP	8211	8715	8867	9371	9359	9810	10147	10611	11930	12341	12711	4.46
AQUATIC MAMMALS	4	5	3	3	3	3	2	3	3	4	4	-.14
AQUATIC ANIMALS	203	126	220	280	434	264	306	380	386	328	334	7.78
AQUATIC PLANTS	3193	3354	3079	3126	3289	3605	3723	3467	3565	4156	4266	2.84
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	645129	614143	581111	561153	623527	661142	667199	697689	716754	722500	722541	2.16
SAWLOGS NONCONIFEROUS	255853	263120	254221	242405	251516	259584	251903	265602	283337	286311	286311	1.29
PULPWOOD+PARTICLES	357288	370764	372394	361990	369698	381536	377102	397280	410116	416036	416036	1.57
FUELWOOD	1422257	1482809	1524996	1558851	1590104	1638629	1672626	1707020	1735425	1764647	1764859	2.20
SAWNWOOD CONIFEROUS	346927	333769	315612	311543	327361	343331	349007	361553	377312	377842	377842	1.67
SAWNWOOD NONCONIFEROUS	110244	113441	110788	107854	110839	114357	115428	118402	124006	124596	124596	1.42
WOOD-BASED PANELS	106469	101115	100348	96212	105492	108526	111772	117393	121477	125381	125381	2.49
PULP FOR PAPER	125869	128856	128808	123474	132359	140224	141214	146793	152701	157616	157674	2.63
PAPER+PAPERBOARD	169352	170220	170954	167272	177227	189954	192648	201990	215835	231131	231424	3.65

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 THOUSAND METRIC TONS.....											PERCENT
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	164363	177560	167233	181315	173598	211609	195691	191110	186279	195792	196074	1.67
WHEAT	60247	70024	66271	73690	73720	92695	80179	81148	80897	85193	88417	3.31
RICE PADDY	1831	1702	1597	1705	1519	1750	1933	2012	1925	1954	1968	1.88
BARLEY	52830	57235	50636	53714	49748	62856	58834	53697	52899	57069	53022	.28
MAIZE	32384	31280	32622	35505	34533	36438	37681	39890	36540	37629	37706	1.98
MILLET AND SORGHUM	648	617	600	505	460	491	393	384	393	446	548	-3.66
ROOT CROPS	52002	49186	48603	48371	42526	50514	51552	48645	48531	46965	47064	-.44
POTATOES	51857	49040	48465	48240	42403	50406	51437	48542	48434	46871	46970	-.43
TOTAL PULSES	1791	1873	1639	1952	2140	2742	3337	4007	4899	5800	5573	14.99
CITRUS FRUIT	6495	6629	6777	6740	8650	6413	8036	8725	7787	8650	9108	3.34
BANANAS	436	511	522	492	500	489	454	531	512	457	453	-.23
APPLES	10655	10701	7646	12696	9089	10924	9206	10741	9058	11090	9791	-.08
VEGETABLE OILS, OIL EQUIV	2677	3310	2930	3762	3642	4250	4675	4804	6707	5790	5810	8.86
SOYBEANS	102	66	118	233	300	389	523	1130	2044	1868	2244	45.25
GROUNDNUTS IN SHELL	21	19	15	14	17	16	18	19	16	17	16	-1.03
SUNFLOWER SEED	1276	1302	1219	1736	1895	2484	3008	3769	4753	4486	3988	16.44
RAPESEED	1696	2543	2523	3295	3141	4160	4388	4371	6537	5966	5706	12.78
COTTONSEED	284	333	366	285	329	363	419	527	484	660	625	8.51
SUGAR (CENTRIFUGAL, RAW)	15787	15732	19077	18002	14945	16551	16564	16790	15756	16467	17329	.03
COTTON LINT	146	178	196	156	176	196	238	291	254	354	311	8.41
TOBACCO	439	401	435	462	436	481	494	494	475	455	453	1.08
TOTAL MEAT	28488	29513	29686	29740	30200	31033	31169	31574	32398	32591	32155	1.30
TOTAL MILK	133805	135988	136329	139996	144287	142550	141084	142054	136940	133782	135045	
TOTAL EGGS	5395	5443	5536	5692	5562	5479	5562	5503	5425	5513	5314	-.14
WOOL GREASY	157	160	159	159	163	166	173	177	182	190	202	2.44
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	210	260	249	267	274	288	322	360	355	416	438	6.94
MARINE FISH	10042	9960	10017	9545	9747	10196	9917	9632	9488	9768	10009	-.20
CRUST+ MOLLUS+ CEPHALOP	1017	1136	1197	1264	1371	1279	1411	1436	1479	1397	1425	3.17
AQUATIC ANIMALS	2	1	1	1	1	1	1	1				-12.52
AQUATIC PLANTS	278	250	208	226	222	242	249	264	272	319	331	2.83
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	96073	97381	90791	89591	94371	96228	95221	95420	94792	99057	99057	.44
SAWLOGS NONCONIFEROUS	23882	24240	23838	22524	21723	22843	22796	23332	23281	24744	24744	.28
PULPWOOD+PARTICLES	83932	83788	86401	84045	82462	86245	87144	91118	99243	102564	102564	2.25
FUELWOOD	35526	37305	38303	38905	39520	39921	40173	40483	39544	39478	39478	.86
SAWNWOOD CONIFEROUS	53613	54877	50554	50134	52307	53470	51566	51750	52395	53799	53799	.09
SAWNWOOD NONCONIFEROUS	12724	12437	11472	11210	10631	11284	11228	11317	11307	11639	11639	-.62
WOOD-BASED PANELS	26607	26602	24960	23577	23901	24225	24457	25236	26418	29556	29556	1.17
PULP FOR PAPER	26736	26647	26489	25045	26880	29161	29299	30044	31403	32530	32603	2.53
PAPER+PAPERBOARD	45174	44736	44707	43738	45571	49971	50106	51867	54610	58748	58867	3.19

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 THOUSAND METRIC TONS.....											PERCENT
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	251009	264130	233882	269542	268617	260496	269375	297567	291638	275334	295624	1.69
WHEAT	113566	127688	107425	113780	107436	105104	110359	126687	117932	123249	131034	1.00
RICE PADDY	2584	2934	2666	2651	2818	2932	2815	2921	2940	3128	2821	1.08
BARLEY	62927	59219	51413	59740	64483	58199	62261	70162	74216	61013	67035	1.67
MAIZE	32920	30619	31776	40048	35967	37864	35077	39015	36012	32448	33018	.50
MILLET AND SORGHUM	1744	2077	2035	2718	2709	2151	3154	2570	4267	3429	4377	8.40
ROOT CROPS	163116	111251	135403	129664	135629	147334	134596	150729	136554	122498	128089	-.46
POTATOES	163113	111249	135399	129661	135627	147332	134593	150725	136551	122496	128087	-.46
TOTAL PULSES	5052	7130	5290	7803	9872	10220	10808	9411	11543	10613	11282	7.95
CITRUS FRUIT	340	161	313	286	415	367	156	332	194	461	365	2.26
APPLES	11302	8567	10002	13278	13120	11931	11713	13824	8958	10539	10279	-.01
VEGETABLE OILS, OIL EQUIV	4435	4362	4363	4674	4555	4478	4760	5127	5319	5403	6036	2.97
SOYBEANS	1042	1118	907	1007	953	1001	864	1281	1446	1416	1547	4.37
GROUNDNUTS IN SHELL	6	7	9	9	8	8	6	9	10	11	12	5.46
SUNFLOWER SEED	7208	6324	6636	7350	6904	6528	7082	7605	8025	7915	9061	2.49
RAPESEED	574	1226	1097	1064	1312	1718	1932	2330	2329	2550	2949	14.95
COTTONSEED	5615	6095	5896	5685	5645	5276	5361	5046	4979	5319	5247	-1.52
SUGAR (CENTRIFUGAL, RAW)	12229	10842	10943	12450	13563	13434	12923	12706	13404	12204	14043	1.62
TEA	118	130	137	140	146	151	152	146	156	123	143	1.16
COTTON LINT	2514	2813	2905	2800	2597	2354	2792	2660	2475	2770	2666	-.25
JUTE AND SIMILAR FIBRES	48	52	45	45	45	45	45	45	45	47	47	-.47
TOBACCO	627	545	574	637	670	704	698	713	628	537	455	-1.02
TOTAL MEAT	25283	25130	24866	24768	26073	26940	27333	28614	29425	30179	30480	2.31
TOTAL MILK	133738	131285	127674	129251	137219	140471	141472	144836	146133	149231	151874	1.66
TOTAL EGGS	5513	5643	5834	5862	6062	6178	6298	6524	6636	6739	6680	2.12
WOOL GREASY	573	559	574	571	584	595	578	601	583	604	597	.60
FISHERY PRODUCTS 1/												
FRESHWATER + DIAORMDUS	14	15	16	19	17	16	16	17	15	15	15	-.19
MARINE FISH	81	119	99	106	113	99	87	95	102	109	105	.44
CRUST+ MOLLUS+ CEPHALOP	3	1				6	9	9	6	8		
FOREST PRODUCTS 2/												
SAWLOGS CONIFERODUS	154849	155724	155698	153520	156432	158709	157347	165092	168613	168855	164337	.92
SAWLOGS NONCONIFERODUS	33545	33594	33619	33109	33368	34357	33003	32610	33333	33545	32276	-.24
PULPWOOD+PARTICLES	55277	55992	55666	56524	57323	58951	58714	61664	62292	65326	62390	1.61
FUELWOOD	91301	92415	96413	99038	95838	100756	103258	104366	103634	99438	95138	.82
SAWNWOOD CONIFERODUS	102829	101494	100809	100153	100268	100630	101194	103222	103882	103849	100879	.14
SAWNWOOD NONCONIFERODUS	18638	18260	18269	18060	18272	18430	18202	17881	17417	17482	16680	-.81
WOOD-BASED PANELS	17005	17464	17598	17988	18563	19480	19682	20662	20801	21471	21582	2.63
PULP FOR PAPER	11489	11607	11774	12052	12869	13261	13432	13342	13339	14920	14610	2.60

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
.....THOUSAND METRIC TONS.....												PERCENT
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
TOWHEACEREALS	336233	344092	360808	366858	298320	397805	398889	388828	382298	248848	339269	-1.04
RICE PADDY	5985	6629	8289	6969	4523	6296	6122	6049	5879	7253	7007	.12
BARLEY	16821	19257	24033	25198	21289	23324	25263	27926	25311	16526	20456	.82
MAIZE	206659	174400	212895	215702	111972	201705	232415	214854	188157	130562	197597	-.93
MILLET AND SORGHUM	20509	14716	22247	21212	12384	22004	28456	23829	18563	14648	15694	-.76
ROOT CROPS	18895	16762	18680	19565	18253	19833	22137	19737	21222	19445	20077	1.36
POTATOES	18285	16263	18097	18889	17702	19241	21460	19159	20692	18946	19553	1.44
TOTAL PULSES	1299	1676	1954	1720	1161	1373	1492	1699	2374	1649	1811	2.21
CITRUS FRUIT	12092	14954	13703	10938	12344	9790	9549	10012	10874	11571	11959	-1.99
BANANAS	2	2	3	3	2	4	4	4	5	6	5	10.73
APPLES	4121	4553	3933	4162	4283	4213	4073	3953	5378	4628	5034	1.70
VEGETABLE OILS,OIL EQUIV	15756	11883	13250	14340	10893	13015	14190	13232	13393	11426	12732	-.98
SOYBEANS	62183	49612	54742	60459	45253	51592	58140	53840	54007	43306	53664	-1.18
GROUNDNUTS IN SHELL	1800	1045	1806	1560	1495	1998	1870	1677	1640	1806	1811	2.11
SUNFLOWER SEED	3528	1863	2201	2514	1497	1783	1512	1276	1235	861	882	-11.23
RAPESEED	3411	2483	1849	2218	2593	3412	3498	3787	3850	4323	3152	5.02
COTTONSEED	5242	4056	5803	4304	2791	4671	4789	3448	5234	5499	4242	-.05
SUGAR (CENTRIFUGAL,RAW)	5167	5438	5774	5384	5219	5476	5527	6197	6798	6377	6125	2.13
COFFEE GREEN	1	1	1		1	1	1	1	1	1	1	1.66
COTTON LINT	3185	2422	3406	2605	1692	2827	2924	2119	3214	3355	2663	.34
TOBACCO	771	918	1048	975	760	873	782	596	601	691	716	-3.69
TOTAL MEAT	26290	27156	27552	26933	27871	28141	28773	29184	29795	30777	31254	1.64
TOTAL MILK	63626	66099	68182	69691	71166	69490	72760	72845	72717	74069	74300	1.40
TOTAL EGGS	4424	4463	4477	4456	4359	4382	4379	4419	4494	4434	4281	-.17
WOOL GREASY	49	49	51	50	48	45	41	40	40	42	42	-2.52
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	433	476	502	485	501	493	577	527	662	665	686	4.43
MARINE FISH	3106	3153	3122	3518	3774	3949	4181	4482	5347	5311	5577	6.78
CRUST+ MOLLUS+ CEPHALOP	1376	1350	1558	1378	1324	1647	1452	1379	1515	1555	1584	1.17
AQUATIC ANIMALS	10	2	2	10	10	9	11	17	24	31	34	25.06
AQUATIC PLANTS	195	191	78	103	29	63	109	82	126	113	114	-2.28
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	298266	260961	238884	220996	276510	304302	310133	333140	348289	348493	348493	3.71
SAWLOGS NONCONIFEROUS	42727	43206	39834	29093	36240	37061	35511	42142	43671	44601	44601	1.22
PULPWOOD+PARTICLES	157282	163894	164429	156026	161024	165399	158513	171356	175472	176865	176865	1.15
FUELWOOD	71933	95976	107410	107595	108119	120638	125203	126047	123102	123102	123102	4.23
SAWWOOD CONIFEROUS	122060	109483	98688	94908	109365	122153	127361	136114	149275	147711	147711	3.95
SAWWOOD NONCONIFEROUS	18432	18650	17087	12357	14415	15957	15376	18365	20167	20202	20202	1.96
WOOD-BASED PANELS	36649	31026	32011	28338	34842	36378	38250	40834	40782	40641	40641	2.90
PULP FOR PAPER	63750	65241	65672	61122	65863	69877	68364	72386	75621	77914	77914	2.31
PAPER+PAPERBOARD	70896	70229	71502	67307	72157	76588	75407	79703	83589	86225	86225	2.44

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	THOUSAND METRIC TONS											PERCENT
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	24143	17159	24472	15066	31940	29719	26361	25941	21107	22976	23163	1.29
WHEAT	16483	11162	16686	9168	22317	18981	16477	17158	12706	14260	14455	.42
RICE PADDY	692	613	728	854	519	634	864	716	613	751	805	1.10
BARLEY	3967	2910	3721	2295	5236	6125	5513	4167	3878	3657	4417	2.60
MAIZE	348	307	325	382	282	392	466	465	383	345	340	1.58
MILLET AND SORGHUM	1162	936	1231	1355	987	1929	1395	1448	1458	1683	1188	3.18
ROOT CROPS	1012	1091	1089	1168	1127	1327	1277	1250	1316	1390	1338	2.95
POTATOES	1001	1071	1075	1157	1117	1314	1264	1239	1301	1376	1322	2.98
TOTAL PULSES	175	209	225	315	322	617	860	921	1602	1563	1659	29.36
CITRUS FRUIT	489	566	509	534	525	587	637	643	614	508	525	.97
BANANAS	125	124	130	140	146	145	134	178	181	165	167	3.67
APPLES	525	510	549	520	534	513	629	632	686	694	714	3.69
VEGETABLE OILS, OIL EQUIV	159	120	126	118	105	157	266	223	186	213	219	6.83
SOYBEANS	99	82	73	77	53	89	110	105	90	75	113	2.07
GROUNDNUTS IN SHELL	62	39	43	58	23	47	42	43	48	39	32	-2.67
SUNFLOWER SEED	186	142	139	115	104	170	293	215	137	179	170	2.52
RAPESEED	41	18	15	7	18	33	88	84	89	66	100	21.66
COTTONSEED	79	136	161	191	164	190	410	382	330	445	449	17.69
SUGAR (CENTRIFUGAL, RAW)	2963	3330	3435	3536	3170	3548	3379	3371	3440	3679	3793	1.47
COTTON LINT	53	83	99	134	101	141	249	258	214	284	286	17.64
TOBACCO	19	18	17	15	15	16	14	12	13	14	12	-4.01
TOTAL MEAT	4102	3799	3812	3855	3923	3583	3777	3816	4063	4233	3975	.37
TOTAL MILK	12202	12248	12079	12203	12593	13711	14089	14440	13625	13948	13944	1.83
TOTAL EGGS	268	265	278	274	275	264	250	249	251	254	254	-.92
WOOL GREASY	1025	1066	1082	1080	1073	1091	1188	1188	1237	1255	1277	2.25
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	5	5	4	4	4	6	5	5	5	6	6	3.98
MARINE FISH	171	227	257	253	289	308	308	381	477	563	597	12.17
CRUST+ MOLLUS+ CEPHALOP	93	113	121	150	158	166	152	136	149	135	140	2.87
AQUATIC PLANTS	18	15	16	11	11	18	14	13	16	18	18	1.27
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	7021	8443	8607	8357	7703	7308	8267	8297	8398	9392	9392	1.71
SAWLOGS NONCONIFEROUS	5846	5881	6077	5725	4569	4556	4911	4784	4795	5173	5173	-1.91
PULPWOOD+PARTICLES	8330	9890	10177	9513	9865	10455	11137	11577	11577	11577	11577	2.93
FUELWOOD	1447	1458	1818	2118	2524	2924	2924	2930	2930	2936	2936	8.10
SAWNWOOD CONIFEROUS	2743	3101	3370	3414	3141	3163	3496	3595	2996	3297	3297	.93
SAWNWOOD NONCONIFEROUS	1986	2069	2145	2013	1790	1739	1830	1801	1838	1881	1881	-1.19
WOOD-BASED PANELS	1073	1166	1215	1228	1053	1210	1292	1330	1498	1521	1521	3.51
PULP FOR PAPER	1699	1824	1913	1896	1794	1917	2065	2032	2039	2246	2246	2.48
PAPER+PAPERBOARD	1942	2104	2151	2188	2101	2214	2316	2267	2192	2401	2401	1.66

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	THOUSAND METRIC TONS.....											PERCENT
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	45585	47492	46693	50495	47398	44028	59653	62559	57370	62961	63011	3.72
WHEAT	4655	5419	4391	5613	4592	4717	6586	6989	6444	6468	7158	4.47
RICE PADDY	5828	6226	6307	6528	6631	6719	7209	7573	7734	7649	7995	3.14
BARLEY	3769	4464	2866	4435	2882	3113	5522	5873	3974	5063	5238	4.03
MAIZE	13621	13295	15192	15204	14495	14572	18441	19321	16498	20535	20874	4.50
MILLET AND SORGHUM	16063	16424	16516	17005	17425	13755	20565	21378	21359	21856	20335	3.44
ROOT CROPS	82173	83715	86912	91100	88436	93664	98950	100531	95335	97621	100050	2.01
POTATOES	3210	3367	3118	3466	3759	3384	4609	4286	4201	4116	4368	3.58
CASSAVA	47178	48128	50860	53363	52287	55264	58156	58707	58366	59864	62258	2.74
TOTAL PULSES	5105	4580	4626	5204	4947	4276	4857	5943	5042	5907	5893	2.06
CITRUS FRUIT	2504	2753	2663	2585	2481	2631	2453	2779	2617	2894	3122	1.26
BANANAS	4164	4478	4597	4605	4581	4567	4797	4991	5185	5420	5509	2.51
APPLES	97	116	134	154	194	233	262	278	333	389	402	15.83
VEGETABLE OILS, OIL EQUIV	3672	3831	3810	3910	3832	3847	4096	4469	4465	4408	4581	2.28
SOYBEANS	178	204	184	202	170	182	202	204	238	260	262	3.58
GROUNDNUTS IN SHELL	3334	3204	3603	3664	3189	3239	3392	3983	4036	3899	4107	2.20
SUNFLOWER SEED	150	140	134	136	139	155	170	184	230	246	253	6.82
RAPESEED	46	52	64	60	74	73	83	93	110	113	118	9.98
COTTONSEED	888	888	842	853	920	1080	1172	1325	1334	1499	1526	6.87
COPRA	181	179	175	189	203	201	213	218	228	237	238	3.32
PALM KERNELS	649	700	682	685	594	654	690	692	642	615	645	-5.51
SUGAR (CENTRIFUGAL, RAW)	3498	3534	3761	3900	3984	3967	3967	4192	4224	4410	4321	2.23
COFFEE GREEN	1091	1152	1270	1196	1109	994	1183	1240	1255	1232	1244	.94
COCOA BEANS	1030	1026	1072	882	887	1058	1033	1134	1182	1442	1349	3.38
TEA	197	186	195	208	218	225	260	251	255	273	291	4.52
COTTON LINT	485	504	469	489	551	605	673	733	761	825	874	6.94
JUTE AND SIMILAR FIBRES	8	8	8	9	9	9	9	9	10	10	10	1.74
SISAL	159	168	146	142	124	115	103	106	102	94	105	-5.48
TOBACCO	259	275	214	234	253	296	277	274	301	301	321	2.64
NATURAL RUBBER	198	201	206	202	207	228	238	250	280	294	340	5.32
TOTAL MEAT	4469	4559	4674	4797	4800	4887	5058	5142	5183	5308	5431	1.91
TOTAL MILK	8693	8725	8912	9307	9579	9659	9960	10827	11111	11505	11741	3.34
TOTAL EGGS	611	644	674	731	798	810	869	950	994	1038	1078	6.11
WOOL GREASY	70	73	76	82	95	98	109	112	117	122	124	6.57
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	1322	1287	1258	1323	1393	1435	1393	1508	1535	1582	1639	2.54
MARINE FISH	1516	1530	1702	1654	1749	1657	1671	1848	1856	1927	1967	2.45
CRUST+ MOLLUS+ CEPHALOP	71	95	115	133	183	184	185	197	204	197	200	10.12
AQUATIC ANIMALS	1	1	1			1	1	1				-5.61
AQUATIC PLANTS	5	5	5	5	5	5	5	5	5	6	5	.42
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1032	1279	1266	1305	1129	1250	1261	1353	1492	1502	1543	3.08
SAWLOGS NONCONIFEROUS	16418	17462	17224	16246	15963	16528	16579	16340	16019	16275	16275	- .45
PULPWOOD+PARTICLES	2171	2002	2008	2037	2109	2297	2380	2171	2616	2944	2944	3.80
FUELWOOD	301712	314197	323016	333971	345313	355742	365746	377111	388575	400673	401134	3.00
SAWNWOOD CONIFEROUS	542	592	624	642	591	666	654	681	766	791	791	3.60
SAWNWOOD NONCONIFEROUS	4432	5211	5259	5015	4729	4999	5398	5486	5798	5810	5810	2.20
WOOD-BASED PANELS	937	1119	1122	1179	1213	1197	1283	1374	1396	1428	1428	3.80
PULP FOR PAPER	409	435	471	359	381	387	415	424	465	471	471	1.27
PAPER+PAPERBOARD	344	378	399	400	417	449	505	574	613	642	644	7.01

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	THOUSAND METRIC TONS											PERCENT
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	84007	88456	104496	105151	99588	106768	110655	105876	111920	108539	105772	2.11
WHEAT	15103	14874	15202	22727	20133	21917	20201	21675	22321	20160	23080	4.08
RICE PADDY	14348	16401	15676	17475	14754	16940	16990	17609	18187	19989	19396	2.67
BARLEY	1330	1302	1262	1147	1161	1331	1262	1276	1596	1429	1629	2.19
MAIZE	39751	45242	55311	47806	47098	50817	55808	52593	56377	53767	51235	2.18
MILLET AND SORGHUM	12281	9572	16059	14785	15083	14233	15234	11621	12024	11891	8972	-1.84
ROOT CROPS	45631	43830	46239	45677	41863	44034	44945	46954	46243	46589	48231	.59
POTATOES	10988	10355	11862	11801	10100	12161	11602	11213	11796	13674	12809	1.74
CASSAVA	30941	29940	30956	30469	28305	28145	29616	32062	30591	29212	31506	.09
TOTAL PULSES	4569	4310	5329	5448	4335	5113	5061	4857	4573	5220	4762	.40
CITRUS FRUIT	16360	19223	20161	20739	20722	21624	23212	22492	24462	25009	26719	4.04
BAHANAS	15678	16184	16340	16596	15884	16960	17038	17370	18556	18284	17901	1.55
APPLES	1704	1702	1769	1816	1801	2239	2209	2064	2635	2666	2895	5.70
VEGETABLE OILS,OIL EQUIV	5868	6525	6350	6207	6634	7426	8652	7967	7919	9142	9709	4.93
SOYBEANS	15464	19814	20499	18655	20331	24445	27170	22254	26472	30089	33768	6.56
GROUNDNUTS IN SHELL	1389	1099	1012	867	799	890	995	828	949	875	631	-4.37
SUNFLOWER SEED	1551	1757	1353	2068	2463	2268	3521	4280	2381	3149	3423	9.32
RAPESEED	75	96	64	32	17	17	46	111	112	139	129	8.89
COTTONSEED	3125	2948	2727	2552	2256	3018	3419	2737	2364	3457	2664	-.03
COPRA	214	235	227	281	282	244	248	263	258	295	271	2.03
PALM KERNELS	324	325	311	306	290	301	317	301	302	316	331	-.02
SUGAR (CENTRIFUGAL,RAW)	26274	26391	27202	28920	29379	29707	28863	28508	27780	28454	27028	.42
COFFEE GREEN	3257	2981	4075	3064	3747	3509	3881	3168	4254	3464	3463	1.04
COCOA BEANS	572	552	561	607	572	535	733	725	568	677	684	2.17
TEA	44	51	39	49	54	56	63	59	63	53	58	3.15
COTTON LINT	1730	1634	1519	1423	1251	1673	1917	1504	1321	1948	1523	.17
JUTE AND SIMILAR FIBRES	108	107	129	89	95	106	95	90	92	87	56	-4.51
SISAL	339	352	339	347	276	307	365	336	275	262	297	-2.03
TOBACCO	797	732	690	758	708	721	703	692	689	751	754	-.33
NATURAL RUBBER	43	46	51	54	57	58	62	58	58	64	63	3.49
TOTAL MEAT	14580	15079	15821	15825	15884	15438	16038	16128	16847	17584	18090	1.77
TOTAL MILK	33749	35445	35857	36600	36401	36767	38152	38782	40693	42876	43347	2.35
TOTAL EGGS	2429	2578	2619	2739	2698	2912	3123	3456	3570	3684	3504	4.46
WOOL GREASY	301	306	314	317	314	297	293	311	317	317	317	.30
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	235	297	323	338	444	469	461	455	581	567	581	9.02
MARINE FISH	9129	8605	9274	10338	8007	10756	12359	14697	12586	14925	15575	6.50
CRUST+ MOLLUS+ CEPHALOP	630	539	532	570	602	656	668	670	737	746	764	3.39
AQUATIC ANIMALS	54	50	49	36	30	46	77	57	33	31	33	-3.35
AQUATIC PLANTS	129	124	152	222	213	213	235	181	167	199	207	3.91
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	26802	29294	28493	29038	30038	31453	32405	31529	31810	31868	31868	1.63
SAWLOGS NONCONIFEROUS	27100	30174	29789	29631	30049	31057	31493	33678	34431	34478	34478	2.28
PULPWOOD+PARTICLES	26641	29274	29132	29006	30745	31331	31606	32064	32246	32251	32251	1.72
FUELWOOD	229893	236060	239855	244625	250845	256862	261960	266721	272330	278171	278171	2.03
SAWWOOD CONIFEROUS	12149	11671	11498	11174	12064	12575	12972	12684	13466	13472	13472	1.73
SAWWOOD NONCONIFEROUS	12167	13708	14479	14006	14353	15073	15180	15968	16244	16349	16349	2.62
WOOD-BASED PANELS	3737	4283	4421	4362	4472	4596	4548	4755	5192	5316	5316	3.04
PULP FOR PAPER	4439	5408	5261	5566	6106	6192	6516	7055	7152	7577	7562	5.10
PAPER+PAPERBOARD	7026	7730	7451	7723	7962	8764	9093	9951	10514	11290	11106	5.11

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
.....THOUSAND METRIC TONS.....												PERCENT
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	53834	55760	59162	57852	55061	54887	62229	65377	63600	73814	56986	1.83
WHEAT	30726	30702	31755	31880	30225	30684	33146	36266	36820	39416	32467	1.90
RICE PADDY	4739	4705	4862	5036	4565	4591	4988	4983	5025	4445	4932	.13
BARLEY	8234	9573	10471	10587	10146	10281	11604	12399	11804	15445	9138	2.99
MAIZE	5309	5546	5536	5721	6004	6218	6662	6077	6378	7256	6848	2.76
MILLET AND SORGHUM	3625	4160	5502	3732	3294	2324	5047	4912	2807	6649	3156	.13
ROOT CROPS	6497	7217	7503	7773	7747	8044	9211	9759	10198	9503	8084	3.46
POTATOES	6008	6756	7039	7279	7282	7605	8755	9333	9825	9160	7789	3.89
CASSAVA	127	122	125	125	125	100	90	80	80	65	15	-13.35
TOTAL PULSES	1685	1855	1917	2282	2474	2331	2623	3259	3401	3737	3002	7.72
CITRUS FRUIT	3740	3602	3703	4272	4431	4325	4031	4670	4993	4909	5122	3.51
BAHANAS	260	291	315	356	361	391	419	460	514	534	507	7.44
APPLES	2359	2539	2513	2966	3212	3539	3475	3444	3377	3507	3386	4.05
VEGETABLE OILS, OIL EQUIV	1395	1667	1338	1550	1319	1413	1344	1605	1571	1816	1479	1.11
SOYBEANS	195	145	209	319	340	301	357	425	476	371	389	9.80
GROUNDNUTS IN SHELL	977	814	840	610	524	495	398	477	582	726	366	-6.36
SUNFLOWER SEED	634	794	630	652	763	758	867	1008	1161	1217	1325	7.77
RAPESEED	43	12	6	2						1	3	-27.81
COTTONSEED	2332	2284	2226	2335	2460	2520	2479	2339	2274	2435	2286	.21
SUGAR (CENTRIFUGAL, RAW)	2587	2492	3104	3748	3803	3707	3682	3758	4069	3554	3413	3.32
COFFEE GREEN	5	5	5	4	4	5	5	5	5	6	6	2.78
TEA	133	128	76	103	137	160	179	196	187	209	182	7.36
COTTON LINT	1372	1360	1334	1392	1441	1504	1465	1374	1327	1422	1382	.17
JUTE AND SIMILAR FIBRES	13	13	13	10	10	10	10	10	10	10	10	-2.82
TOBACCO	274	295	238	277	305	242	245	230	249	273	309	-1.16
TOTAL MEAT	3287	3448	3645	3887	3980	4128	4283	4211	4285	4318	4395	2.83
TOTAL MILK	15239	15668	16545	16654	16809	14839	16711	16377	16461	16613	16377	.49
TOTAL EGGS	708	741	837	904	965	1028	1100	1165	1159	1234	1269	6.15
WOOL GREASY	179	183	189	194	195	176	185	180	187	186	180	-1.12
FISHERY PRODUCTS 1/												
FRESHWATER + OIAOROMOUS	161	174	176	185	197	207	202	209	294	292	302	6.58
MARINE FISH	699	772	811	880	968	978	996	1024	1105	1143	1061	4.57
CRUST+ MOLLUS+ CEPHALOP	36	47	36	40	42	51	47	49	55	56	50	3.66
AQUATIC MAMMALS	2	3	1									
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	4718	4964	5218	5214	4190	4150	4059	4393	4054	4053	4053	-2.43
SAWLOGS NONCONIFEROUS	1523	1315	1366	1366	1371	1353	1340	1144	1339	1339	1339	-.91
PULPWOOD+PARTICLES	1043	672	714	712	765	513	380	740	726	726	726	-1.87
FUELWOOD	40693	41838	40973	41413	41810	40947	38304	39100	39764	40486	40486	-.41
SAWNWOOD CONIFEROUS	4114	4127	4107	4101	3787	3794	3792	3791	3786	3784	3784	-1.06
SAWNWOOD NONCONIFEROUS	1146	1139	1121	917	1142	1719	1725	1722	1722	1722	1722	6.23
WOOD-BASED PANELS	797	652	629	623	654	888	978	979	980	980	980	4.95
PULP FOR PAPER	463	494	487	487	517	588	588	588	588	588	588	2.73
PAPER+PAPERBOARD	737	774	832	821	674	808	763	762	786	748	748	-.23

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	THOUSAND METRIC TONS.....											PERCENT
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	250762	273697	290004	276050	317477	318663	323716	325577	310946	349054	367171	3.17
WHEAT	46459	44140	49540	50449	57213	58446	57997	62820	58334	60801	70401	3.99
RICE PADDY	162613	186944	193463	184162	209545	211011	222091	216890	209735	236207	244529	3.33
BARLEY	3819	2592	3366	2937	2901	2810	2302	2591	2361	2290	2402	-3.89
MAIZE	17060	19227	20325	18141	22257	23652	22313	24476	20476	26816	25910	3.74
MILLET AND SORGHUM	20766	20746	23266	20303	25514	22486	18953	18739	19975	22889	23870	.16
ROOT CROPS	54697	57900	60337	59122	59556	63885	64979	56826	64029	70193	73767	2.25
POTATOES	12458	10923	12430	12818	12997	15353	16046	13876	16057	17661	18579	4.70
CASSAVA	33735	39291	40231	39162	39121	41100	41650	36238	41503	46071	48717	2.28
TOTAL PULSES	14252	11679	13368	13914	15561	15745	15374	16579	15145	14549	16358	2.09
CITRUS FRUIT	3326	3719	4179	4263	4654	4711	4743	5588	5400	5551	5693	5.24
BANANAS	12177	13095	13597	13200	13140	13919	13909	14377	14273	14284	14478	1.45
APPLES	1208	1179	1462	1586	1684	1660	1708	1667	2084	1760	1815	4.47
VEGETABLE OILS,OIL EQUIV	11650	11924	13762	14300	14064	15440	16332	17331	17434	19964	22126	6.10
SOYBEANS	1351	1442	1480	1408	1602	2270	2481	2714	2647	3570	3974	12.05
GROUNDNUTS IN SHELL	7153	6441	8677	6831	8639	8085	6892	7709	7507	11283	10142	3.30
SUNFLOWER SEED	47	75	184	306	377	569	441	653	924	660	583	28.74
RAPESEED	2351	1942	2797	2872	2699	3087	3599	3198	3054	3888	4877	6.76
COTTONSEED	4229	4214	4436	4421	3357	5077	5612	5143	5251	5963	6286	4.36
COPRA	3394	3760	3782	3770	3711	3041	3450	4522	4154	3589	3415	.38
PALM KERNELS	601	691	738	1086	1021	1301	1486	1659	1672	1879	2266	13.89
SUGAR (CENTRIFUGAL,RAW)	12841	9665	12019	17965	16832	13935	14180	14586	16424	17668	19278	4.45
COFFEE GREEN	528	602	616	648	630	578	686	668	730	722	851	3.49
COCOA BEANS	44	54	71	90	111	132	147	184	295	292	378	23.83
TEA	890	911	923	887	919	1020	1048	1015	1082	1117	1102	2.54
COTTON LINT	2114	2007	2201	2211	1680	2540	2808	2574	2589	2981	3141	4.52
JUTE AND SIMILAR FIBRES	2950	2792	2748	2485	2704	2598	4037	3491	2722	2548	2957	.64
TOBACCO	1002	950	990	1082	1135	1074	1100	1083	1010	897	1054	.05
NATURAL RUBBER	3431	3380	3346	3342	3611	3644	3770	3958	4105	4287	4171	2.69
TOTAL MEAT	5581	5818	6017	6149	6485	6908	7226	7415	7863	8304	8658	4.56
TOTAL MILK	41870	43542	46627	48560	52170	55549	58903	61235	62560	66438	70220	5.36
TOTAL EGGS	1937	2090	2152	2296	2432	2495	2640	2802	2914	3094	3212	5.11
WOOL GREASY	75	80	77	80	83	86	89	93	99	102	90	2.76
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	698	697	705	724	763	806	817	824	812	843	864	2.38
MARINE FISH	583	608	632	643	649	591	625	620	1211	1231	644	4.81
CRUST+ MOLLUS+ CEPHALOP	99	111	118	123	118	133	149	167	144	141	150	4.19
AQUATIC ANIMALS									2	4		16.66
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	3631	3382	3463	3524	3744	3752	3868	3867	3987	3957	3986	1.59
SAWLOGS NONCONIFEROUS	78791	81434	78401	79735	82966	83444	77696	82821	97759	101753	104206	2.73
PULPWOOD+PARTICLES	3388	3436	3168	3123	3430	3433	2789	2769	3128	3070	2687	-1.89
FUELWOOD	456678	466779	476791	486977	498079	508847	519085	530149	541226	552325	563468	2.13
SAWNWOOD CONIFEROUS	3454	3148	3864	4032	4610	4260	4500	5109	5540	5769	6064	6.35
SAWNWOOD NONCONIFEROUS	23401	26184	25388	28810	30287	30472	31642	31954	35556	35967	37922	4.60
WOOD-BASED PANELS	6047	5654	6286	7200	8331	8549	9230	10198	11269	12624	13682	9.36
PULP FOR PAPER	1842	2065	2652	2790	3116	3300	3478	3533	3584	3640	3621	6.70
PAPER+PAPERBOARD	3764	3831	4254	4253	4772	5250	5464	6210	7075	7781	8191	8.66

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

1. (Cont.) VOLUME OF PRODUCTION OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	THOUSAND METRIC TONS.....											PERCENT
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
TOTAL CEREALS	314278	303442	310397	341926	373276	394775	369530	381802	390483	388679	403389	2.89
WHEAT	63093	55566	60058	69042	82195	88478	86696	90907	88521	86610	91699	5.04
RICE PADDY	163772	160820	165518	185638	193628	203691	194491	197993	199211	198315	209523	2.54
BARLEY	3825	2847	3278	3418	3229	3537	2982	2816	3052	3250	3459	-1.59
MAIZE	63980	67244	63934	65363	73171	78791	69194	76247	85235	85723	84733	3.22
MILLET AND SORGHUM	13900	12318	12514	13665	15994	14853	11754	10104	10150	10569	9672	-3.54
ROOT CROPS	156128	158102	143702	148940	159350	155562	143028	139838	154265	147456	148856	-1.49
POTATOES	27905	28352	26874	27892	29821	30345	28945	27379	29317	34087	33796	1.73
CASSAVA	6496	6863	6691	6640	6876	7002	6698	6532	6089	6232	5855	-1.13
TOTAL PULSES	7131	7169	6885	6782	6492	6833	6019	5944	5900	6601	5366	-2.30
CITRUS FRUIT	1163	1353	1475	1688	2077	2260	2665	3410	4252	3578	5624	16.29
BANANAS	1128	1235	1281	1429	1385	1587	2002	2602	3489	3383	3528	13.89
APPLES	3331	2843	3501	2941	4083	3515	4208	3953	4906	4987	5152	5.67
VEGETABLE OILS,OIL EQUIV	5066	5691	7066	7710	7779	8829	9566	9247	9923	8912	8493	5.57
SOYBEANS	7843	8339	9747	9480	10217	10182	11022	12151	12997	12162	10795	4.22
GROUNDNUTS IN SHELL	2993	3784	4018	4122	4145	5073	6959	6174	6518	5993	5661	7.35
SUNFLOWER SEED	340	910	1332	1286	1341	1705	1733	1544	1241	1180	980	6.33
RAPESEED	2404	2386	4067	5657	4288	4206	5607	5882	6605	5044	5440	8.41
COTTONSEED	4425	5425	5948	7210	9290	12534	8313	7102	8514	8323	7604	4.99
COPRA	61	64	65	70	98	112	115	119	116	123	132	8.97
PALM KERNELS	43	40	41	45	47	46	48	49	50	52	53	2.65
SUGAR (CENTRIFUGAL,RAW)	3690	3840	4486	5176	4841	5744	6657	6686	5542	6332	6609	5.97
COFFEE GREEN	31	46	37	39	42	40	73	125	137	196	248	23.21
TEA	325	349	389	446	451	466	484	514	564	601	593	6.22
COTTON LINT	2212	2712	2974	3605	4645	6267	4157	3551	4257	4162	3802	4.99
JUTE AND SIMILAR FIBRES	574	583	666	572	564	796	2114	772	645	630	609	2.24
SISAL	8	8	3	3	3	19	18	19	17	17	16	16.81
TOBACCO	1025	995	1591	2279	1485	1908	2553	1832	2070	2749	2953	9.77
NATURAL RUBBER	162	164	177	204	232	249	258	284	315	321	318	8.09
TOTAL MEAT	14032	15537	16345	17476	18309	19965	22412	24203	25193	27862	29342	7.72
TOTAL MILK	3178	3380	3559	3964	4267	4730	5221	5796	6404	6894	6521	8.69
TOTAL EGGS	2988	3151	3258	3472	3756	4771	5815	6036	6419	7460	7742	11.31
WOOL GREASY	174	196	210	223	214	202	197	201	224	238	254	2.36
FISHERY PRODUCTS 1/												
FRESHWATER + DIADROMOUS	1067	1178	1305	1492	1772	2185	2872	3281	3950	4423	4819	18.00
MARINE FISH	2129	2171	2181	2413	2336	2552	2595	3117	3247	3351	3496	5.63
CRUST+ MOLLUS+ CEPHALOP	845	877	874	1004	1087	1171	1291	1576	2090	2553	2713	13.36
AQUATIC ANIMALS	13	9	18	18	19	20	21	26	59	32	32	13.63
AQUATIC PLANTS	1507	1590	1387	1408	1524	1664	1714	1346	1354	1645	1657	.52
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	30973	30984	27923	28442	29419	33965	34591	35011	34977	34520	32041	1.70
SAWLOGS NONCONIFEROUS	20031	19665	18473	18779	19383	22283	22670	22957	22916	22626	23372	2.33
PULPWOOD+PARTICLES	4991	5172	4652	4786	4981	5690	6610	6921	6888	7178	7440	5.13
FUELWOOD	179790	183295	186901	190662	194541	198483	202491	206570	210729	211423	212133	1.80
SAWNWOOD CONIFEROUS	13318	13887	14511	15162	15695	17410	18270	17819	17788	17748	16887	3.00
SAWNWOOD NONCONIFEROUS	8025	8323	8652	9019	9291	9432	9898	9653	9637	9615	9152	1.61
WOOD-BASED PANELS	2328	2320	2475	2523	2709	2524	2599	2881	3443	3877	3696	5.20
PULP FOR PAPER	4697	4930	4967	4940	5412	5974	7229	7511	8149	8218	9676	7.81
PAPER+PAPERBOARD	6392	6942	7017	7576	8461	9624	11270	12019	13135	14280	15472	9.91

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

2. INDICES OF FOOD PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	1979=100						1979=100					
	PERCENT						PERCENT					
WORLD	114	116	116	118	121	3.21	105	105	103	102	104	1.43
DEVELOPED COUNTRIES	108	109	108	106	110	4.15	104	105	103	100	103	3.51
WESTERN EUROPE	107	108	109	108	108	.56	105	107	107	105	105	.25
EUROPEAN ECON COMMUNITY	107	108	110	108	109	.46	106	107	108	106	106	.18
BELGIUM-LUXEMBOURG	107	116	114	116	118	1.85	107	116	113	116	118	1.80
DENMARK	123	120	118	119	123	3.20	123	120	118	119	122	3.16
FRANCE	107	106	109	110	107	-2.79	105	104	106	106	102	-3.15
GERMANY FED. REP. OF	108	116	111	114	112	-1.44	109	117	111	114	112	-1.72
GREECE	111	107	99	103	105	1.23	108	104	95	100	101	1.11
IRELAND	113	114	115	109	104	-4.56	108	109	109	102	97	-5.29
ITALY	101	101	104	101	102	.79	100	99	103	99	100	.64
NETHERLANDS	108	119	115	112	125	12.00	106	116	111	107	119	11.38
UNITED KINGDOM	110	110	108	106	105	-1.59	109	109	107	105	103	-1.85
AUSTRIA	107	108	108	114	112	-1.81	107	108	107	114	111	-2.02
FINLAND	114	113	99	102	115	12.32	111	110	96	99	111	11.98
ICELAND	108	101	98	90	88	-2.22	102	95	91	83	80	-3.08
MALTA	114	118	110	104	106	1.77	120	123	115	108	109	.90
NORWAY	107	100	108	112	112	-.01	106	98	105	108	108	-.44
PORTUGAL	107	105	112	87	113	28.86	103	100	106	83	107	28.63
SPAIN	110	107	121	114	113	-.61	107	104	116	109	108	-.97
SWEDEN	108	106	95	93	101	8.15	108	105	94	92	99	7.40
SWITZERLAND	108	110	106	107	107	-.03	106	107	102	103	103	-.50
YUGOSLAVIA	100	112	106	101	101	.10	96	107	101	96	95	-.48
USSR AND EASTERN EUROPE	110	118	116	117	119	2.41	106	112	110	110	111	1.73
EASTERN EUROPE	109	115	111	113	113	-.34	107	112	108	110	109	-.52
ALBANIA	108	109	110	112	115	1.99	98	97	96	96	96	.20
BULGARIA	95	107	101	101	104	3.76	94	106	100	99	103	3.62
CZECHOSLOVAKIA	117	119	121	125	127	1.60	116	117	119	123	124	1.40
GERMAN DEMOCRATIC REP.	116	115	117	112	114	1.38	117	116	118	113	114	1.32
HUNGARY	107	109	108	115	112	-3.01	107	109	109	116	113	-2.83
POLAND	109	117	111	114	113	-.89	105	111	105	107	107	-.87
ROMANIA	108	118	111	116	112	-3.68	106	115	108	112	107	-4.19
USSR	110	118	119	119	122	2.90	106	112	112	110	113	2.02
NORTH AMERICA DEVELOPED	109	104	101	93	104	11.38	103	98	94	87	96	10.46
CANADA	113	123	116	104	114	9.27	107	117	109	97	104	7.99
UNITED STATES	108	102	100	94	103	9.78	102	96	93	87	94	8.91
OCEANIA DEVELOPED	107	108	106	110	107	-2.88	100	100	97	100	96	-3.88
AUSTRALIA	106	108	104	108	108	-.31	99	100	94	97	96	-1.48
NEW ZEALAND	116	111	112	117	109	-7.36	111	106	107	111	103	-7.61
OTHER DEV.ED COUNTRIES	104	105	106	105	108	3.50	99	99	99	97	99	2.65
ISRAEL	126	115	129	113	118	4.30	115	104	115	99	101	2.65
JAPAN	109	109	104	99	101	2.09	105	104	99	95	96	1.67
SOUTH AFRICA	94	97	103	106	112	5.71	85	85	88	89	92	3.42

2. (Cont.) INDICES OF FOOD PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	 1979=100					PERCENT	 1979=100					PERCENT
DEVELOPING COUNTRIES	120	123	125	130	133	2.42	108	108	108	110	111	.29
AFRICA DEVELOPING	114	119	116	120	122	1.66	98	100	94	94	93	-1.46
NORTH WESTERN AFRICA	126	133	127	127	132	3.46	109	112	104	102	102	.67
ALGERIA	127	126	131	122	124	1.70	110	105	106	95	94	-1.43
MOROCCO	126	154	125	161	159	-1.65	110	131	104	130	125	-4.09
TUNISIA	135	114	138	100	118	18.08	119	98	115	82	94	15.43
WESTERN AFRICA	117	124	119	124	126	1.43	100	103	95	96	94	-1.84
BENIN	133	140	127	147	161	9.45	114	117	103	115	122	6.01
BURKINA FASO	128	143	131	147	143	-2.75	113	123	109	120	113	-5.33
COTE D'IVOIRE	120	122	128	139	132	-4.50	97	95	96	99	91	-8.35
GAMBIA	106	119	111	106	128	20.73	92	100	91	84	99	17.39
GHANA	132	133	138	142	151	6.42	111	107	108	108	111	3.34
GUINEA	105	109	109	108	109	.54	93	95	92	89	88	-1.95
LIBERIA	116	117	122	124	121	-2.46	99	97	97	96	91	-5.50
MALI	110	119	112	125	129	2.95	96	100	92	99	99	.02
MAURITANIA	100	104	106	110	111	.65	88	89	88	89	87	-2.09
NIGER	99	103	91	121	107	-11.75	86	87	75	96	83	-14.40
NIGERIA	122	130	120	123	126	2.23	104	107	95	94	93	-1.25
SENEGAL	122	127	139	121	137	13.34	108	109	117	99	109	10.22
SIERRA LEONE	102	111	109	105	108	3.31	91	96	93	87	87	.74
TOGO	106	108	109	121	132	9.13	91	90	88	95	100	5.84
CENTRAL AFRICA	109	113	114	116	116	.40	95	95	93	92	90	-2.52
ANGOLA	102	103	104	103	101	-1.74	90	89	87	84	80	-4.48
CAMEROON	112	116	117	120	121	1.58	98	99	97	96	96	.99
CENTRAL AFRICAN REP	98	106	104	108	110	2.05	87	92	89	90	89	-.46
CHAD	116	116	114	126	120	-4.47	103	101	97	104	97	-6.83
CONGO	113	113	119	122	122	.53	99	97	99	99	97	-2.21
GABON	103	106	108	110	110	.57	84	84	82	81	79	-2.78
ZAIRE	115	118	119	120	121	.62	98	99	96	94	92	-2.57
EASTERN AFRICA	110	113	111	116	118	1.84	95	95	90	91	90	-1.30
BURUNDI	116	121	125	131	118	-10.15	101	102	103	104	91	-12.65
ETHIOPIA	97	106	100	102	105	2.42	89	95	88	88	89	.26
KENYA	120	135	131	142	149	4.95	98	106	98	102	103	.58
MADAGASCAR	112	116	117	117	121	3.03	97	97	94	91	91	-.20
MALAWI	104	105	103	111	115	3.40	89	87	83	86	86	-.01
MAURITIUS	111	119	120	110	110	.19	102	108	108	98	97	-1.01
MOZAMBIQUE	99	101	100	103	104	1.02	87	87	84	84	82	-1.66
RWANDA	112	103	104	102	95	-6.42	95	84	82	78	70	-9.55
SOMALIA	116	125	124	131	135	3.29	97	101	97	98	98	-.05
TANZANIA	113	114	117	119	126	5.65	94	91	90	88	90	1.89
UGANDA	111	105	113	113	115	1.66	94	86	89	86	85	-1.83
ZAMBIA	114	119	119	144	145	.95	93	94	90	105	102	-2.67
ZIMBABWE	130	128	92	129	119	-7.69	112	107	75	102	91	-10.58
SOUTHERN AFRICA	100	104	109	113	112	-.39	86	86	87	88	84	-3.52
BOTSWANA	94	90	83	93	99	6.04	78	73	65	70	72	2.37
LESOTHO	99	92	95	113	93	-18.29	87	78	78	90	72	-20.58
SWAZILAND	111	130	125	128	125	-2.12	94	106	99	98	93	-5.45
LATIN AMERICA	114	113	117	123	125	1.80	102	99	100	104	103	-.28
CENTRAL AMERICA	111	114	113	117	122	4.49	99	98	96	96	98	2.11
COSTA RICA	104	107	109	109	114	4.88	90	90	90	87	89	2.21
EL SALVADOR	99	102	96	106	102	-3.44	94	95	88	95	90	-5.43
GUATEMALA	118	123	122	129	135	5.01	103	104	100	103	105	2.02
HONDURAS	103	104	113	115	120	4.44	86	84	88	87	88	1.24
MEXICO	114	113	112	117	121	3.78	101	98	95	97	99	1.57
NICARAGUA	91	90	90	80	80	.05	77	73	71	61	59	-3.25
PANAMA	110	112	116	105	106	1.59	99	98	100	88	88	-.46
CARIBBEAN	104	106	107	110	113	2.50	97	97	97	98	99	1.00
BARBADOS	79	88	78	81	76	-6.55	78	86	76	79	73	-7.19
CUBA	109	110	107	113	116	3.12	106	107	103	108	110	2.28
DOMINICAN REPUBLIC	107	107	108	109	123	12.76	95	92	92	90	99	10.32
HAITI	110	112	114	111	112	.69	101	100	101	96	95	-1.20
JAMAICA	111	113	115	102	91	-10.46	103	104	104	91	80	-11.84

2. (Cont.) INDICES OF FOOD PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	1979=81=100					PERCENT	1979=81=100					PERCENT
SOUTH AMERICA	116	114	119	126	127	1.09	104	100	102	106	105	-1.95
ARGENTINA	97	95	100	108	100	-7.58	91	88	91	97	88	-8.72
BOLIVIA	117	116	123	131	128	-1.81	103	98	102	105	101	-4.49
BRAZIL	124	119	129	139	143	2.65	111	104	110	117	117	.58
CHILE	106	112	115	121	129	6.89	98	101	102	106	111	5.13
COLOMBIA	106	115	117	125	136	8.31	96	101	101	106	112	6.13
ECUADOR	117	119	124	134	142	5.57	101	100	101	107	110	2.69
GUYANA	84	88	82	79	69	-11.84	76	78	72	68	59	-13.31
PARAGUAY	130	117	133	153	160	4.60	111	97	107	119	121	1.62
PERU	110	110	120	128	124	-3.50	97	94	100	104	98	-5.88
URUGUAY	106	106	106	114	124	8.47	102	101	100	108	116	7.64
VENEZUELA	106	118	112	118	106	-9.91	92	99	92	94	83	-12.19
NEAR EAST DEVELOPING	114	118	118	124	115	-6.83	99	100	97	99	90	-9.46
NEAR EAST IN AFRICA	112	113	118	125	124	-1.03	97	95	96	99	96	-3.60
EGYPT	120	126	134	135	138	2.36	105	107	110	109	108	-.14
LIBYA	147	130	148	150	159	6.14	118	101	110	108	110	2.53
SUDAN	109	103	91	121	96	-20.75	93	86	74	95	73	-22.95
NEAR EAST IN ASIA	114	119	119	124	113	-8.80	100	101	98	99	87	-11.46
AFGHANISTAN	92	78	82	82	82	-.66	101	86	90	88	84	-4.50
CYPRUS	96	90	95	111	110	-.58	91	84	88	102	100	-1.58
IRAN	120	125	127	116	113	-3.12	99	99	97	85	80	-6.21
IRAQ	146	141	133	127	136	7.21	122	114	103	96	99	3.58
JORDAN	151	137	158	168	145	-13.35	125	109	121	124	103	-16.63
LEBANON	119	121	140	133	141	6.03	119	120	138	128	132	3.14
SAUDI ARABIA	292	301	313	370	368	-.62	234	232	232	263	252	-4.45
SYRIA	109	123	106	145	84	-41.86	92	100	84	110	62	-43.91
TURKEY	109	115	116	122	114	-6.64	96	99	98	101	93	-8.33
YEMEN ARAB REPUBLIC	98	118	108	125	117	-6.81	85	99	89	99	90	-9.64
YEMEN DEMOCRATIC	101	103	106	102	103	.71	88	87	87	81	79	-2.38
FAR EAST DEVELOPING	121	123	122	132	138	4.53	108	107	104	110	113	2.37
SOUTH ASIA	122	124	123	135	142	4.74	108	107	104	112	115	2.43
BANGLADESH	112	113	112	113	121	6.65	97	96	93	91	95	3.85
INDIA	124	126	124	139	146	5.07	111	110	107	117	120	2.96
NEPAL	118	112	124	138	140	1.68	104	96	104	112	111	-.77
PAKISTAN	121	130	131	139	147	5.33	100	104	101	103	105	1.94
SRI LANKA	111	109	97	101	101	-.06	102	99	86	89	88	-1.27
EAST SOUTH-EAST ASIA	121	122	121	127	133	4.03	109	107	105	108	111	2.15
BURMA	139	140	141	140	142	1.30	126	124	122	119	118	-.80
INDONESIA	129	139	139	146	150	2.33	117	124	122	126	127	.76
KOREA REP	111	110	101	108	105	-2.87	103	101	91	97	93	-3.96
LAO	138	141	137	135	148	9.84	123	123	117	112	120	7.14
MALAYSIA	146	151	156	170	190	11.96	130	131	133	141	154	9.41
PHILIPPINES	100	102	102	105	110	5.03	88	87	85	85	87	2.51
THAILAND	121	111	111	122	127	4.05	109	99	97	106	108	2.56
ASIAN CENT PLANNED ECON	128	133	139	140	144	3.30	120	123	127	126	128	1.74
CHINA	128	134	139	140	144	3.28	121	124	128	127	129	1.78
KAMPUCHEA, DEMOCRATIC	166	169	167	187	182	-2.59	148	146	140	153	145	-4.95
KOREA DPR	114	117	119	122	124	1.89	101	101	101	100	100	-.46
MONGOLIA	109	117	112	114	116	1.89	95	99	92	91	90	-1.31
VIET NAM	123	124	130	132	138	4.30	110	109	111	111	113	1.99
OTHER DEV.ING COUNTRIES	110	113	108	109	115	5.11	97	98	91	89	92	2.54

3. INDICES OF AGRICULTURAL PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	1979-81=100						1979-81=100					
	PERCENT					PERCENT						
WORLD	114	115	116	118	121	2.99	105	104	103	103	104	1.21
DEVELOPED COUNTRIES	108	109	108	106	110	3.70	104	104	103	100	103	3.06
WESTERN EUROPE	107	109	109	108	108	.51	105	107	107	105	106	.20
EUROPEAN ECON COMMUNITY	107	108	110	109	109	.41	106	107	108	106	106	.13
BELGIUM-LUXEMBOURG	107	116	113	116	118	1.91	107	116	113	116	118	1.87
DENMARK	123	120	118	119	123	3.20	123	120	118	119	122	3.16
FRANCE	107	106	109	110	106	-2.84	104	103	106	106	102	-3.20
GERMANY FED. REP. OF	108	116	110	114	112	-1.44	109	117	111	114	112	-1.72
GREECE	113	111	102	107	108	1.14	110	107	98	104	105	1.02
IRELAND	113	114	115	109	104	-4.41	108	109	109	102	97	-5.15
ITALY	101	101	104	102	102	.81	100	99	103	100	100	.66
NETHERLANDS	108	119	115	112	125	11.94	106	116	111	107	120	11.33
UNITED KINGDOM	110	110	109	107	105	-1.50	109	109	107	105	103	-1.76
AUSTRIA	107	108	108	114	112	-1.81	107	108	107	114	111	-2.01
FINLAND	114	113	99	102	115	12.32	111	110	96	99	111	11.98
ICELAND	107	101	98	90	88	-2.15	101	95	91	83	80	-3.02
MALTA	114	117	110	104	106	1.76	119	123	115	108	109	.89
NORWAY	107	100	108	112	112	-.01	106	98	105	108	108	-.44
PORTUGAL	107	105	111	87	112	28.72	102	100	106	83	107	28.49
SPAIN	110	107	121	115	113	-1.32	107	104	116	110	108	-1.68
SWEDEN	108	106	95	93	101	8.15	108	105	94	92	99	7.40
SWITZERLAND	108	110	106	107	107	-.12	106	107	102	103	102	-.58
YUGOSLAVIA	100	112	106	101	101	.18	97	108	101	96	95	-.39
USSR AND EASTERN EUROPE	110	117	115	116	118	2.16	106	112	109	109	110	1.49
EASTERN EUROPE	109	115	111	113	112	-.61	107	112	108	109	108	-.79
ALBANIA	109	111	110	114	114	.11	98	98	96	97	95	-1.65
BULGARIA	95	105	100	98	98	.15	94	104	99	97	97	.01
CZECHOSLOVAKIA	117	119	121	125	127	1.74	116	117	119	122	124	1.54
GERMAN DEMOCRATIC REP.	116	115	118	113	114	1.31	117	116	118	113	115	1.26
HUNGARY	107	108	108	115	111	-3.00	107	109	109	116	113	-2.82
POLAND	110	117	111	114	112	-1.34	105	111	105	107	105	-1.32
ROMANIA	108	118	111	116	112	-3.57	106	115	108	112	107	-4.09
USSR	110	117	117	117	120	2.65	105	111	110	109	111	1.78
NORTH AMERICA DEVELOPED	108	102	101	94	103	10.05	103	97	94	87	95	9.14
CANADA	113	123	116	103	113	9.07	108	116	109	96	103	7.79
UNITED STATES	107	100	99	94	102	8.29	101	94	93	87	93	7.43
OCEANIA DEVELOPED	109	110	109	113	111	-2.06	102	102	100	102	99	-3.06
AUSTRALIA	110	112	109	114	115	.24	103	103	99	103	102	-.94
NEW ZEALAND	113	108	109	112	105	-6.28	109	104	103	106	99	-6.53
OTHER DEV.ED COUNTRIES	103	103	105	103	106	3.09	98	97	98	96	98	2.25
ISRAEL	124	109	119	107	107	.63	114	99	105	93	92	-.97
JAPAN	107	106	102	97	99	1.65	103	102	97	93	94	1.23
SOUTH AFRICA	95	97	102	106	111	5.35	85	85	87	89	91	3.07

3. (Cont.) INDICES OF AGRICULTURAL PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	 1979=100					PERCENT	 1979=100					PERCENT
DEVELOPING COUNTRIES	121	122	125	130	133	2.42	109	108	108	110	110	.29
AFRICA DEVELOPING	114	119	117	121	123	1.86	98	100	94	95	93	-1.26
NORTH WESTERN AFRICA	127	134	129	129	134	3.43	111	113	106	103	104	.64
ALGERIA	128	127	132	123	125	1.71	110	106	107	96	95	-1.42
MOROCCO	126	154	126	162	159	-1.57	111	131	104	131	126	-4.01
TUNISIA	134	114	138	100	118	17.78	118	98	115	82	94	15.14
WESTERN AFRICA	117	124	119	123	126	2.16	99	102	95	95	94	-1.14
BENIN	137	146	130	153	166	8.48	118	122	106	120	126	5.08
BURKINA FASO	129	146	133	149	144	-2.95	114	126	111	121	115	-5.53
COTE D'IVOIRE	117	118	125	131	129	-1.46	95	92	93	94	89	-5.43
GAMBIA	107	119	110	106	127	20.57	92	100	90	84	98	17.24
GHANA	131	131	136	140	149	6.42	109	106	106	106	110	3.34
GUINEA	105	109	109	109	111	1.55	93	95	93	90	90	-.96
LIBERIA	115	117	122	121	122	.20	98	97	98	94	91	-2.93
MALI	111	120	114	126	132	4.45	96	101	94	101	102	1.43
MAURITANIA	100	104	106	110	111	.65	88	89	88	89	87	-2.09
NIGER	99	103	91	121	107	-11.73	86	87	75	96	83	-14.38
NIGERIA	122	130	120	123	126	2.41	103	106	95	94	93	-1.08
SENEGAL	122	127	139	121	136	12.76	108	109	117	99	108	9.66
SIERRA LEONE	101	112	111	104	107	2.72	90	97	94	86	86	.16
TOGO	108	111	113	125	135	8.69	93	93	92	98	103	5.41
CENTRAL AFRICA	109	114	114	117	116	-.87	95	96	93	93	90	-3.76
ANGOLA	99	101	100	100	98	-2.12	87	86	84	81	78	-4.85
CAMEROON	111	117	115	122	119	-2.43	97	100	95	98	93	-4.90
CENTRAL AFRICAN REP	98	107	104	109	112	2.08	88	93	89	91	90	-.44
CHAD	116	116	116	128	123	-4.41	104	101	99	106	99	-6.78
CONGO	113	112	119	121	122	.56	99	96	99	98	96	-2.17
GABON	103	106	108	110	111	.58	84	84	82	81	79	-2.77
ZAIRE	115	119	120	121	122	.62	99	99	97	94	92	-2.57
EASTERN AFRICA	110	113	112	117	120	2.09	95	95	91	92	91	-1.05
BURUNDI	116	119	126	129	116	-9.82	101	101	103	103	90	-12.33
ETHIOPIA	96	104	100	101	104	3.41	88	94	88	87	88	1.23
KENYA	122	134	130	143	146	2.34	100	105	98	103	101	-1.92
MADAGASCAR	112	116	116	116	120	3.44	96	97	93	91	91	.19
MALAWI	110	109	106	115	120	4.08	94	90	85	89	90	.65
MAURITIUS	112	119	120	111	110	-.51	103	109	108	98	97	-1.69
MOZAMBIQUE	96	101	100	102	103	.69	85	86	84	83	81	-1.98
RWANDA	113	106	108	106	101	-5.10	96	87	86	81	75	-8.28
SOMALIA	116	125	124	131	135	3.29	97	101	97	98	98	-.05
TANZANIA	110	114	116	119	125	5.28	91	91	89	88	89	1.53
UGANDA	111	106	114	114	116	1.63	94	86	90	87	86	-1.85
ZAMBIA	115	120	122	146	149	1.59	94	95	93	107	104	-2.05
ZIMBABWE	133	130	108	134	128	-4.37	114	109	87	105	98	-7.36
SOUTHERN AFRICA	100	104	108	111	111	-.45	85	86	86	87	84	-3.58
BOTSWANA	94	90	83	93	99	5.99	78	73	65	70	72	2.32
LESOTHO	101	95	97	114	94	-17.30	88	80	80	91	73	-19.61
SWAZILAND	111	128	124	126	123	-1.94	94	105	98	97	91	-5.27
LATIN AMERICA	114	111	116	121	122	1.10	102	97	99	102	101	-.97
CENTRAL AMERICA	108	110	110	113	116	2.32	95	95	93	93	93	-.01
COSTA RICA	106	110	113	115	119	3.68	92	92	93	92	93	1.04
EL SALVADOR	86	83	83	79	70	-10.34	81	77	76	70	62	-12.19
GUATEMALA	110	111	111	117	126	6.90	95	94	91	94	97	3.86
HONDURAS	102	103	110	116	119	2.84	86	83	86	88	88	-.31
MEXICO	113	112	112	116	118	1.84	100	98	95	96	96	-.33
NICARAGUA	91	85	83	75	73	-3.57	77	69	65	58	54	-6.74
PANAMA	111	113	118	107	109	1.11	100	99	101	90	90	-.93
CARIBBEAN	104	105	106	109	111	1.68	98	97	97	98	98	.19
BARBADOS	79	88	78	81	76	-6.55	78	86	76	79	73	-7.19
CUBA	109	110	107	113	116	3.16	107	107	104	108	111	2.32
DOMINICAN REPUBLIC	109	107	108	109	114	4.50	97	93	92	90	92	2.24
HAITI	108	110	110	108	109	.46	99	99	97	94	92	-1.42
JAMAICA	111	114	115	103	92	-10.61	103	104	104	91	80	-11.99

3. (Cont.) INDICES OF AGRICULTURAL PRODUCTION

	TOTAL					CHANGE 1988 TO 1989	PER CAPUT					CHANGE 1988 TO 1989
	1985	1986	1987	1988	1989		1985	1986	1987	1988	1989	
	1979=81=100						1979=81=100					
	PERCENT						PERCENT					
SOUTH AMERICA	116	112	118	124	125	.76	104	98	101	104	103	-1.28
ARGENTINA	97	96	100	108	100	-7.71	91	88	90	97	89	-8.85
BOLIVIA	116	114	121	129	126	-2.16	101	97	100	104	99	-4.84
BRAZIL	125	115	129	135	138	2.24	112	100	111	113	113	.17
CHILE	106	112	115	121	129	6.78	98	101	102	105	111	5.03
COLOMBIA	103	111	113	120	127	6.58	93	98	97	101	105	4.44
ECUADOR	118	120	123	136	142	4.11	102	101	101	108	110	1.27
GUYANA	84	88	82	79	69	-11.82	76	78	72	68	59	-13.30
PARAGUAY	137	120	129	159	169	5.87	117	99	104	124	128	2.86
PERU	109	109	117	125	122	-2.40	96	94	97	102	97	-4.80
URUGUAY	105	108	109	115	123	6.84	102	103	103	109	116	6.03
VENEZUELA	107	118	113	119	107	-9.30	92	99	92	95	84	-11.60
NEAR EAST DEVELOPING	113	116	117	122	115	-6.38	98	98	96	98	89	-9.02
NEAR EAST IN AFRICA	111	110	114	119	119	-.38	96	93	93	95	92	-2.96
EGYPT	116	120	125	125	129	2.90	101	102	103	101	101	.39
LIBYA	146	130	148	150	159	6.11	118	101	110	107	110	2.50
SUDAN	112	104	94	120	97	-19.13	96	87	76	95	74	-21.38
NEAR EAST IN ASIA	114	118	118	123	113	-8.39	99	100	97	99	88	-11.06
AFGHANISTAN	91	78	83	83	81	-3.02	100	86	91	89	83	-6.77
CYPRUS	96	90	95	111	110	-.51	91	84	88	101	100	-1.52
IRAN	120	125	127	116	113	-2.64	98	99	97	85	80	-5.74
IRAQ	146	141	132	126	135	7.40	122	114	103	95	98	3.76
JORDAN	149	134	156	166	145	-12.97	124	107	120	123	103	-16.27
LEBANON	117	119	138	130	138	6.00	118	118	135	126	130	3.11
SAUDI ARABIA	289	299	311	366	364	-.62	232	230	230	261	249	-4.44
SYRIA	111	124	107	144	88	-38.86	94	101	84	110	65	-41.02
TURKEY	109	114	115	122	114	-6.55	96	98	97	101	93	-8.25
YEMEN ARAB REPUBLIC	98	117	109	125	117	-6.57	86	99	89	99	90	-9.40
YEMEN DEMOCRATIC	101	104	107	103	104	.68	88	88	88	82	80	-2.41
FAR EAST DEVELOPING	121	122	121	131	137	5.09	108	106	103	109	112	2.92
SOUTH ASIA	122	123	123	134	142	5.73	108	107	104	111	115	3.40
BANGLADESH	113	115	113	112	119	6.10	99	97	93	90	93	3.32
INDIA	124	124	123	137	146	6.08	111	109	105	116	120	3.95
NEPAL	117	112	122	135	138	1.78	103	96	102	110	109	-.68
PAKISTAN	124	134	136	143	150	4.97	103	107	105	106	108	1.59
SRI LANKA	109	107	96	101	99	-1.97	100	97	86	89	86	-3.15
EAST SOUTH-EAST ASIA	120	121	121	127	132	3.81	108	107	105	108	110	1.93
BURMA	138	139	139	138	140	1.24	125	123	120	117	116	-.86
INDONESIA	128	130	138	145	148	2.41	116	123	121	125	126	.84
KOREA REP	109	109	100	107	104	-2.60	101	100	90	95	92	-3.69
LAO	137	140	136	135	148	9.83	122	116	112	112	120	7.12
MALAYSIA	133	138	142	153	165	7.25	118	120	121	128	134	4.80
PHILIPPINES	100	103	103	106	111	5.30	88	88	86	86	88	2.78
THAILAND	123	114	113	124	129	4.58	111	101	99	107	110	3.08
ASIAN CENT PLANNED ECON	131	134	141	142	147	3.05	123	124	128	128	130	1.49
CHINA	131	134	141	143	147	3.00	124	125	130	129	131	1.51
KAMPUCHEA, DEMOCRATIC	171	173	171	191	187	-2.24	151	149	143	156	149	-4.60
KOREA DPR	114	117	120	122	125	1.99	101	101	101	101	100	-.37
MONGOLIA	107	114	109	111	114	1.86	93	97	89	89	88	-1.34
VIET NAM	123	125	130	133	138	4.30	110	109	111	111	113	1.99
OTHER DEV.ING COUNTRIES	110	111	109	110	116	5.59	97	96	91	90	93	3.00

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

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS.....											PERCENT
WORLD												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	84921	81565	99524	105209	104988	111830	116426	105130	96408	110680	119210	2.69
RICE MILLED	9559	11634	12956	13061	12047	11502	12872	11408	13019	12946	12185	1.33
BARLEY	14585	14104	16226	20278	18346	17755	23006	21899	26231	22292	21069	5.12
MAIZE	68794	76097	80303	79442	70049	69087	68679	69725	57640	64450	66681	-1.89
MILLET	315	296	215	242	196	191	165	193	158	177	202	-5.15
SORGHUM	10923	11365	11166	14466	13725	11732	12438	13337	8579	7946	9279	-2.95
POTATOES	4037	4632	4919	4948	5182	4783	4788	5009	5476	6245	6480	3.54
SUGAR,TOTAL (RAW EQUIV.)	26139	26687	27505	29347	30744	29480	28558	28380	27714	28568	29124	.63
PULSES	2116	2350	2810	3148	2960	3195	3363	3706	4824	5369	6042	10.14
SOYBEANS	24062	25489	26877	26219	28928	26592	25790	26152	27637	29245	26122	.84
SOYBEAN OIL	2610	2953	3196	3489	3405	3652	4030	3503	2992	4019	3914	2.99
GROUNDNUTS SHELLED BASIS	746	744	723	831	739	782	740	851	951	895	934	2.52
GROUNDNUT OIL	418	503	477	322	450	529	302	320	367	359	338	-3.21
COPRA	709	440	461	415	438	252	287	388	405	333	291	-5.75
COCOA BUT OIL	1334	1142	1216	1357	1270	1325	984	1236	1650	1470	1331	1.35
PALM NUTS KERNELS	181	160	201	138	136	120	131	98	110	120	135	-4.58
PALM OIL	2404	2846	3617	3229	3776	4017	4318	5221	6242	5781	5927	9.59
OILSEED CAKE AND MEAL	21875	23221	25689	27792	27625	32126	28496	30547	33969	36650	39062	5.40
BANANAS	7044	6954	6956	6996	7210	6335	6937	6807	7353	7631	7779	.86
ORANGES+TANGER+CLEMEN	5182	4945	5104	4941	4955	4807	5269	4926	5928	5464	5302	.93
LEMONS AND LIMES	970	917	986	923	1000	935	996	1040	1066	1061	1027	1.23
COFFEE GREEN+ROASTED	3440	3792	3738	3732	3959	4031	4229	4425	4086	4469	4250	2.19
COCOA BEANS	1086	930	1065	1336	1252	1208	1354	1386	1504	1566	1636	4.96
TEA	886	903	984	951	927	975	1080	1082	1089	1101	1159	2.63
COTTON LINT	4472	4359	4828	4263	4430	4272	4235	4131	4699	5518	4805	1.02
JUTE AND SIMILAR FIBRES	496	559	519	573	512	508	495	384	524	510	342	-2.72
TOBACCO UNMANUFACTURED	1439	1374	1353	1491	1430	1338	1390	1384	1332	1348	1353	-.55
NATURAL RUBBER	3317	3422	3329	3148	3115	3450	3642	3647	3707	4071	4207	2.44
WOOL GREASY	890	937	907	952	874	893	882	904	945	1011	996	.82
BOVINE CATTLE 1/	7580	7409	7042	7187	7687	7108	6769	6490	7121	7125	7154	-.67
SHEEP AND GOATS 1/	14776	15269	18641	17608	18437	20576	19631	18725	19348	21607	21965	3.39
PIGS 1/	7951	8421	10746	9846	9357	9583	10119	10277	11862	12239	12672	3.97
TOTAL MEAT	7097	7828	8084	8853	8576	8929	8777	9035	9880	10127	10743	3.48
MILK DRY	602	662	872	868	816	743	822	839	872	1044	1117	4.51
TOTAL EGGS IN SHELL	606	656	746	806	825	794	839	766	755	781	764	1.66
FISHERY PRODUCTS												
FISH FRESH FROZEN	3853	4249	4437	4569	4630	5094	5295	6019	7010	7067	7236	6.81
FISH CURED	392	428	441	464	431	408	406	426	442	442	446	.51
SHELLFISH	993	1157	1076	1147	1248	1437	1601	1654	1751	1812	1852	6.91
FISH CANNED AND PREPARED	853	891	1027	1075	943	916	994	1034	1137	1156	1156	2.62
SHELLFISH CANNED+PREPAR	113	115	138	150	162	184	196	205	229	240	257	8.93
FISH BODY AND LIVER OIL	693	724	741	727	686	730	949	994	792	780	771	1.82
FISH MEAL	2051	2313	2332	2124	2639	2302	2639	3206	3236	3087	3140	4.74
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	29768	31748	27904	22480	26310	29382	30884	32586	32744	35793	38822	2.94
SAWLOGS NONCONIFEROUS	48311	45958	42006	32978	33265	32252	29597	29980	28870	33026	32084	-4.27
PULPWOOD+PARTICLE	32616	35824	39944	38596	33427	33657	37527	38919	41056	44881	50198	3.02
FUELWOOD	1894	2243	2780	2248	2392	2784	2653	2097	2068	2196	2270	-.09
SAWNWOOD CONIFEROUS	65879	68743	65938	60656	61439	70576	72754	73472	73656	78824	81354	2.29
SAWNWOOD NONCONIFEROUS	11994	13380	12545	10952	10923	12507	12579	11888	12813	14933	17555	2.50
WOOD-BASED PANELS	16401	16680	16323	16758	15443	17388	18233	19284	20606	23451	25544	4.39
PULP FOR PAPER	17489	18709	19756	18755	17314	19810	20334	20599	22090	23399	24192	2.95
PAPER AND PAPERBOARD	30210	33294	35108	35370	33688	36744	39803	40915	43385	46974	51011	4.74

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS											PERCENT
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	13773	16091	19923	23693	22408	23811	27408	29646	27688	29590	30525	7.60
RICE MILLED	839	874	943	999	933	941	984	1198	1190	1156	945	2.61
BARLEY	8634	7197	8052	10796	7416	8390	11526	12791	13762	11050	13249	5.84
MAIZE	4869	5050	5474	4808	5743	7705	7809	7025	9310	9529	8248	7.38
MILLET	12	13	16	20	20	26	21	24	18	15	23	4.49
SORGHUM	262	308	206	240	269	159	165	190	124	191	134	-6.80
POTATOES	2798	3016	3455	3543	3666	3517	3526	3778	4174	4773	4522	4.55
SUGAR,TOTAL (RAW EQUIV.)	4448	4632	5628	6147	6466	6078	5631	5261	5561	6569	7152	3.03
PULSES	353	450	458	448	419	606	814	1240	1205	1430	1477	17.12
SOYBEANS	237	353	327	160	207	127	88	95	153	287	304	-3.37
SOYBEAN OIL	1099	1208	1204	1272	1380	1387	1427	1323	1271	1446	1148	1.11
GROUNDNUTS SHELLED BASIS	28	14	18	24	25	17	24	24	33	41	57	8.96
GROUNDNUT OIL	45	64	79	68	74	99	62	61	56	51	63	-5.58
COPRA	4	1	2		1							-37.57
COCONUT OIL	119	61	43	58	87	60	57	51	54	67	64	-2.47
PALM NUTS KERNELS	1	2	3	1	2					1	1	-13.62
PALM OIL	97	92	123	114	94	123	131	141	171	156	149	5.64
OILSEED CAKE AND MEAL	3438	3957	4247	4921	5330	6420	6112	6364	5589	6819	5734	5.81
BANANAS	41	43	43	48	46	35	47	35	81	113	49	5.64
ORANGES+TANGER+CLEMEN	1921	1907	1799	1659	1880	1702	2439	1957	3024	2512	2385	4.02
LEMONS AND LIMES	505	483	512	433	574	449	532	542	597	566	518	1.46
COFFEE GREEN+ROASTED	102	130	106	122	126	142	165	202	209	232	265	9.91
COCOA BEANS	34	31	44	48	52	52	66	76	78	74	43	6.98
TEA	50	46	43	44	43	51	56	56	52	55	52	2.12
COTTON LINT	71	60	57	55	75	69	69	98	78	156	107	7.45
JUTE AND SIMILAR FIBRES	19	16	17	17	15	16	14	14	13	11	12	-4.51
TOBACCO UNMANUFACTURED	223	234	197	210	247	249	265	243	254	309	281	3.13
NATURAL RUBBER	21	21	16	14	15	16	23	23	22	28	42	6.61
WOOL GREASY	60	65	69	61	57	69	65	62	63	79	81	1.99
BOVINE CATTLE 1/	3322	3291	3412	3620	3546	3493	3537	3422	3779	3731	3370	.70
SHEEP AND GOATS 1/	1732	1384	1418	927	784	1196	1142	1415	1553	1926	2033	3.34
PIGS 1/	3421	4004	4777	4747	4537	4737	4688	4751	6685	7109	6837	6.38
TOTAL MEAT	2822	3173	3673	3900	3788	4076	4303	4453	5027	4968	5203	5.79
MILK DRY	450	515	660	673	599	531	641	624	616	773	832	4.08
TOTAL EGGS IN SHELL	382	444	506	538	601	596	586	541	548	557	559	2.79
FISHERY PRODUCTS												
FISH FRESH FROZEN	1395	1691	1652	1796	1885	1993	1956	2124	2283	2318	2423	5.00
FISH CURED	253	275	275	302	271	265	269	281	284	289	295	.82
SHELLFISH	263	277	277	325	312	346	406	409	378	366	380	4.28
FISH CANNED AND PREPARED	263	267	261	277	268	272	276	289	293	284	282	.96
SHELLFISH CANNED+PREPAR	36	38	42	47	57	72	75	83	82	84	90	10.62
FISH BODY AND LIVER OIL	270	296	333	335	270	265	270	392	274	267	257	-1.85
FISH MEAL	869	948	918	843	822	930	1003	925	852	783	829	-7.76
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1899	2395	2937	2735	2429	2494	2786	3282	2906	3423	3490	4.60
SAWLOGS NONCONIFEROUS	2017	2055	2257	2128	1928	2011	2335	2458	2639	2873	3929	5.25
PULPWOOD+PARTICLE	6846	8321	10313	10737	9666	8772	10596	12087	13595	13671	12955	5.93
FUELWOOD	551	797	965	745	1010	1241	1172	940	910	1004	1086	4.42
SAWNWOOD CONIFEROUS	18051	20349	19783	17142	18334	20620	20377	19637	19183	19395	19498	.44
SAWNWOOD NONCONIFEROUS	2756	2514	2395	2037	1896	2017	2428	2261	2240	2524	2676	.11
WOOD-BASED PANELS	6737	7386	7047	6696	6312	6459	6894	7153	7450	7835	8345	1.55
PULP FOR PAPER	6705	6857	6661	6219	5616	6749	7086	7197	7298	7775	7936	1.97
PAPER AND PAPERBOARD	15659	17385	17423	18108	17770	19661	21939	22707	23381	26048	28815	5.81

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....	PERCENT											
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	3969	5002	4170	4380	5092	4042	3680	4758	3847	3585	4169	-1.34
RICE MILLED	13	24	33	25	28	38	64	41	89	76	27	12.53
BARLEY	222	232	336	247	276	276	277	276	226	314	289	1.44
MAIZE	1493	554	1325	1770	1326	860	694	977	961	848	628	-4.82
MILLET	3	5	6	3	5	4	3	2	4	5	12	3.92
SORGHUM	7	7	5	9	6	4	4	6	9	23	25	11.18
POTATOES	371	655	322	323	299	185	141	268	302	497	722	.83
SUGAR,TOTAL (RAW EQUIV.)	953	717	738	631	807	762	871	1024	1240	1083	824	3.25
PULSES	135	145	122	122	112	118	193	231	274	361	399	12.86
SOYBEANS	6	30	5	4	5	5	11	6	5	33	15	6.28
SOYBEAN OIL	7	10	17	14	20	15	35	25	12	7	2	-6.63
GROUNDNUTS SHELLED BASIS		1	1				2					
COCONUT OIL		1	1									
OilSEED CAKE AND MEAL	53	20	27	91	115	120	64	205	174	323	226	25.57
ORANGES+TANGER+CLEMEN			1	2	2	1	1	2	2	1		
COCOA BEANS						5	12					
TEA	17	17	20	18	17	26	30	19	6	5	7	-10.68
COTTON LINT	865	807	863	928	970	847	695	720	769	813	776	-1.53
JUTE AND SIMILAR FIBRES										1	5	
TOBACCO UNMANUFACTURED	89	102	103	90	88	85	81	80	89	79	90	-1.49
NATURAL RUBBER											1	
WOOL GREASY	2	3	3	1		1	1	1	1	1	1	-10.45
BOVINE CATTLE 1/	544	676	577	460	607	705	707	658	676	785	925	4.27
SHEEP AND GOATS 1/	3800	4719	4598	3720	3654	4179	4232	3166	3075	3776	4453	-1.34
PIGS 1/	1158	1152	1144	1713	1091	973	857	1120	1151	1177	1218	-.66
TOTAL MEAT	620	744	738	779	715	758	832	889	942	912	933	3.71
MILK DRY											1	
TOTAL EGGS IN SHELL	114	104	90	78	59	55	65	42	38	44	42	-10.42
FISHERY PRODUCTS												
FISH FRESH FROZEN	559	591	612	493	418	543	540	607	823	844	867	4.82
FISH CURED	15	21	17	11	6	18	6				1	-42.58
SHELLFISH	19	26	11	24	51	114	135	113	78	93	85	22.47
FISH CANNED AND PREPARED	37	33	37	36	30	38	39	66	68	69	69	8.76
SHELLFISH CANNED+PREPAR	1	1	2	1	2	2	1	1	2	2	2	3.97
FISH BODY AND LIVER OIL	1	1	1									
FISH MEAL	21	20	22	12	9	12	8	11	12	12	12	-6.29
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	10281	8774	7430	6783	7025	7762	8085	8271	9791	9327	8881	.80
SAWLOGS NONCONIFEROUS	296	404	384	285	289	315	232	193	194	214	236	-5.93
PULPWOOD+PARTICLE	11375	11667	11463	11529	9631	10909	12616	12617	12948	13922	15141	2.72
FUELWOOD	141	143	183	94	70	92	121	132	149	171	201	2.86
SAWNWOOD CONIFEROUS	10782	9956	9513	9363	9630	9697	9476	9701	10238	9978	10571	.17
SAWNWOOD NONCONIFEROUS	752	600	597	539	487	536	564	389	338	488	361	-5.92
WOOD-BASED PANELS	1875	1842	1827	1683	1548	1598	1437	1488	1623	1818	1721	-1.05
PULP FOR PAPER	926	827	895	896	982	1162	1217	1227	1366	1326	1292	5.28
PAPER AND PAPERBOARD	1779	1664	1732	1697	1745	1775	1806	1795	1927	1999	2035	1.72

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS											PERCENT
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	50841	47174	54495	61342	61264	63319	65263	43528	42833	55214	62600	.30
RICE MILLED	2279	2301	3054	3133	2540	2385	2141	1940	2392	2472	2260	-1.46
BARLEY	4249	4654	4195	6853	7097	7258	5876	2938	7586	8468	4873	2.74
MAIZE	50550	59414	63923	56067	49658	48083	49584	44345	27473	41097	46815	-4.32
MILLET	23	15	60	24	28	41	55	39	74	58	47	10.79
SORGHUM	5184	5950	8050	8032	6051	5325	6828	7239	4149	5009	6532	-1.45
POTATDES	282	289	344	395	461	363	296	321	319	353	442	1.81
SUGAR,TOTAL (RAW EQUIV.)	149	135	654	1187	154	323	397	436	544	673	358	8.73
PULSES	390	470	913	1141	854	679	635	646	851	930	1030	5.54
SOYBEANS	20794	20951	21882	21980	25652	22791	19641	17671	21576	21513	18124	-1.20
SOYBEAN OIL	916	1110	1081	809	911	786	1043	588	540	624	892	-4.46
GROUNDNUTS SHELLED BASIS	381	356	285	146	201	224	266	311	276	221	159	-4.07
GROUNDNUT OIL	40	5	18	20	10	2	7	17	35	3	3	-11.32
COCONUT OIL	9	5	19	14	13	11	21	19	18	39	40	16.18
OILSEED CAKE AND MEAL	6793	6845	8009	7471	6917	7517	5551	5599	7379	8258	8652	.84
BANANAS	201	197	205	217	210	188	202	197	163	188	180	-1.50
ORANGES+TANGER+CLEMEN	356	318	482	443	353	497	374	412	417	403	357	.40
LEMONS AND LIMES	237	173	171	176	135	163	148	144	148	152	146	-3.31
COFFEE GREEN+ROASTED	59	79	79	70	60	46	63	52	77	60	76	-.38
COCOA BEANS	9	9	7	14	14	16	12	11	14	17	14	6.28
TEA	5	5	5	4	4	5	5	13	22	15	3	9.29
COTTON LINT	1347	1527	1823	1269	1392	1126	1367	1001	662	1195	1173	-4.62
JUTE AND SIMILAR FIBRES	1										1	-2.65
TOBACCO UNMANUFACTURED	364	299	293	300	290	264	275	274	247	226	240	-3.53
NATURAL RUBBER	20	21	28	18	16	20	35	41	37	37	56	10.27
WOOL GREASY				1	1	1	1	1	1	1	1	8.47
BOVINE CATTLE 1/	592	436	424	441	563	440	479	506	355	399	868	1.05
SHEEP AND GOATS 1/	153	135	144	225	287	226	332	382	145	67	204	-.16
PIGS 1/	201	145	254	171	342	483	1362	1171	515	435	960	19.48
TOTAL MEAT	721	777	973	1073	987	926	956	1013	1150	1285	1443	5.44
MILK DRY	7	5	36	37	29	37	19	49	30	12	21	8.05
TOTAL EGGS IN SHELL	39	30	61	87	64	31	25	22	19	35	49	-4.80
FISHERY PRODUCTS												
FISH FRESH FROZEN	383	424	480	638	801	918	1167	1465	1913	1895	1922	20.20
FISH CURED	63	64	76	87	89	70	65	70	79	70	77	.67
SHELLFISH	93	133	115	88	80	80	71	83	95	96	104	-1.38
FISH CANNED AND PREPARED	63	64	81	93	68	82	96	85	100	102	88	4.04
SHELLFISH CANNED+PREPAR	11	11	11	11	11	4	3	3	6	6	15	-5.61
FISH BODY AND LIVER OIL	110	101	137	117	98	191	188	133	92	94	95	-1.19
FISH MEAL	58	21	86	50	22	76	25	38	39	43	35	-2.23
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	15565	17865	15135	11676	15269	17395	18441	19320	18316	21212	24104	4.31
SAWLOGS NONCONIFEROUS	522	630	784	751	506	755	761	602	779	879	1163	4.92
PULPWOOD+PARTICLE	8216	9463	9887	8382	6605	6422	5846	5613	5933	6249	8001	-3.79
FUELWOOD	170	98	63	108	85	85	90	89	82	76	104	-2.75
SAWWOOD CONIFEROUS	34492	35407	33612	31770	31423	38296	40879	42219	42232	47162	49090	4.11
SAWWOOD NONCONIFEROUS	1341	1025	1190	1209	1083	1340	1373	1172	1513	2174	3663	8.46
WOOD-BASED PANELS	2061	2053	2312	2533	2088	2401	2668	2754	2948	3295	4384	6.38
PULP FOR PAPER	8132	8906	9838	9261	8531	9428	9611	9791	10917	11909	12307	3.49
PAPER AND PAPERBOARD	11062	12336	13742	13149	11941	12846	13288	13378	14558	15455	16105	2.88

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS											PERCENT
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	11134	6933	14955	10677	10998	8312	10647	15782	16171	14898	12285	4.21
RICE MILLED	277	241	457	281	596	405	246	341	178	186	298	-3.59
BARLEY	1375	1757	3047	1650	1599	852	3231	5482	4399	2345	1530	5.50
MAIZE	32	75	37	52	24	73	30	164	117	103	29	6.31
MILLET	15	18	14	11	25	19	18	16	16	24	46	7.03
SORGHUM	385	516	580	463	1271	445	772	1594	1234	818	415	6.05
POTATOES	20	18	23	21	23	26	21	24	19	19	20	-1.12
SUGAR,TOTAL (RAW EQUIV.)	2481	1842	2203	2563	2502	2551	2361	2529	2760	2481	2786	2.17
PULSES	36	45	72	64	71	106	78	100	219	480	441	27.02
SOYBEAN OIL						1						
GROUNDNUTS SHELLED BASIS	2	2	12	4	4	8		5	3	3	3	-3.11
GROUNDNUT OIL					1				1			
PALM OIL									2			
DILSEED CAKE AND MEAL		1	1		1	1	2	1	13	16	1	54.11
DRANGES+TANGER+CLEMEN	22	25	38	32	28	32	25	30	36	48	51	5.96
LEMONS AND LIMES			4	1	2	1	1	1	5	4	2	15.02
COCOA BEANS						1	1	1			1	2.57
TEA	1											-3.80
COTTON LINT	10	24	49	59	79	129	81	140	241	251	176	31.95
TOBACCO UNMANUFACTURED	1		1	1		1						-16.39
NATURAL RUBBER			1					1	2	3	1	20.58
WOOL GREASY	630	705	650	680	642	660	659	709	733	799	784	1.89
BOVINE CATTLE 1/	71	107	74	109	121	120	96	67	181	125	153	5.56
SHEEP AND GOATS 1/	4143	3898	6172	5763	6097	7035	6350	6262	6554	8416	7748	6.18
PIGS 1/	1	1	2	1		1	3				2	-4.16
TOTAL MEAT	1664	1814	1494	1602	1493	1666	1351	1323	1361	1642	1639	-1.12
MILK DRY	125	123	157	137	157	146	148	152	202	227	214	5.63
TOTAL EGGS IN SHELL	1	1	1	1	1	3	6	2	2	1	1	-3.63
FISHERY PRODUCTS												
FISH FRESH FROZEN	32	54	81	95	88	98	94	97	119	122	120	10.63
FISH CURED			1	1	2	1		1	3	3	3	20.26
SHELLFISH	20	32	65	57	70	68	78	70	61	62	66	8.58
FISH CANNED AND PREPARED		1	3	2	4	5	4	4	4	4	4	19.76
SHELLFISH CANNED+PREPAR	2	2	2	2	2	3	3	3	3	3	3	6.60
FISH BODY AND LIVER OIL	5	4					2	2	1	1	1	19.59
FISH MEAL				1			4	1	2	2	2	
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	936	1236	971	529	479	508	452	361	389	429	820	-7.40
SAWLOGS NONCONIFEROUS	2	1	4	4				1	1	22	22	17.10
PULPWOOD+PARTICLE	5074	5357	7064	6647	6240	6105	7345	7376	7188	8069	9381	4.78
SAWNWOOD CONIFEROUS	367	509	617	546	515	401	381	489	401	348	411	-2.49
SAWNWOOD NONCONIFEROUS	30	41	54	35	34	35	41	36	34	16	26	-5.16
WOOD-BASED PANELS	52	104	142	138	99	113	93	79	98	167	169	5.09
PULP FOR PAPER	435	464	475	518	421	471	459	428	504	483	483	.52
PAPER AND PAPERBOARD	332	359	418	447	340	361	342	353	336	330	330	-1.34

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS.....											PERCENT
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	46	31	17	19	23	9	8	3	6	4	45	-13.87
RICE MILLED	13	12	22	18	14	8	20	13	12	4	15	-4.47
BARLEY		2									263	
MAIZE	652	365	70	245	380	782	262	352	792	785	523	9.14
MILLET	31	78	46	41	6	1	2	2		4		-44.56
SORGHUM		53	12	3	15	25	30	11	5	21	5	11.59
POTATOES	58	50	55	36	30	49	63	60	84	72	56	3.98
SUGAR,TOTAL (RAW EQUIV.)	1296	1659	1586	1491	1683	1683	1569	1628	1806	1779	1677	1.90
PULSES	150	149	220	127	166	191	123	71	123	156	135	-3.20
SOYBEANS	36	1	1	1		1		3	1	1	4	-2.25
SOYBEAN OIL	2	1								1	1	-3.12
GROUNDNUTS SHELLED BASIS	65	82	86	36	56	96	56	45	55	53	74	-1.80
GROUNDNUT OIL	94	160	92	38	162	210	109	48	95	119	149	1.20
COPRA	52	45	32	22	20	14	11	18	18	20	14	-10.70
COCONUT OIL	9	14	15	18	21	21	23	32	34	29	29	12.21
PALM NUTS KERNELS	152	123	140	107	97	87	98	50	87	108	117	-4.27
PALM OIL	96	64	140	85	84	70	75	92	135	157	96	3.28
OILSEED CAKE AND MEAL	457	667	480	362	492	490	336	386	439	442	585	-1.84
BANANAS	344	292	243	205	187	193	193	211	193	183	191	-4.80
ORANGES+TANGER+CLEMEN	878	679	855	715	662	594	582	640	642	577	670	-2.88
LEMONS AND LIMES	2	2	1	1	2	7	6	7	3	3	2	11.06
COFFEE GREEN+ROASTED	925	1011	895	965	1053	939	914	973	1076	910	959	1.17
COCOA BEANS	778	601	759	976	826	783	894	831	957	930	945	2.93
TEA	182	197	180	168	190	200	195	226	224	231	241	3.04
COTTON LINT	312	324	336	340	316	349	372	377	482	491	515	5.23
JUTE AND SIMILAR FIBRES		1										
TOBACCO UNMANUFACTURED	139	132	172	189	148	144	173	175	173	174	179	2.21
NATURAL RUBBER	145	142	138	146	151	156	186	185	204	215	254	5.93
WOOL GREASY	4	3	4	4	4	4	5	3	2	1	1	-11.72
BOVINE CATTLE 1/	1181	1271	1415	1461	1461	1206	1136	974	812	751	691	-6.60
SHEEP AND GOATS 1/	3066	3049	3646	3412	3574	3001	2488	3397	3087	3007	2649	-1.49
PIGS 1/	1	1	1			1			3	3		-1.53
TOTAL MEAT	98	96	47	44	44	48	52	45	36	52	47	-5.95
MILK DRY	2	4										-17.65
TOTAL EGGS IN SHELL			1				2	1				-4.33
FISHERY PRODUCTS												
FISH FRESH FROZEN	128	117	113	144	154	146	164	187	171	175	179	4.76
FISH CURED	12	12	13	11	12	9	12	15	14	18	11	1.89
SHELLFISH	48	34	34	74	76	130	135	140	152	157	149	17.90
FISH CANNED AND PREPARED	62	77	79	94	82	101	100	105	105	104	104	4.70
FISH BODY AND LIVER OIL	6	7	4	10	1	8	5		4	4	4	-11.34
FISH MEAL	31	24	20	22	6	15	9	8	3	3	3	-22.69
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	2	2										
SAWLOGS NONCONIFEROUS	6211	6175	5971	4599	4723	4547	5076	4217	3658	3596	3741	-5.54
PULPWOOD+PARTICLE	75	112	84	173	173	173	173	173	173	412	673	18.17
FUELWOOD	51	51	5				28					
SAWNWOOD CONIFEROUS	116	126	108	105	81	79	82	77	79	89	83	-4.08
SAWNWOOD NONCONIFEROUS	706	680	611	522	554	598	681	794	777	818	828	3.05
WOOD-BASED PANELS	261	236	272	283	265	288	300	307	286	283	266	1.15
PULP FOR PAPER	218	240	240	229	192	202	252	244	244	264	284	2.00
PAPER AND PAPERBOARD	16	24	21	11	19	12	14	13	7	14	7	-8.30

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS.....											PERCENT
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	1833	4427	4620	3964	4042	10410	7491	9762	4125	4326	3905	5.38
RICE MILLED	702	563	525	606	510	512	530	559	571	482	468	-2.27
BARLEY	18	58	72	32	24	59	95	86	51	36	150	10.59
MAIZE	5927	5990	3556	9198	5837	7321	5733	7129	7422	4001	4235	-1.46
MILLET	196	139	63	136	101	96	58	93	32	60	67	-10.38
SORGHUM	4625	3899	1545	5075	5369	5332	4278	3332	1960	1005	1511	-9.82
POTATOES	67	77	61	45	44	32	50	55	56	33	30	-6.33
SUGAR,TOTAL (RAW EQUIV.)	12429	12726	12025	12702	13052	12953	12851	12321	11385	11007	11978	-1.91
PULSES	464	395	336	286	281	358	412	349	391	306	322	-1.44
SOYBEANS	2845	3814	4493	3909	2877	3270	5170	7171	4469	5577	5999	6.60
SOYBEAN OIL	570	609	840	1355	1024	1369	1413	1510	1103	1734	1700	10.51
GROUNDNUTS SHELLED BASIS	52	97	98	86	61	101	104	138	138	131	145	8.38
GROUNDNUT OIL	155	209	207	80	113	104	57	109	50	104	75	-9.37
COPIA		2			5			1				-20.61
COCONUT OIL	9	8	4	5	6	6	17	4	5	5	7	-1.51
PALM NUTS KERNELS	9	7	5	1	4	4	3	2	1	1	1	-18.34
PALM OIL	4	5	3	7	15	17	27	35	31	33	32	30.75
OilSEED CAKE AND MEAL	7676	7497	8891	10912	10498	12344	12163	13506	12750	13486	15516	7.08
BANANAS	5520	5366	5358	5471	5652	5082	5493	5371	5896	6175	6323	1.34
ORANGES+TANGER+CLEMEN	269	312	306	316	383	418	409	479	536	532	521	7.56
LEMONS AND LIMES	47	74	53	51	34	56	65	154	113	130	141	12.38
COFFEE GREEN+ROASTED	1960	2179	2232	2148	2259	2426	2533	2622	2108	2691	2343	1.91
COCOA BEANS	211	226	183	201	241	229	211	289	239	257	260	2.71
TEA	41	39	44	35	43	54	54	53	49	48	46	2.54
COTTON LINT	903	733	636	600	599	509	481	637	372	435	551	-5.54
JUTE AND SIMILAR FIBRES	1	2	2		1		1	2				
TOBACCO UNMANUFACTURED	274	276	255	271	273	274	290	305	270	262	299	.63
NATURAL RUBBER	6	4	3	2	3	3	2	2	4	2	3	-4.79
WOOL GREASY	107	80	105	125	108	88	79	67	78	75	67	-4.52
BOVINE CATTLE 1/	1551	1277	754	716	962	717	451	556	1022	1057	838	-3.74
SHEEP AND GOATS 1/	125	98	65	312	195	634	462	14	89	20	310	-5.50
PIGS 1/	24	16	1		10	4	4	6	55	17	13	18.66
TOTAL MEAT	840	815	738	992	1027	983	778	806	805	627	818	-1.46
MILK DRY	10	4	4	11	19	17	2	1	2	3	14	-7.90
TOTAL EGGS IN SHELL	2	4	12	14	6	3	4	6	10	5	2	-4.49
FISHERY PRODUCTS												
FISH FRESH FROZEN	346	362	419	375	401	380	368	485	413	397	397	1.31
FISH CURED	4	6	8	5	5	5	5	5	5	5	5	.04
SHELLFISH	144	168	137	125	165	174	178	173	171	175	174	2.31
FISH CANNED AND PREPARED	79	81	143	170	95	55	65	49	72	77	77	-4.69
SHELLFISH CANNED+PREPAR	2	5	4	6	4	6	7	7	8	7	7	9.42
FISH BODY AND LIVER OIL	71	108	103	76	137	25	139	207	187	180	180	10.05
FISH MEAL	830	1020	1052	962	1495	1022	1292	1901	1962	1875	1875	9.12
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	689	968	1029	377	906	1024	902	1271	1162	1271	1400	6.98
SAWLOGS NONCONIFEROUS	60	86	114	65	54	55	68	47	37	43	83	-4.41
PULPWOOD+PARTICLE									323	1347	2737	
FUELWOOD	152	214	167	71	23	57	10	7	6	60	6	-28.05
SAWNWOOD CONIFEROUS	1477	1678	1718	1319	1102	1172	1217	1004	1153	1342	1208	-3.17
SAWNWOOD NONCONIFEROUS	727	1121	1130	994	892	851	911	894	774	861	813	-1.64
WOOD-BASED PANELS	487	488	625	606	608	584	650	651	655	697	869	4.34
PULP FOR PAPER	715	1024	1318	1374	1302	1566	1532	1515	1511	1407	1598	5.66
PAPER AND PAPERBOARD	276	351	398	497	404	651	939	778	920	828	1327	15.16

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS											PERCENT
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	2131	877	540	652	717	1145	1046	804	873	2025	4621	8.98
RICE MILLED	223	211	259	159	59	78	158	121	226	214	159	-1.46
BARLEY	50	88	229	424	1026	662	321	100	171	48	678	5.34
MAIZE	43	111	155	40	53	10	6	12	7	13	15	-22.24
MILLET	4	2	2	3	8	2	4		2	5	2	-4.47
SORGHUM	66	197	286	256	423	186	25		31	534	237	
POTATOES	291	316	453	393	463	456	511	355	377	357	495	2.29
SUGAR,TOTAL (RAW EQUIV.)	55	37	45	71	224	341	629	369	78	127	76	12.03
PULSES	256	304	299	500	573	658	609	386	560	800	1278	12.88
SOYBEAN OIL			3	5	16	11	11	5	1		1	22.21
GROUNDNUTS SHELLED BASIS	111	52	51	108	101	24	31	19	6	10	77	-16.21
GROUNDNUT OIL	35	16	33	16	18	2	12	3	2	22	9	-14.35
COCONUT OIL				1								-11.51
PALM OIL					1				5	27	17	
DLSEED CAKE AND MEAL	225	214	261	145	105	104	133	29	73	111	192	-8.87
BAHANAS	4	14	19	20	11	10	12	12	13	14	14	4.22
DRANGES+TANGER+CLEMEN	609	592	591	698	637	617	611	558	434	494	441	-3.36
LEMONS AND LIMES	138	144	191	190	191	202	199	137	152	159	174	.24
COFFEE GREEN+ROASTED	3	3	2	6	5	5	8	4	4	2	5	4.29
TEA	10	16	15	17	5	7	5	6	2	2	1	-22.47
COTTON LINT	768	669	608	532	584	623	648	488	611	425	409	-4.45
TOBACCO UNMANUFACTURED	84	77	94	138	110	75	72	105	85	114	81	.17
NATURAL RUBBER									1			85.86
WOOL GREASY	9	8	7	3	6	6	5	5	8	11	14	4.68
BOVINE CATTLE 1/	12	21	13	60	112	77	51	18	13	2	1	-20.09
SHEEP AND GOATS 1/	1209	1421	2026	2858	3505	3710	3866	3353	4039	3713	4217	12.11
PIGS 1/	1	3										
TOTAL MEAT	15	15	22	74	96	78	97	70	58	55	48	13.58
MILK DRY		1	1		1	1						18.46
TOTAL EGGS IN SHELL	7	10	13	17	27	42	70	73	52	51	31	22.10
FISHERY PRODUCTS												
FISH FRESH FROZEN	6	17	15	28	27	28	31	29	30	30	30	11.81
FISH CURED	1	1	1	1	1	1	1	1	1	1	1	1.86
SHELLFISH	8	9	10	5	7	7	8	9	9	9	10	2.00
FISH CANNED AND PREPARED	4	5	8	3	2	1	1	1	1	1	1	-17.60
SHELLFISH CANNED+PREPAR	1	2	3	4	5	7	8	5	7	7	7	16.40
FISH BODY AND LIVER OIL				1	1	2	9	7	5	5	5	77.60
FISH MEAL			1				1					
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	1	1	1	2	7	11	20	15	24	1	5	18.98
SAWLOGS NONCONIFEROUS	5	3	4	36	36	35	100	76	24	23	18	23.21
FUELWOOD	22	20	31	24	16	24	11	11	11	11	11	-9.22
SAWNWOOD CONIFEROUS	60	103	84	96	94	126	107	82	48	50	82	-2.88
SAWNWOOD NONCONIFEROUS		2	3	6	12	7	8	5	8	57	26	38.24
WOOD-BASED PANELS	26	24	19	19	24	27	19	19	19	18	25	-1.26
PAPER AND PAPERBOARD	10	16	21	35	35	41	71	56	65	65	65	20.11

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	967	801	510	295	157	250	359	447	241	495	273	-7.72
RICE MILLED	3031	4965	5331	6033	6050	5525	7018	5888	6913	6717	6913	5.81
BARLEY	13	73	259	275	907	250	1655	130	2		1	-38.08
MAIZE	2198	2146	2342	2721	3030	2861	3476	2933	4101	1779	1467	-7.73
MILLET	1	6	2	2	1		2	11	3	1	2	2.49
SORGHUM	166	170	208	288	317	248	327	339	270	149	28	-7.31
POTATOES	55	99	106	72	69	61	60	55	65	60	77	-2.28
SUGAR,TOTAL (RAW EQUIV.)	2822	3269	2722	2930	4093	3580	2970	2968	2663	2797	2661	-1.15
PULSES	245	291	312	338	376	345	337	492	582	456	421	6.58
SOYBEANS	30	27	27	27	27	33	34	43	40	99	126	14.29
SOYBEAN OIL	7	6	27	32	49	78	89	47	62	201	154	35.53
GROUNDNUTS SHELLED BASIS	24	40	55	113	106	89	66	72	84	91	84	9.01
GROUNDNUT OIL	6	16	5	5	6	28	8	10	10	10	11	4.17
COPRA	445	193	234	172	232	75	72	153	193	157	116	-8.27
COCONUT OIL	1112	976	1061	1192	1064	1144	779	1045	1448	1255	1126	1.31
PALM NUTS KERNELS	13	23	45	24	15	14	13	25	5	3	1	-23.56
PALM OIL	2168	2638	3303	2963	3487	3709	3951	4811	5755	5299	5514	9.74
OilSEED CAKE AND MEAL	2582	3291	3054	3091	3220	3553	2876	2932	4090	3497	3231	1.85
BANANAS	832	920	971	922	982	683	841	826	892	816	903	-6.63
ORANGES+TANGER+CLEMEN	65	89	78	50	62	75	74	65	64	68	62	-1.17
LEMONS AND LIMES	1	2	1	7	2	2	2	3	2	3	2	7.36
COFFEE GREEN+ROASTED	339	335	370	371	403	405	482	517	544	490	538	5.45
COCOA BEANS	24	32	41	65	88	91	121	143	177	246	330	28.49
TEA	459	445	539	546	488	475	554	544	533	544	583	1.91
COTTON LINT	128	133	396	415	326	410	204	351	841	943	583	16.58
JUTE AND SIMILAR FIBRES	466	520	465	514	451	457	432	290	425	431	278	-4.26
TOBACCO UNMANUFACTURED	224	212	198	259	238	202	193	166	174	136	132	-5.22
NATURAL RUBBER	3080	3179	3101	2924	2886	3205	3340	3339	3376	3721	3785	2.14
WOOL GREASY	1			1	1			1	5	2		11.66
BOVINE CATTLE 1/	78	66	60	36	39	76	40	58	53	50	57	-1.86
SHEEP AND GOATS 1/	70	100	120	60	26	155	241	232	257	196	246	15.86
PIGS 1/	15	19	18	24	130	160	113	222	329	468	611	49.43
TOTAL MEAT	68	95	90	103	127	97	107	128	163	201	255	11.14
MILK DRY	7	10	13	10	10	10	10	13	20	27	33	12.99
TOTAL EGGS IN SHELL	6	5	5	11	8	6	16	17	18	23	25	18.39
FISHERY PRODUCTS												
FISH FRESH FROZEN	579	586	625	581	496	591	519	597	762	790	803	3.25
FISH CURED	30	27	28	27	29	28	36	38	39	42	40	4.69
SHELLFISH	317	362	314	329	379	385	448	474	548	594	625	7.49
FISH CANNED AND PREPARED	49	47	55	80	100	113	144	177	261	281	294	22.87
SHELLFISH CANNED+PREPAR	35	35	50	55	61	68	73	77	91	101	102	11.71
FISH BODY AND LIVER OIL	3	2	2	1	1	1	2	2	2	3	3	2.27
FISH MEAL	141	164	153	151	141	153	155	160	193	195	211	3.33
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	270	396	327	291	127	109	107	38	129	102	102	-14.57
SAWLOGS NONCONIFEROUS	38457	35843	31534	24005	24286	23128	19372	20789	19848	23616	21284	-5.76
PULPWOOD+PARTICLE	860	736	1003	1033	963	1122	793	927	796	1111	1210	2.07
FUELWOOD	731	799	1181	1164	1086	1229	1146	842	832	798	784	-1.18
SAWWOOD CONIFEROUS	425	481	410	254	197	138	186	214	272	407	362	-2.77
SAWWOOD NONCONIFEROUS	5463	7236	6415	5511	5838	7003	6469	6239	7043	7914	9080	3.26
WOOD-BASED PANELS	3342	3159	2933	3590	3428	4772	5290	6027	6763	8571	9062	12.50
PULP FOR PAPER	2	6	6	10	8	9	16	16	13	20	55	26.26
PAPER AND PAPERBOARD	154	153	298	309	228	223	249	327	549	879	1068	18.55

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

4. (Cont.) VOLUME OF EXPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	8	9	4	9	6	67	75	19	124	32	105	34.32
RICE MILLED	2096	1836	1637	948	994	1279	1603	1305	1447	1640	1099	-2.63
BARLEY	1	2	1			7		58	34	31	30	
MAIZE	230	240	104	141	96	92	1043	6388	5656	3945	3976	53.93
MILLET	30	20	5	1	2	2	2	5	9	5	3	-10.06
SORGHUM		10	1		3	4	4	564	752	186	384	
POTATDES	62	81	77	80	89	78	72	61	52	48	83	-2.29
SUGAR,TOTAL (RAW EQUIV.)	493	514	657	440	463	258	189	405	463	505	284	-4.40
PULSES	76	90	71	111	103	134	159	188	595	438	531	24.31
SOYBEANS	113	306	140	139	160	367	847	1162	1393	1736	1550	34.80
SOYBEAN OIL	6	4	4		1	2	9	1	1	3	10	10.48
GROUNDNUTS SHELLED BASIS	30	49	84	250	136	201	180	214	325	328	309	23.48
GROUNDNUT OIL	13	18	21	57	55	72	39	57	108	41	19	9.21
COPIA					1	2	2	11	9		3	
COCONUT OIL						4	4	7	3	1	2	
PALM NUTS KERNELS					1			1	2			
DILSEED CAKE AND MEAL	31	49	87	208	339	1135	961	1321	3182	3380	4529	68.36
BANANAS	101	117	109	103	112	134	135	143	104	136	109	1.56
ORANGES+TANGER+CLEMEN	81	73	70	54	57	62	52	67	79	91	99	2.39
COFFEE GREEN+ROASTED	5	5	4	1	10	15	13	11	13	17	14	17.58
COCOA BEANS									3	3	3	
TEA	109	126	125	107	126	148	169	157	192	193	217	7.04
COTTON LINT	33	22	2	1	17	131	218	261	558	755	468	69.03
JUTE AND SIMILAR FIBRES	8	20	35	42	44	36	48	77	85	66	47	17.67
TOBACCO UNMANUFACTURED	35	35	32	28	30	35	32	27	24	25	42	-1.28
NATURAL RUBBER	41	50	39	38	41	47	50	50	55	60	59	4.08
WOOL GREASY	22	24	23	21	16	16	14	13	19	14	15	-4.88
BOVINE CATTLE 1/	181	224	272	263	257	252	257	220	225	225	251	.65
SHEEP AND GOATS 1/	443	463	448	330	312	438	515	502	547	487	105	-4.49
PIGS 1/	3129	3079	4548	3189	3256	3217	3091	3007	3123	3030	3031	-1.37
TOTAL MEAT	210	246	251	250	274	271	284	295	327	374	344	4.95
MILK DRY									1	1	1	
TOTAL EGGS IN SHELL	42	51	54	56	57	57	60	56	64	60	50	1.88
FISHERY PRODUCTS												
FISH FRESH FROZEN	129	134	146	169	168	183	189	199	229	229	229	6.37
FISH CURED	5	9	8	6	7	6	8	7	7	7	7	.13
SHELLFISH	57	72	70	76	75	90	102	137	205	205	205	14.95
FISH CANNED AND PREPARED	22	33	43	34	38	42	38	41	39	39	39	3.36
SHELLFISH CANNED+PREPAR	14	10	10	12	9	11	13	13	17	17	17	4.35
FISH BODY AND LIVER OIL							1					-3.02
FISH MEAL	1	1	1	1		1	2	1	2	2	2	9.92
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	32	27	21	33	29	38	35	5	1	1	1	-33.68
SAWLOGS NONCONIFEROUS	42	45	45	33	35	36	59	39	14	12	10	-12.80
SAWNWOOD CONIFEROUS	28	19	10	12	13	13	12	12	12	16	12	-3.99
SAWNWOOD NONCONIFEROUS	103	48	34	26	56	55	53	56	56	55	59	.71
WOOD-BASED PANELS	1244	1096	885	957	834	884	614	565	513	560	515	-8.76
PULP FOR PAPER	44	46	49	86	81	64	30	68	92	81	106	6.72
PAPER AND PAPERBOARD	116	89	149	174	165	139	217	304	386	440	485	17.56

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

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

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....US \$ PER METRIC TON.....												PERCENT
AGRICULTURAL PRODUCTS												
WHEAT	131	163	186	188	173	162	157	145	135	114	140	-2.42
WHEAT FLOUR	199	225	284	294	245	197	215	208	195	179	198	-2.58
RICE MILLED	346	325	383	445	344	309	296	283	249	240	315	-3.60
BARLEY	137	145	175	175	161	144	147	121	107	103	130	-3.51
MAIZE	117	128	150	154	128	142	149	126	117	104	127	-1.26
POTATOES	157	188	185	178	186	168	209	124	151	172	164	-1.21
SUGAR CENTRIFUGAL RAW	341	355	538	505	403	422	415	389	419	381	383	-.34
SOYBEANS	250	271	264	282	243	256	278	218	200	200	263	-1.96
SOYBEAN OIL	617	675	625	542	483	498	715	644	411	356	466	-3.98
GROUNDNUTS SHELLLED	661	679	698	964	668	621	733	601	594	603	566	-2.32
GROUNDNUT OIL	946	965	781	998	647	568	986	919	658	563	612	-4.09
COPRA	374	587	400	312	261	354	583	332	139	225	316	-6.09
COCONUT OIL	627	937	651	536	461	556	1028	591	290	397	539	-4.98
PALM NUTS KERNELS	262	357	267	235	222	263	331	232	111	102	154	-8.61
PALM OIL	554	617	563	528	441	442	660	505	290	327	425	-4.90
PALM KERNEL OIL	617	896	653	540	450	574	908	535	261	391	501	-5.67
OLIVE OIL	1364	1638	1983	1808	1782	1504	1362	1174	1631	1950	1946	.69
CASTOR BEANS	318	341	318	324	284	291	376	275	192	200	304	-3.51
CASTOR BEAN OIL	801	803	970	856	825	908	1119	709	586	703	910	-1.33
COTTONSEED	177	183	179	199	136	130	175	141	106	119	146	-4.16
COTTONSEED OIL	607	682	628	627	529	526	751	639	446	429	498	-3.12
LINSEED	217	281	311	326	285	275	287	266	206	173	276	-2.12
LINSEED OIL	380	543	611	662	533	417	527	625	477	305	395	-2.67
BANANAS	156	168	186	199	204	214	213	220	242	254	266	4.97
ORANGES	266	345	357	347	330	326	299	334	343	397	408	2.21
APPLES	408	399	435	409	432	336	329	323	401	426	440	-.31
RAISINS	1080	1563	1677	1477	1212	1079	941	923	1070	1185	1255	-2.60
DATES	387	390	415	588	654	712	881	809	757	641	748	7.58
COFFEE GREEN	3168	3149	3290	2238	2307	2285	2552	2535	3673	2245	2407	-1.84
COCOA BEANS	3138	3283	2663	1771	1590	1636	2099	2076	2181	2041	1698	-4.42
TEA	2058	1937	2060	1906	1772	1993	2649	2186	1863	1939	1897	-.02
COTTON LINT	1357	1528	1623	1719	1443	1521	1693	1457	1135	1205	1571	-1.32
JUTE	338	383	378	313	284	263	333	503	283	229	315	-1.95
JUTE-LIKE FIBRES	247	248	259	190	235	310	304	259	219	184	263	-.45
SISAL	378	483	601	558	516	433	418	405	425	409	404	-2.01

5. (Cont.) WORLD AVERAGE EXPORT UNIT VALUES OF SELECTED AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....US \$ PER METRIC TON.....	PERCENT											
TOBACCO UNMANUFACTURED	2630	2740	2822	2952	3239	3129	2972	2919	2929	2914	3043	.89
NATURAL RUBBER	945	1243	1296	1162	871	1018	1058	851	906	1146	1730	1.10
RUBBER NATURAL DRY	915	1180	1312	1066	797	963	965	755	788	903	1115	-1.90
WOOL GREASY	2221	2463	2825	2956	2919	2517	2626	2514	2445	2668	4271	2.51
CATTLE 1/	355	418	439	423	400	379	365	375	428	463	533	1.85
BEEF AND VEAL	2160	2390	2514	2377	2443	2213	1954	1863	2028	2681	2936	.58
MUTTON AND LAMB	1390	1592	1761	1863	1809	1597	1515	1421	1469	1570	1795	-.04
PIGS 1/	104	111	106	108	113	99	94	88	93	96	96	-1.79
BACON HAM OF SWINE	2247	2630	2894	2744	2640	2345	2226	2236	2741	3057	3256	1.57
MEAT CHICKENS	1295	1361	1430	1338	1162	1031	1072	1032	1206	1258	1259	-1.41
MEAT PREPARATIONS	1607	2105	2529	2414	2150	2106	1983	1845	2010	2354	2144	.53
EVAP COND WHOLE COW MILK	746	849	931	926	939	898	785	775	969	1068	1071	2.13
MILK OF COWS SKIMMED DRY	742	843	1047	1106	1055	864	786	783	1021	1182	1617	3.88
BUTTER OF COWMILK	2246	2281	2468	2631	2704	2395	2006	1683	1844	1746	1983	-3.36
CHEESE OF WHOLE COWMILK	2532	2769	2933	2663	2568	2429	2188	2237	2807	3261	3454	1.43
FISHERY PRODUCTS												
FISH FRESH FROZEN	1135	1242	1254	1288	1208	1090	1057	1046	1205	1345	1364	.52
FISH CURED	1868	2114	2450	2584	2249	2029	1815	1871	2536	3143	3180	3.22
SHELLFISH	3375	3686	3921	3809	3792	3575	3297	3383	4275	4428	4608	1.99
FISH CANNED AND PREPARED	2038	2301	2349	2401	2313	2400	2264	2323	2635	2825	2883	2.59
SHELLFISH CANNED+PREPAR	3797	4490	4694	4354	4201	4350	4065	3963	5110	5512	5695	2.65
FISH BODY AND LIVER OIL	434	426	432	399	343	344	347	301	260	256	280	-5.57
FISH MEAL	427	401	469	473	371	429	391	294	347	359	378	-2.56
FOREST PRODUCTS												
SAWLOGS CONIFEROUS 2/	62	83	89	81	73	63	63	61	65	74	83	-.64
SAWLOGS NONCONIFEROUS 2/	57	93	105	88	87	85	72	70	76	87	91	.38
PULPWOOD+PARTICLE 2/	25	27	36	40	35	30	30	29	32	36	41	2.37
FUELWOOD 2/	21	27	34	34	29	25	26	26	29	33	33	1.66
SAWNWOOD CONIFEROUS 2/	108	131	138	127	114	114	110	105	117	128	137	.16
SAWNWOOD NONCONIF. 2/	164	216	245	223	209	215	201	195	226	233	236	1.45
WOOD-BASED PANELS 2/	228	283	316	294	280	268	248	251	264	309	321	1.00
PULP FOR PAPER	282	361	444	451	411	356	416	353	386	502	582	3.75
PAPER AND PAPERBOARD	454	505	571	567	556	504	521	528	594	688	759	3.44

1/ U.S. DOLLARS PER HEAD

2/ U.S. DOLLARS PER CUBIC METRE

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

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
	THOUSAND METRIC TONS.....											PERCENT
WORLD												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	80117	85545	98025	103071	107888	105897	114863	103281	96536	108017	117523	2.64
RICE MILLED	10155	12146	13059	13838	11489	11902	11456	12432	12745	12274	11408	.30
BARLEY	14749	14767	15086	18682	18655	17746	23004	21788	23503	21538	19695	4.46
MAIZE	68112	75185	79538	80423	69530	69481	67666	68760	58588	64361	66351	-1.81
MILLET	386	366	285	223	283	267	227	281	200	202	216	-5.41
SORGHUM	10433	10195	11037	13691	13569	11017	13152	11762	8421	7660	8705	-2.86
POTATOES	3906	4569	4665	4697	5145	4844	4817	5298	5572	6237	6513	4.18
SUGAR,TOTAL (RAW EQUIV.)	24539	26474	27374	28330	29577	27894	28176	27384	26658	28057	28164	.66
PULSES	2066	2356	2924	3210	3167	3270	3537	3907	4843	5180	6021	10.03
SOYBEANS	23411	26125	27048	26294	28702	26871	25696	25906	27169	29588	26881	.97
SOYBEAN OIL	2404	2873	3239	3255	3792	3677	4028	3449	3017	3903	3907	3.34
GROUNDNUTS SHELLED BASIS	805	777	713	727	814	766	755	814	902	916	950	2.15
GROUNDNUT OIL	475	474	513	359	416	516	323	333	358	372	383	-3.16
COPRA	804	458	465	393	477	251	306	366	407	339	282	-6.52
COCONUT OIL	1255	1198	1125	1400	1291	1294	1052	1136	1493	1434	1373	1.28
PALM NUTS KERNELS	169	161	182	161	123	127	125	99	106	117	93	-6.03
PALM OIL	2318	2701	3408	3220	3686	3917	3901	4873	5973	5762	5914	9.80
OILSEED CAKE AND MEAL	21972	23854	25374	27075	28471	33091	29271	31853	34160	37693	39296	5.59
BANANAS	6882	7044	6742	6786	6796	6190	6643	7145	7303	7561	7840	1.15
ORANGES+TANGER+CLEMEN	4969	5071	5239	5018	5158	5105	5259	4950	5299	5427	5555	.78
LEMONS AND LIMES	961	965	991	970	1049	1003	997	1008	1017	991	1044	.57
COFFEE GREEN+ROASTED	3438	3915	3794	3815	3886	3988	4048	4210	4231	4548	4263	2.06
COCOA BEANS	1096	1026	1063	1242	1270	1259	1325	1464	1400	1470	1542	4.02
TEA	832	891	908	883	888	915	1051	1010	1069	1026	1167	2.94
COTTON LINT	4503	4521	5069	4421	4503	4356	4496	4593	4805	5604	5049	1.23
JUTE AND SIMILAR FIBRES	492	572	574	531	572	518	461	380	523	527	343	-2.95
TOBACCO UNMANUFACTURED	1425	1394	1410	1443	1410	1369	1434	1382	1361	1407	1325	-.46
NATURAL RUBBER	3350	3492	3392	3279	3132	3428	3696	3660	3711	4074	4310	2.33
WOOL GREASY	883	919	852	857	818	823	820	909	923	991	926	.82
BOVINE CATTLE 1/	7212	7208	6672	6919	7287	6786	6658	6620	7034	7003	6789	-.40
PIGS 1/	7749	8084	10498	9715	9020	9357	9987	10218	11821	12230	12576	4.30
TOTAL MEAT	6942	7572	7909	8425	8698	8669	8541	9019	9900	9946	10307	3.57
MILK DRY	538	592	677	695	677	645	724	708	813	932	1064	5.49
TOTAL EGGS IN SHELL	636	674	740	780	825	820	847	785	745	778	767	1.44
FISHERY PRODUCTS												
FISH FRESH FROZEN	3698	4058	4144	4388	4445	4695	4842	5309	5986	6271	6533	5.76
FISH CURED	330	371	400	424	364	434	424	465	432	462	475	3.00
SHELLFISH	1061	1224	1121	1143	1241	1347	1494	1600	1756	1877	1948	6.52
FISH CANNED AND PREPARED	871	904	1020	1078	950	920	942	1011	1090	1138	1147	2.17
SHELLFISH CANNED+PREPAR	162	163	174	184	201	223	238	257	276	292	307	7.31
FISH BODY AND LIVER OIL	653	762	752	732	796	731	951	1098	819	803	863	2.62
FISH MEAL	2089	2471	2263	2052	2599	2324	2520	3104	3243	3221	3307	4.87
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	29858	31516	28054	23842	26400	30362	31057	33089	32712	35992	37152	2.67
SAWLOGS NONCONIFEROUS	47694	48277	42243	34891	32704	32986	30879	29890	31104	31942	33548	-4.18
PULPWOOD+PARTICLE	34187	39249	43086	41400	36495	37710	41454	42094	44786	48926	50209	2.84
FUELWOOD	2769	2908	3112	2533	3158	3545	3924	4096	3878	3844	3494	3.81
SAWNWOOD CONIFEROUS	65298	67388	63311	58325	59443	67704	70499	72550	73756	76203	77620	2.23
SAWNWOOD NONCONIFEROUS	11669	13257	12662	11264	10847	11941	12330	12316	12674	15609	15914	2.31
WOOD-BASED PANELS	15866	16789	15657	16649	15469	16855	17820	18786	20453	23809	25172	4.55
PULP FOR PAPER	17563	18800	19316	18517	17299	19597	20441	20746	22105	23942	24685	3.20
PAPER AND PAPERBOARD	30472	32181	33797	34193	33844	35678	39315	40224	43370	47557	50705	4.97

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1972-88
	THOUSAND METRIC TONS											PERCENT
WESTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	13384	12981	14122	13336	13943	10586	12635	15531	16641	14965	15487	1.83
RICE MILLED	1460	1299	1290	1490	1687	1559	1702	1901	1796	1665	1597	2.70
BARLEY	6567	5105	5247	5966	6194	6665	5119	4562	5022	5076	5362	-1.71
MAIZE	24755	25117	23448	21740	21102	18873	15992	15035	10940	10468	11443	-9.24
MILLET	234	186	120	130	162	129	145	142	127	128	126	-3.87
SORGHUM	1453	1196	1273	1103	2149	685	1145	244	174	771	619	-13.25
POTATOES	2565	2808	3051	3026	3228	3167	3235	3629	3936	4492	4384	5.31
SUGAR,TOTAL (RAW EQUIV.)	3521	3460	3139	3063	3195	3148	3789	3151	3112	3289	4690	1.31
PULSES	907	1055	1014	924	1067	1306	1429	1867	2094	2887	2946	13.36
SOYBEANS	14201	15311	16249	14414	16454	15009	13575	13843	13802	15420	13387	-1.93
SOYBEAN OIL	559	580	675	643	681	743	702	682	604	634	619	.62
GROUNDNUTS SHELLED BASIS	541	528	414	389	431	386	396	424	459	464	480	-1.64
GROUNDNUT OIL	325	407	446	297	349	396	255	274	273	299	303	-3.15
COPRA	515	294	253	184	280	113	132	133	148	123	100	-12.47
COCONUT OIL	395	390	414	561	537	512	372	419	591	573	550	3.05
PALM NUTS KERNELS	153	137	147	140	106	96	100	81	97	110	84	-5.49
PALM OIL	781	856	831	723	735	859	717	828	1159	1100	1105	3.68
DILSEED CAKE AND MEAL	15320	16704	17396	18205	19294	21471	19780	22424	23715	23749	23506	4.57
BANANAS	2526	2459	2221	2172	2178	2018	2183	2306	2458	2629	3019	1.45
ORANGES+TANGER+CLEMEN	3141	3228	3228	2969	3186	3117	3299	3010	3415	3618	3642	1.31
LEMONS AND LIMES	428	432	429	416	452	451	431	449	459	479	480	1.18
COFFEE GREEN+ROASTED	1703	1955	1930	1999	1997	2062	1999	2098	2151	2319	2305	2.41
COCOA BEANS	590	569	611	664	721	649	738	793	778	790	860	3.99
TEA	250	278	296	244	287	266	306	277	290	262	281	.56
COTTON LINT	1216	1150	1259	1017	1148	1246	1232	1343	1344	1518	1289	2.04
JUTE AND SIMILAR FIBRES	157	182	132	120	97	85	88	54	74	54	54	-11.66
TOBACCO UNMANUFACTURED	785	743	701	679	670	683	670	678	636	672	635	-1.58
NATURAL RUBBER	861	925	892	838	844	830	865	929	923	958	978	1.01
WOOL GREASY	437	444	399	394	353	316	395	422	409	430	409	-1.12
BOVINE CATTLE 1/	3473	3530	3405	3211	3478	3401	3335	3695	3840	3856	3546	.97
PIGS 1/	3875	4382	5202	5496	4680	4889	4877	4973	7253	7221	7000	5.41
TOTAL MEAT	3776	3790	3761	3504	3778	3889	3835	4198	4388	4548	4708	2.46
MILK DRY	116	137	156	133	145	147	146	136	131	197	233	4.18
TOTAL EGGS IN SHELL	366	399	431	431	444	441	467	466	482	526	506	3.01
FISHERY PRODUCTS												
FISH FRESH FROZEN	1335	1474	1599	1604	1711	1564	1616	1803	1898	2206	2404	4.88
FISH CURED	168	193	199	176	174	217	214	249	227	255	260	4.28
SHELLFISH	345	367	413	407	468	509	586	623	648	751	797	9.01
FISH CANNED AND PREPARED	285	311	333	335	315	347	359	380	425	465	477	4.93
SHELLFISH CANNED+PREPAR	73	80	87	86	90	97	97	107	120	135	142	6.44
FISH BODY AND LIVER OIL	584	666	666	637	706	607	813	957	702	691	750	2.31
FISH MEAL	1102	1241	1182	1026	1288	1230	1163	1462	1525	1502	1495	3.38
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	4094	4547	5103	4507	4660	4456	4356	4756	4391	5062	5333	1.23
SAWLOGS NONCONIFEROUS	7715	8044	8424	6889	6139	6174	6337	6034	6112	5986	7461	-2.29
PULPWOOD+PARTICLE	15037	17463	20877	22039	19447	19140	22527	23775	24526	27928	28059	5.39
FUELWOOD	1673	1784	2016	1539	1851	2238	2490	2631	2390	2276	2088	3.67
SAWWOOD CONIFEROUS	23684	27274	25507	21507	22714	23839	22948	21753	24888	26258	27521	.51
SAWWOOD NONCONIFEROUS	5620	6724	6088	4933	4891	5386	5322	5516	5643	6588	6696	.80
WOOD-BASED PANELS	8440	9652	8951	8956	8462	8980	9484	9981	11074	11713	12758	3.52
PULP FOR PAPER	9435	10034	10014	9531	8807	9611	10063	10301	11028	11745	11958	2.20
PAPER AND PAPERBOARD	13602	15046	15107	15728	15742	17301	18745	18578	20632	23134	25319	5.87

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....	PERCENT											
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	13101	16167	21293	24583	27316	26829	31394	24387	18252	21841	25471	3.88
RICE MILLED	710	940	994	1599	1127	601	490	586	734	844	728	-3.62
BARLEY	4137	4559	4311	6019	3258	3531	3326	5907	6573	4326	4360	1.19
MAIZE	17809	20175	18863	22097	14985	7861	13431	18014	9566	10747	13555	-5.69
MILLET	1	1	1	1	1	1		1	7	3		1.27
SORGHUM	830	229	1567	3967	2709	2078	1990	1452	39	155	400	-15.54
POTATOES	301	512	297	330	481	158	131	245	265	482	733	1.81
SUGAR,TOTAL (RAW EQUIV.)	4668	4933	5825	6397	8146	7029	6939	5843	6356	6380	5451	1.58
PULSES	39	41	62	85	60	35	77	39	80	41	59	1.38
SOYBEANS	1409	2360	1707	1653	1906	1938	1205	1113	2533	2229	1730	.66
SOYBEAN OIL	103	126	154	198	313	255	203	401	137	293	143	5.25
GROUNDNUTS SHELLED BASIS	57	46	54	61	67	54	76	74	82	83	91	5.98
GROUNDNUT OIL		2	1		1	1		1		1	1	- .24
COPIRA	26	18	20	10	14	14	5	2	5	4	4	-19.38
COCONUT OIL	66	58	89	77	99	79	68	60	67	83	61	- .64
PALM NUTS KERNELS	4	3	4									
PALM OIL	58	113	112	184	384	329	292	250	249	279	190	11.84
Oilseed CAKE AND MEAL	3699	4033	4599	5331	5069	6664	4010	4187	3930	6898	7177	3.96
BANANAS	299	298	269	232	155	167	200	206	119	174	186	-6.14
ORANGES+TANGER+CLEMEN	719	690	748	688	645	599	616	697	690	641	641	-1.02
LEMONS AND LIMES	326	309	333	308	363	289	272	272	275	232	257	-3.08
COFFEE GREEN+ROASTED	181	203	232	211	210	215	247	256	222	246	262	2.80
COCOA BEANS	202	198	201	199	178	243	246	253	252	247	241	3.01
TEA	71	79	102	116	107	110	129	151	146	174	173	8.95
COTTON LINT	681	718	743	638	693	764	841	868	731	695	777	1.18
JUTE AND SIMILAR FIBRES	70	79	93	111	122	93	45	57	87	85	65	-2.32
TOBACCO UNMANUFACTURED	135	133	178	196	201	189	202	185	167	140	122	- .53
NATURAL RUBBER	433	437	441	418	360	446	435	374	341	362	262	-3.62
WOOL GREASY	182	188	182	174	173	219	135	153	157	177	164	-1.54
BOVINE CATTLE 1/	77	169	173	162	160	183	209	167	166	138	209	4.07
PIGS 1/	507	442	479	844	565	637	519	732	536	969	846	5.29
TOTAL MEAT	267	645	956	1226	1091	1132	923	848	896	758	714	4.15
MILK DRY	29	42	71	78	90	47	58	70	85	74	59	5.43
TOTAL EGGS IN SHELL	43	47	43	34	36	31	28	21	24	14	13	-11.80
FISHERY PRODUCTS												
FISH FRESH FROZEN	204	236	280	180	151	433	524	585	626	685	695	16.09
FISH CURED	15	15	20	26	20	40	30	36	33	37	43	10.73
SHELLFISH		2										
FISH CANNED AND PREPARED	39	34	38	39	37	34	33	48	56	67	63	6.08
FISH BODY AND LIVER OIL	6	5	23	13	26	24	32	46	37	31	28	19.13
FISH MEAL	384	476	310	233	291	218	283	341	337	339	399	- .18
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	960	720	1050	960	498	655	629	598	711	610	560	-4.66
SAWLOGS NONCONIFEROUS	442	416	454	487	385	367	375	405	301	300	331	-3.92
PULPWOOD+PARTICLE	1345	1446	1583	1390	1248	1286	1323	1248	1222	1205	1179	-2.09
FUELWOOD	27	25	25	25	20	25	25	12				
SAWWOOD CONIFEROUS	3228	2644	2665	2884	2544	2685	2983	3671	3165	2856	2491	.15
SAWWOOD NONCONIFEROUS	326	268	274	331	213	226	222	214	187	152	150	-7.13
WOOD-BASED PANELS	1132	1045	1137	1115	939	832	766	797	897	938	920	-2.74
PULP FOR PAPER	1053	1021	1173	1093	1031	1101	1067	1063	1015	1124	1133	.27
PAPER AND PAPERBOARD	1709	1784	2044	1968	1965	1732	1689	1717	1566	1513	1571	-2.07

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	1	6	8	11	74	63	110	282	279	392	487	76.89
RICE MILLED	82	91	94	106	126	128	141	174	207	221	264	12.39
BARLEY	108	157	140	127	198	141	146	105	135	201	256	4.22
MAIZE	476	849	1228	1276	807	352	541	567	937	348	527	-5.22
MILLET											2	7.19
SORGHUM	1				2		7				2	-1.46
POTATOES	235	242	212	340	344	280	303	330	305	388	405	5.14
SUGAR,TOTAL (RAW EQUIV.)	4833	5401	4587	5453	3466	3654	4150	3662	3199	2265	2125	-8.09
PULSES	43	39	43	61	47	48	55	51	56	64	72	4.79
SOYBEANS	325	351	483	382	468	315	285	247	166	247	131	-9.12
SOYBEAN OIL	35	22	12	9	4	35	17	42	15	26	297	16.29
GROUNONUTS SHELLED BASIS	66	63	55	72	61	67	69	69	79	73	61	1.19
GROUNONUT OIL	6	5	5	4	4	6	5	4	6	9	19	7.66
COPRA										1	1	
COCONUT OIL	503	527	422	476	427	475	400	474	558	534	470	.45
PALM OIL	173	163	137	138	132	168	161	251	288	199	169	4.02
OILSEED CAKE AND MEAL	426	491	431	443	457	536	701	763	797	888	987	9.45
BANANAS	2543	2659	2669	2794	2935	2785	2922	3352	3350	3367	3212	2.91
ORANGES+TANGER+CLEMEN	303	297	320	326	304	325	301	295	325	325	283	-1.15
LEMONS AND LIMES	34	36	38	43	38	40	51	66	61	66	80	8.87
COFFEE GREEN+ROASTED	1195	1277	1190	1104	1150	1089	1178	1233	1283	1319	1051	-1.04
COCOA BEANS	226	179	162	264	213	233	218	292	224	283	259	3.44
TEA	91	101	107	107	103	97	109	97	110	93	106	.35
COTTON LINT	59	61	65	63	52	61	59	57	54	42	41	-3.44
JUTE AND SIMILAR FIBRES	17	23	10	18	18	17	11	17	16	16	15	-1.61
TOBACCO UNMANUFACTURED	173	188	191	176	167	153	214	177	207	220	168	.93
NATURAL RUBBER	846	862	695	759	713	773	906	927	874	934	960	2.10
WOOL GREASY	15	11	14	20	16	20	23	17	24	32	31	8.83
BOVINE CATTLE 1/	1337	758	731	816	1085	1004	801	894	1407	1295	1401	3.91
PIGS 1/	204	137	248	147	295	448	1322	1227	502	447	839	19.56
TOTAL MEAT	875	912	854	766	866	808	866	1010	1064	1170	1190	3.46
MILK DRY						2	3	4	4	5	6	
TOTAL EGGS IN SHELL	18	21	12	12	11	22	30	19	20	14	12	-1.39
FISHERY PRODUCTS												
FISH FRESH FROZEN	800	776	699	735	676	700	688	760	810	823	798	.68
FISH CURED	34	31	26	35	33	32	33	32	33	33	34	.66
SHELLFISH	146	155	146	156	175	213	222	235	261	261	263	7.37
FISH CANNEO AND PREPARED	89	95	99	104	112	126	153	187	218	224	229	11.58
SHELLFISH CANNEO+PREPAR	40	41	39	47	54	69	73	84	76	77	84	9.19
FISH BODY AND LIVER OIL	9	9	12	10	8	9	8	10	11	11	14	2.38
FISH MEAL	40	82	45	56	79	68	81	234	171	172	181	17.15
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	2043	2458	2146	1674	1772	2683	2887	2837	2826	2710	2705	3.86
SAWLOGS NONCONIFEROUS	409	502	471	415	335	424	585	576	645	757	844	6.98
PULPW000+PARTICLE	2516	2504	2249	2348	2000	2409	2173	1976	2805	2142	2527	-1.18
FUELW000	352	377	268	137	113	113	161	160	154	160	172	-7.04
SAWNW000 CONIFEROUS	28675	26582	22839	22542	21694	28483	31316	34407	33653	34403	33648	3.90
SAWNW000 NONCONIFEROUS	1431	1571	1422	1557	912	1246	1407	1432	1496	2072	1630	2.00
WOOD-BASEO PANELS	3956	3336	2378	2851	2283	3366	3548	3956	4268	4392	4678	4.45
PULP FOR PAPER	3522	3857	3528	3563	3245	3645	4085	4069	4150	4489	4419	2.51
PAPER AND PAPERBOARD	8394	8220	8314	7773	7538	8434	10381	10973	11622	12494	12786	5.41

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.		32	54	53	51	71	126	67	73	45	137	49.56
RICE MILLED	8	8	8	9	10	12	15	19	21	29	33	16.55
BARLEY											7	51.86
MAIZE	3	3	4	5	11	14	9	11	9	9	6	11.55
MILLET		1	1	1	1	1	1	1	1	1	1	
SORGHUM					4							
POTATDES							1					
SUGAR,TOTAL (RAW EQUIV.)	166	172	151	120	147	157	169	172	149	182	167	.98
PULSES	13	12	14	13	16	16	22	12	11	8	10	-3.31
SOYBEANS	15		13	41	10	23	36	38			31	-3.81
SOYBEAN OIL	29	26	32	29	45	53	48	31	21	36	40	1.60
GROUNDNUTS SHELLED BASIS	12	4	5	9	12	6	13	8	9	9	7	1.60
GROUNDNUT OIL	2	3		1	1	1	1	1	1	1	1	-3.36
COPRA	5	7	4	6	6	4						
COCONUT OIL	18	19	17	16	20	20	22	20	19	19	24	2.10
PALM OIL	23	28	26	24	20	4	7	9	15	48	72	2.73
OILSEED CAKE AND MEAL	30	7	12	19	10	52	11	38	33	60	26	11.74
BANANAS	38	35	37	36	36	40	30	60	37	45	45	2.54
ORANGES+TANGER+CLEMEN	18	14	16	16	17	18	24	21	18	25	21	3.80
LEMONS AND LINES		1	1	1	1	3	3	4	2	2	2	21.29
COFFEE GREEN+ROASTED	26	35	41	38	42	39	37	37	39	36	43	2.14
COCOA BEANS	17	15	14	15	13	13	10	7	6	2	1	-20.84
TEA	30	30	32	28	30	28	28	27	26	25	25	-2.26
COTTON LINT	4	2	2	2	1	1	1	3	1			-19.56
JUTE AND SIMILAR FIBRES	11	12	9	11	8	8	6	8	9	7	8	-3.88
TOBACCO UNMANUFACTURED	16	13	15	15	14	14	14	14	14	16	16	.23
NATURAL RUBBER	52	53	54	50	47	40	40	44	43	45	47	-2.07
WOOL GREASY	1	1										-10.06
BOVINE CATTLE 1/	1	1	1				1	2			1	-1.20
TOTAL MEAT	1	2	4	4	4	5	8	7	5	6	6	13.38
MILK DRY	1			1		1		1	1		2	28.99
FISHERY PRODUCTS												
FISH FRESH FROZEN	21	22	29	33	33	29	35	41	38	40	42	6.76
FISH CURED	3	5	4	4	4	4	5	5	5	4	5	2.75
SHELLFISH	2	4	4	6	6	8	8	9	10	13	12	17.87
FISH CANNED AND PREPARED	26	22	27	27	28	25	31	30	31	31	27	1.92
SHELLFISH CANNED+PREPAR	7	6	5	7	8	8	8	9	9	9	9	5.26
FISH BODY AND LIVER OIL	1	1			1			1	1	1	1	3.21
FISH MEAL	3	4	14	8	8	11	8	13	8	12	15	11.68
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	2					1						-2.81
SAWLOGS NONCONIFEROUS	17	11	2	1	7	1	1	1	2	4	4	-13.29
FUELWOOD	2	2	1	1	1	1						
SAWNWOOD CONIFEROUS	638	682	697	781	881	642	823	1113	1044	860	1304	5.95
SAWNWOOD NONCONIFEROUS	311	304	317	306	290	210	282	317	265	257	265	-1.76
WOOD-BASED PANELS	89	99	88	104	111	79	102	112	121	106	106	2.01
PULP FOR PAPER	239	280	281	286	262	220	243	208	239	280	280	-.35
PAPER AND PAPERBOARD	584	671	739	736	794	558	670	899	813	817	841	2.88

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	7963	7752	9067	8979	9371	9423	10187	11047	10115	9326	10805	2.85
RICE MILLED	1877	2227	2299	2573	2829	2725	2535	2759	2903	2932	2230	2.48
BARLEY	647	419	302	459	680	397	743	583	129	133	1096	-3.52
MAIZE	1154	1288	2329	2358	2336	1732	2804	2711	2123	2057	2258	5.05
MILLET	83	101	106	35	55	71	31	85	29	29	21	-12.34
SORGHUM	150	133	113	155	161	232	411	382	104	60	213	.95
POTATOES	233	307	237	211	269	448	347	425	312	230	284	2.13
SUGAR, TOTAL (RAW EQUIV.)	2043	2100	2265	2320	2101	2399	2093	2192	2671	2943	2310	2.15
PULSES	118	210	219	161	153	221	232	226	245	186	291	5.07
SOYBEANS	22	31	25	11	35	16	20	22	18	27	13	-3.03
GROUNDNUTS/SHELLED BASIS	322	353	320	339	444	408	368	289	288	228	289	-8.08
GROUNDNUT OIL	10	10	16	16	21	28	11	4	28	7	3	-8.03
COPRA	4	4	3	2	2	3	5	2	2	3	2	-4.77
COCONUT OIL	10	9	7	14	12	10	17	10	9	9	7	-1.54
PALM OIL	106	99	166	241	289	259	187	209	352	232	238	8.53
DIALSEED CAKE AND MEAL	122	157	188	241	260	230	298	298	491	498	526	14.98
BANANAS	31	17	18	26	57	26	29	10	13	8	9	-11.04
ORANGES+TANGER+CLEMEN	12	12	10	9	10	9	9	7	10	9	9	-2.70
LEMONS AND LIMES	1	1	1	1	1	1	1	1	1	1	1	.52
COFFEE GREEN+ROASTED	83	76	80	103	67	115	97	103	58	134	74	.97
COCOA BEANS	1	1	1	1	1	1	1	2	1	2	1	6.11
TEA	56	70	57	69	52	60	61	70	78	70	78	2.62
COTTON LINT	42	48	44	64	83	91	98	98	79	101	98	9.50
JUTE AND SIMILAR FIBRES	58	58	64	50	49	59	40	58	52	89	32	-1.68
TOBACCO UNMANUFACTURED	64	63	58	49	49	52	46	56	72	57	60	.21
NATURAL RUBBER	21	20	21	26	23	23	23	24	26	26	31	3.12
WOOL GREASY	4	3	2	2	1	2	2	2	4	1	2	-3.10
BOVINE CATTLE 1/	776	835	824	894	839	920	1007	730	599	480	454	-5.37
PIGS 1/	1	1	1	2	2	3	4	1	1	1	1	-11.36
TOTAL MEAT	139	137	141	147	220	186	216	224	251	222	234	6.66
MILK DRY	35	35	51	73	53	69	92	106	112	122	127	14.60
TOTAL EGGS IN SHELL	44	35	50	52	71	78	49	47	20	11	7	-14.20
FISHERY PRODUCTS												
FISH FRESH FROZEN	589	695	764	894	792	832	685	690	758	664	670	-.21
FISH CURED	33	48	56	95	40	50	28	43	41	41	41	-2.09
SHELLFISH	4	3	3	3	3	1	4	3	2	2	2	-3.00
FISH CANNED AND PREPARED	147	127	136	155	114	102	54	59	62	54	53	-11.61
FISH BODY AND LIVER OIL	3	2			1	1						-23.75
FISH MEAL	27	24	24	25	32	36	51	28	38	38	38	5.08
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	32	73	94	84	110	169	139	91	52	59	59	.67
SAWLOGS NONCONIFEROUS	197	204	326	225	241	321	318	325	323	335	343	5.35
FUELWOOD				1	41	43	33	33	33	33	33	
SAWWOOD CONIFEROUS	763	1019	905	1409	1541	1859	1817	1505	1433	1041	1262	3.96
SAWWOOD NONCONIFEROUS	202	203	194	232	193	183	187	209	236	243	252	1.99
WOOD-BASED PANELS	263	316	359	332	261	294	202	206	153	131	131	-9.35
PULP FOR PAPER	102	104	120	135	116	149	147	148	132	109	118	1.48
PAPER AND PAPERBOARD	519	529	537	662	577	569	539	553	564	613	619	1.08

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
LATIN AMERICA												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	10792	10718	12098	12067	11126	11928	12276	11391	9133	10045	8895	-1.88
RICE MILLED	431	1339	1064	794	612	908	662	1062	2114	867	689	3.07
BARLEY	358	323	551	448	339	531	537	466	398	402	436	1.30
MAIZE	4714	3954	8988	7027	3417	8162	5499	4059	5674	6611	5789	.99
MILLET	4	6	3	2	3	4	1	1			24	-9.66
SORGHUM	1442	1876	2927	3578	3226	3830	3168	3383	1562	1655	3019	1.08
POTATOES	205	251	336	198	190	184	197	162	269	185	168	-2.94
SUGAR,TOTAL (RAW EQUIV.)	898	717	1912	1620	1409	1604	1200	392	430	706	788	-7.18
PULSES	291	284	816	878	739	527	526	607	567	454	477	2.01
SOYBEANS	971	952	1205	2235	2198	1385	2858	2122	1432	2089	1809	6.50
SOYBEAN OIL	351	372	432	433	675	551	791	580	586	445	541	4.20
GROUNDNUTS SHELLED BASIS	14	11	13	13	19	10	19	24	7	11	41	4.27
GROUNDNUT OIL	85	9	2	4	1	2	2	1	1	1	4	-25.36
COCONUT OIL	39	15	25	19	21	16	15	10	22	46	47	3.38
PALM NUTS KERNELS		2	1	1	1	3	2					
PALM OIL	8	6	14	10	5	5	8	6	14	14	21	7.09
DEILSEED CAKE AND MEAL	647	710	966	964	1131	1142	1214	1225	1245	1528	2031	9.61
BANANAS	287	391	435	446	325	231	227	217	268	265	256	-4.78
ORANGES+TANGER+CLEMEN	22	44	57	33	26	20	18	17	19	22	28	-5.59
LEMONS AND LIMES	6	4	3	5	2	3	5	5	3	3	2	-4.94
COFFEE GREEN+ROASTED	58	93	49	56	64	49	56	44	43	44	49	-4.35
COCOA BEANS	3	2	3	10	13	3	6	9	5	5	5	6.89
TEA	16	19	16	14	15	14	13	15	14	14	13	-2.28
COTTON LINT	71	91	79	94	79	79	122	119	200	221	230	12.67
JUTE AND SIMILAR FIBRES	12	18	36	34	14	14	14	4	47	46	29	4.40
TOBACCO UNMANUFACTURED	16	17	29	24	20	19	16	16	18	17	19	-1.48
NATURAL RUBBER	181	181	187	181	158	165	201	197	218	248	262	3.69
WOOL GREASY	7	9	13	12	13	8	9	12	8	8	6	-2.91
BOVINE CATTLE 1/	583	926	417	463	427	158	224	179	116	113	306	-15.11
PIGS 1/	32	21	10	26	55	16	8	9	4	7	205	-1.74
TOTAL MEAT	374	366	342	415	338	264	298	373	878	599	563	6.09
MILK DRY	139	122	161	161	150	126	153	120	171	183	302	4.74
TOTAL EGGS IN SHELL	11	18	19	18	26	13	10	10	12	14	21	-1.15
FISHERY PRODUCTS												
FISH FRESH FROZEN	109	134	111	97	100	84	65	84	136	135	136	.96
FISH CURED	46	47	56	53	53	51	48	47	49	47	48	-.51
SHELLFISH	9	12	11	14	13	10	12	11	12	12	11	.67
FISH CANNED AND PREPARED	61	75	93	88	75	43	53	65	58	58	58	-3.29
SHELLFISH CANNED+PREPAR	1	2	2	2	1		1	1	1	1	1	-8.81
FISH BODY AND LIVER OIL	36	67	43	64	35	69	62	34	24	24	24	-7.48
FISH MEAL	107	138	163	126	103	61	86	47	58	58	59	-10.14
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	34	54	128	156	162	160	69	48	58	58	58	-2.29
SAWLOGS NONCONIFEROUS	105	65	57	30	29	30	75	82	73	76	49	.42
PULPWOOD+PARTICLE		31	35	24	16	16	8	8	8	8	8	
FUELWOOD	4	4	5	7	5	3	4	6	6	6	6	2.87
SAWNWOOD CONIFEROUS	1715	1524	2184	1874	1477	1666	1944	1479	1548	1492	1730	-1.15
SAWNWOOD NONCONIFEROUS	679	692	917	642	652	597	734	596	700	599	337	-4.38
WOOD-BASED PANELS	304	401	493	499	482	479	399	349	342	381	401	-.75
PULP FOR PAPER	530	653	740	762	735	645	766	774	809	970	926	4.39
PAPER AND PAPERBOARD	1869	1856	2395	2437	2278	1958	1798	1732	1876	1925	1868	-1.36

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	10319	10698	12860	14011	14156	16474	19465	17514	16007	19273	18166	6.19
RICE MILLED	1548	1887	1821	2025	2006	2251	2362	2313	2302	2756	2085	3.83
BARLEY	852	1493	2364	3292	4988	3871	9213	7762	9001	9004	5887	23.47
MAIZE	1850	2369	2685	3753	3711	4087	4190	4694	4841	5087	3968	8.73
MILLET	4	4	2	2	3	4	4	5	1	1	1	-13.19
SORGHUM	255	121	133	133	340	71	317	34	43	3	36	-24.41
POTATOES	231	282	353	426	462	420	430	334	300	303	359	1.32
SUGAR,TOTAL (RAW EQUIV.)	2401	3465	3263	3405	3946	3429	3925	3280	3254	3563	3016	1.07
PULSES	213	258	257	359	339	304	332	261	328	339	367	3.60
SOYBEANS	138	180	99	116	108	94	79	226	185	267	347	8.61
SOYBEAN OIL	281	381	442	504	529	717	667	630	656	670	456	6.12
GROUNDNUTS SHELLED BASIS	6	8	16	9	8	7	7	7	6	11	8	-1.56
GROUNDNUT OIL	1	1	3	1	1	1						-16.39
COPRA	1										1	
COCONUT OIL	7	4	14	12	16	13	13	14	50	22	23	16.35
PALM NUTS KERNELS									1			
PALM OIL	164	187	148	291	378	420	465	511	676	562	660	17.00
OILSEED CAKE AND MEAL	459	442	406	543	674	860	1122	1260	1288	1185	1550	15.33
BANANAS	294	324	306	322	292	276	277	205	183	174	250	-5.13
ORANGES+TANGER+CLEMEN	472	512	545	622	634	631	644	531	421	354	507	-1.98
LEMONS AND LIMES	45	77	79	77	80	88	102	84	76	66	87	2.73
COFFEE GREEN+ROASTED	42	40	46	56	74	75	63	63	49	62	65	3.90
COCOA BEANS	4	1	2	5	5	6	5	5	7	7	5	13.72
TEA	205	188	168	171	168	194	239	216	230	204	302	3.71
COTTON LINT	21	41	22	24	27	27	29	55	71	154	100	18.07
JUTE AND SIMILAR FIBRES	24	41	20	25	37	34	32	34	28	29	30	1.29
TOBACCO UNMANUFACTURED	52	60	47	61	75	77	83	70	69	68	76	3.64
NATURAL RUBBER	46	37	41	52	65	86	82	80	82	89	97	10.03
WOOL GREASY	17	18	18	19	13	18	25	26	22	29	28	5.66
BOVINE CATTLE 1/	393	386	507	739	735	632	650	496	432	574	348	-1.38
TOTAL MEAT	582	676	992	1328	1323	1272	1262	1208	1126	1084	1053	4.65
MILK DRY	23	40	39	44	48	43	56	45	53	58	58	6.97
TOTAL EGGS IN SHELL	84	75	107	153	153	153	171	131	91	92	89	.35
FISHERY PRODUCTS												
FISH FRESH FROZEN	69	55	77	107	121	137	151	114	133	134	134	8.36
FISH CURED	3	3	3	6	5	9	5	7	6	6	6	9.57
SHELLFISH	1	2	2	2	2	2	2	4	1	2	2	5.20
FISH CANNED AND PREPARED	55	51	70	64	56	55	49	53	43	44	44	-3.33
SHELLFISH CANNED+PREPAR		1	1	2	3	2	2	1	1	1	1	4.62
FISH BODY AND LIVER OIL	1	1	1	1	1		2					-21.25
FISH MEAL	56	58	77	147	113	106	163	101	131	131	131	8.24
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	176	126	173	205	275	319	316	435	214	1211	1089	20.45
SAWLOGS NONCONIFEROUS	68	42	57	46	5	6	11	41	109	144	173	11.66
PULPWOOD+PARTICLE	36	40	14	38	52	69	57	42	106	47	47	7.91
FUELWOOD	163	119	126	146	183	169	198	156	212	212	212	5.03
SAWNWOOD CONIFEROUS	2441	2689	3242	3498	3938	4179	4563	4139	3144	3099	2747	1.42
SAWNWOOD NONCONIFEROUS	620	469	630	550	630	758	811	838	610	587	618	1.73
WOOD-BASED PANELS	804	931	1072	1425	1588	1324	1450	1510	1260	1253	1224	3.51
PULP FOR PAPER	127	113	121	111	110	178	171	196	169	189	227	7.12
PAPER AND PAPERBOARD	889	905	975	1042	1008	1006	1205	1119	1048	1052	1827	4.40

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
..... THOUSAND METRIC TONS.....												PERCENT
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR, WHEAT EQUIV.	8058	8808	8897	7811	9709	11447	10313	9985	11678	10287	14378	4.54
RICE MILLED	3465	3392	4497	4404	2083	3121	2426	2553	1201	1353	2681	-8.57
BARLEY	107	106	206	270	916	451	1624	97	7	123	41	-13.45
MAIZE	3360	4328	4120	4740	5051	6442	5071	5651	5573	6771	7301	6.51
MILLET	1	2	3	3	6	4	5	4	5	5	7	15.76
SORGHUM	49	144	62	178	445	234	421	391	296	36	69	2.24
POTATOES	117	143	155	145	147	160	149	150	164	138	150	1.24
SUGAR, TOTAL (RAW EQUIV.)	1866	1935	2607	2807	2310	2138	2273	4393	3895	4570	3420	8.08
PULSES	167	207	207	377	380	438	535	559	1125	900	1434	23.07
SOYBEANS	489	728	874	1093	1219	1137	1354	1459	1678	1790	2022	12.89
SOYBEAN OIL	583	841	1004	981	976	856	1155	721	537	1058	1354	2.58
GROUNDNUTS SHELLLED BASIS	28	39	67	93	152	144	82	110	165	179	180	17.58
GROUNDNUT OIL	42	36	38	34	36	55	38	44	41	44	44	1.61
COPRA	163	74	115	110	81	46	84	135	146	108	80	-7.79
COCONUT OIL	158	91	58	151	83	90	88	71	99	92	104	-1.68
PALM NUTS KERNELS	6	10	15	6	3	12	5	4	1	1	3	-18.84
PALM OIL	847	1058	1757	1436	1561	1679	1865	2560	2791	2824	2775	12.12
OILSEED CAKE AND MEAL	804	965	1005	1026	1339	1550	1755	1252	2041	2203	2417	11.12
BANANAS	57	69	59	49	59	51	71	69	74	80	81	3.56
ORANGES+TANGER+CLEMEN	222	208	238	273	249	287	253	254	275	295	296	2.89
LEMONS AND LIMES	4	6	7	8	8	9	10	13	14	14	16	12.54
COFFEE GREEN+ROASTED	19	27	19	36	51	72	96	91	107	80	86	19.46
COCOA BEANS	12	17	27	45	60	61	50	57	58	78	107	19.27
TEA	77	84	86	97	94	110	127	114	113	125	124	5.00
COTTON LINT	860	827	888	775	791	863	993	972	1131	1380	1308	5.17
JUTE AND SIMILAR FIBRES	64	80	119	109	165	151	180	136	152	160	101	5.94
TOBACCO UNMANUFACTURED	64	69	82	88	69	63	68	66	63	68	84	-0.06
NATURAL RUBBER	193	215	182	208	226	199	271	249	295	322	399	6.80
WOOL GREASY	29	30	33	39	34	38	40	46	67	65	63	9.05
BOVINE CATTLE 1/	324	355	356	366	359	353	301	294	287	315	319	-1.63
PIGS 1/	3123	3095	4552	3194	3414	3357	3250	3268	3518	3579	3679	.57
TOTAL MEAT	279	297	228	266	352	360	329	326	320	357	428	3.93
MILK DRY	143	159	161	163	151	171	173	179	197	225	223	4.22
TOTAL EGGS IN SHELL	68	75	76	75	80	79	89	88	94	104	115	4.65
FISHERY PRODUCTS												
FISH FRESH FROZEN	185	229	210	258	280	294	410	443	663	660	720	15.60
FISH CURED	21	21	28	22	26	24	53	40	32	33	32	5.70
SHELLFISH	119	180	123	116	132	140	143	164	191	206	231	5.55
FISH CANNED AND PREPARED	84	79	96	78	92	51	59	47	53	57	59	-5.50
SHELLFISH CANNED+PREPAR	16	14	18	16	21	22	23	18	20	21	21	3.47
FISH BODY AND LIVER OIL	4	5	2	2	3	3	5	22	19	20	21	25.61
FISH MEAL	131	164	148	158	251	171	183	191	210	202	223	4.26
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	2426	2128	1536	1186	1548	2116	2073	2217	2432	2795	3217	5.05
SAWLOGS NONCONIFEROUS	9371	9355	6526	5985	5415	5789	4986	4337	6152	5548	6335	-4.40
PULPWOOD+PARTICLE		2	2	1		3	117	118	83	30	71	
FUELWOOD	489	519	560	588	741	749	727	773	721	698	628	3.44
SAWWOOD CONIFEROUS	235	80	87	72	45	46	49	37	37	34	60	-12.09
SAWWOOD NONCONIFEROUS	1829	2345	1850	1762	1910	1840	1778	1361	1492	2176	2724	.42
WOOD-BASED PANELS	575	610	724	821	680	794	652	583	683	1103	1168	4.66
PULP FOR PAPER	696	735	728	815	791	1090	1055	1124	1305	1319	1376	7.97
PAPER AND PAPERBOARD	1830	1995	2072	2247	2349	2313	2537	2504	2612	3133	3388	5.48

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

6. (Cont.) VOLUME OF IMPORTS OF MAJOR AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	ANNUAL RATE OF CHANGE 1978-88
.....THOUSAND METRIC TONS.....												PERCENT
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS												
WHEAT+FLOUR,WHEAT EQUIV.	10271	11756	13243	15688	15565	12643	11234	6620	7623	15547	17157	- .02
RICE MILLED	250	619	652	441	578	205	535	619	941	1043	595	7.66
BARLEY	336	704	402	354	509	481	430	369	477	536	410	.32
MAIZE	3064	5412	4438	3287	4117	5569	3015	3108	3714	5249	4593	.86
SORGHUM	473	517	417	840	767	534	597	564	810	726	98	-4.93
SUGAR,TOTAL (RAW EQUIV.)	1587	1368	1114	1294	2373	2130	1456	2088	1433	2067	3943	6.99
PULSES	68	58	72	91	124	88	92	89	108	97	95	4.22
SOYBEANS	1172	1696	1529	1682	1516	1420	1361	1503	2098	2314	2332	4.94
SOYBEAN OIL	137	143	136	56	63	36	25	43	192	424	156	4.28
GROUNDNUTS SHELLED BASIS	2	1			6				1			
COPRA		1	3	3	7	1	3	7	17	15	12	36.77
COCONUT OIL	19	27	31	26	31	26	27	33	49	32	61	7.73
PALM NUTS KERNELS				2	1							
PALM OIL	14	48	63	26	24	24	23	70	216	277	427	31.23
OILSEED CAKE AND MEAL	55	1	9	14	15	33	50	48	41	66	65	25.11
BANANAS						20	20	40	36	41	21	
ORANGES+TANGER+CLEMEN	1		2	1	1	5	2	3	4	11	10	34.38
LEMONS AND LINES									1			
COFFEE GREEN+ROASTED	6	5	6	7	17	30	17	19	6	6	27	10.31
COCOA BEANS	15	17	17	4	23	10	12	6	27	14	17	1.66
TEA	6	5	5	4	4	5	6	6	19	17	21	16.25
COTTON LINT	818	835	1235	1023	824	521	369	362	464	608	458	-8.68
JUTE AND SIMILAR FIBRES	39	36	47	24	43	36	24	3	42	29	1	-21.09
TOBACCO UNMANUFACTURED	19	22	32	54	46	21	28	45	29	34	49	4.89
NATURAL RUBBER	300	333	358	220	232	337	312	256	328	473	572	4.62
WOOL GREASY	28	51	58	78	95	94	74	115	119	120	113	12.60
BOVINE CATTLE 1/			2		1	1	4	10	7	7	5	55.89
PIGS 1/	4	3	3	5	3	3	2	2	2	2	3	-7.13
TOTAL MEAT	11	18	16	23	27	28	32	38	49	62	77	19.33
MILK DRY	44	45	28	30	28	29	32	37	50	56	49	3.34
FISHERY PRODUCTS												
FISH FRESH FROZEN	4	4	2	3	3	3	5	5	3	3	3	1.24
FISH CURED	1	1	1	2	2	2	3					-6.87
SHELLFISH	9	14	20	2	5	5	4	8	9	9	9	-2.46
FISH CANNEO AND PREPARED	1	1	2	2	2	2	3	3	3	3	3	10.34
SHELLFISH CANNED+PREPAR		1	1	1	1	1	1	1	2	2	2	18.99
FISH BODY AND LIVER OIL	2	2	1	1	1	1	3	3	3	3	3	11.96
FISH MEAL	142	168	155	162	312	263	370	507	526	526	526	16.97
FOREST PRODUCTS 2/												
SAWLOGS CONIFEROUS	389	422	630	1181	3115	5391	6776	7576	5976	5574	7580	39.25
SAWLOGS NONCONIFEROUS	7170	6810	6509	5286	4762	5431	4634	4630	4310	4703	4732	-4.52
PULPWOOD+PARTICLE	728	1069	843	1957	1192	2005	1563	1912	2752	2719	1946	11.95
SAWNWOOD CONIFEROUS	29	29	31	10	6	11	15	9	8	22	33	-3.20
SAWNWOOD NONCONIFEROUS	56	96	139	197	293	423	519	529	800	1158	1160	34.88
WOOD-BASEO PANELS	24	36	51	260	287	314	710	551	592	1280	990	47.28
PULP FOR PAPER	208	210	427	525	440	683	672	737	823	1088	1267	18.52
PAPER AND PAPERBOARD	411	427	650	662	510	678	634	987	1401	1641	1206	13.66

1/ THOUSAND HEAD

2/ EXCEPT FOR PULP FOR PAPER AND PAPER AND PAPERBOARD, ALL FOREST PRODUCTS ARE EXPRESSED IN THOUSAND CUBIC METRES

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

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	1979=100											PERCENT
WORLD												
AGRICULTURAL PRODUCTS	91	105	105	95	93	98	92	99	108	122	128	2.29
FOOD	88	104	107	96	92	97	90	96	105	119	125	2.00
FEED	85	101	114	108	114	100	83	103	116	142	140	3.23
RAW MATERIALS	97	103	100	93	93	100	93	95	114	137	146	3.36
BEVERAGES	105	110	85	88	89	103	106	132	113	118	116	2.39
FOREST PRODUCTS	94	107	98	89	91	97	96	111	140	164	165	5.64
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	89	105	106	96	92	95	88	96	110	125	133	2.52
FOOD	87	105	107	96	91	93	85	93	106	120	127	2.04
FEED	88	102	110	108	116	96	84	98	110	120	114	1.32
RAW MATERIALS	98	102	100	98	94	102	98	100	122	146	156	4.15
BEVERAGES	101	103	96	96	93	98	107	134	149	162	165	5.97
FOREST PRODUCTS	93	107	100	91	92	99	98	115	144	169	169	6.01
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	92	105	103	97	94	96	97	119	140	150	157	5.08
FOOD	90	106	104	96	92	94	95	117	137	148	156	4.98
FEED	86	96	118	128	133	118	107	105	131	125	133	2.72
RAW MATERIALS	105	100	96	96	97	104	106	124	151	158	160	5.54
BEVERAGES	101	103	96	95	93	98	109	139	156	169	174	6.62
FOREST PRODUCTS	93	109	98	89	88	96	97	120	157	183	183	7.12
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	98	102	100	94	86	81	80	87	93	101	99	-1.41
FOOD	99	102	99	90	80	79	77	81	84	93	93	-1.30
FEED	113	96	91	116	106	71	95	105	199	154	100	3.06
RAW MATERIALS	93	103	104	104	96	83	86	98	110	121	119	1.64
BEVERAGES	104	103	94	97	103	96	94	106	113	113	95	.53
FOREST PRODUCTS	97	104	99	97	100	100	99	109	113	113	113	1.57
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	86	104	110	95	94	99	76	69	76	98	104	-1.15
FOOD	84	104	112	95	94	98	73	63	68	91	96	-2.21
FEED	88	107	105	93	107	83	69	95	96	119	102	.45
RAW MATERIALS	95	104	101	96	92	109	96	83	108	130	143	2.65
BEVERAGES	94	110	95	91	79	91	88	123	105	127	125	2.74
FOREST PRODUCTS	93	105	102	91	96	104	100	111	140	169	169	5.89
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	82	107	111	103	88	91	95	94	98	123	142	2.58
FOOD	77	109	114	104	88	90	94	89	87	96	113	.32
FEED	127	74	100	103	95	73	60	74	103	144	145	2.16
RAW MATERIALS	95	103	102	99	90	93	99	105	124	184	208	6.61
BEVERAGES	74	94	132	139	157	177	158	182	283	527	607	20.23
FOREST PRODUCTS	83	106	111	94	83	89	85	87	114	128	128	2.60

7. (Cont.) INDICES OF VALUE OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 1979=100.....											PERCENT
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	94	104	102	92	94	106	100	105	103	117	118	1.79
FOOD	90	102	108	95	95	108	103	102	104	116	119	1.85
FEED	83	100	117	109	112	104	82	109	122	163	164	4.87
RAW MATERIALS	97	104	99	85	92	97	87	88	101	124	129	2.00
BEVERAGES	107	113	80	85	87	106	105	131	94	95	90	-1.01
FOREST PRODUCTS	101	110	89	82	88	83	84	92	121	143	143	3.61
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	105	105	90	83	78	90	88	105	93	93	89	-1.60
FOOD	102	106	92	81	73	84	81	95	98	90	84	-1.91
FEED	132	92	76	79	82	52	46	47	51	77	83	-5.17
RAW MATERIALS	92	100	108	92	93	106	92	96	110	131	141	3.08
BEVERAGES	114	106	80	84	81	95	98	126	78	80	76	-2.00
FOREST PRODUCTS	91	124	85	71	68	69	66	73	82	94	94	-1.93
LATIN AMERICA												
AGRICULTURAL PRODUCTS	93	104	102	91	97	105	101	102	91	104	102	.32
FOOD	90	101	109	92	99	108	105	95	89	102	102	.19
FEED	79	95	125	104	122	109	85	104	115	171	169	5.12
RAW MATERIALS	95	100	104	93	82	85	81	61	67	87	96	-2.46
BEVERAGES	107	116	77	86	87	102	104	133	95	94	85	-1.27
FOREST PRODUCTS	81	111	109	90	96	115	98	107	130	181	181	6.46
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	88	100	112	110	104	110	96	104	114	127	130	2.54
FOOD	80	99	120	124	116	119	105	122	144	159	158	5.29
FEED	94	121	85	60	49	68	21	38	54	81	67	-5.67
RAW MATERIALS	100	100	100	91	89	98	85	78	69	77	86	-2.90
BEVERAGES	103	84	112	72	73	81	62	52	44	60	118	-3.89
FOREST PRODUCTS	78	86	136	152	164	205	156	134	140	148	148	4.78
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	91	105	104	92	94	110	95	99	107	129	136	2.84
FOOD	87	100	112	100	94	118	102	96	105	129	141	2.94
FEED	87	105	108	114	99	98	78	105	115	126	143	2.76
RAW MATERIALS	95	109	95	75	91	91	79	89	106	136	136	2.93
BEVERAGES	95	115	90	81	95	137	121	132	108	114	108	2.18
FOREST PRODUCTS	109	107	84	81	89	76	83	90	125	143	143	3.56
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	92	105	103	100	106	125	140	168	186	205	210	9.39
FOOD	90	106	104	96	95	112	132	155	162	169	181	7.52
FEED	20	103	177	152	198	161	165	348	452	711	526	29.33
RAW MATERIALS	110	102	87	114	145	172	176	206	263	295	305	13.59
BEVERAGES	106	105	89	107	116	151	141	164	179	195	202	8.39
FOREST PRODUCTS	101	96	103	87	93	85	84	95	118	139	139	3.28

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

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	1979=100.....											PERCENT
WORLD												
AGRICULTURAL PRODUCTS	92	101	106	105	105	109	108	107	114	117	120	1.94
FOOD	92	102	106	104	104	108	106	104	111	114	116	1.61
FEED	89	99	113	121	119	116	124	126	134	147	154	4.65
RAW MATERIALS	100	101	99	97	99	102	102	108	116	111	118	1.75
BEVERAGES	100	98	103	104	103	110	115	105	111	111	117	1.52
FOREST PRODUCTS	101	102	97	93	103	107	109	114	124	135	135	3.45
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	91	103	106	103	102	106	101	100	111	112	114	1.36
FOOD	91	104	106	102	101	106	100	98	109	111	113	1.29
FEED	91	99	109	119	125	109	114	116	131	125	121	2.50
RAW MATERIALS	100	102	99	99	98	101	101	102	110	108	114	1.20
BEVERAGES	100	96	104	105	103	111	115	105	106	110	114	1.24
FOREST PRODUCTS	100	102	98	95	104	110	112	117	126	137	137	3.68
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	91	99	110	109	116	125	132	136	143	142	150	4.92
FOOD	91	100	109	106	114	124	131	139	145	146	153	5.28
FEED	90	90	119	151	151	141	160	126	149	126	140	3.59
RAW MATERIALS	98	98	104	100	109	121	124	126	137	127	134	3.72
BEVERAGES	101	94	105	106	102	111	117	106	107	110	116	1.38
FOREST PRODUCTS	101	100	99	97	107	116	118	121	132	144	144	4.30
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	104	98	98	100	96	95	100	97	103	109	101	.38
FOOD	103	99	99	100	96	98	105	103	107	115	110	1.24
FEED	112	96	92	105	104	71	131	133	238	165	79	3.65
RAW MATERIALS	97	101	102	106	101	88	96	100	104	110	105	.60
BEVERAGES	99	100	101	104	113	113	107	96	102	97	84	-1.98
FOREST PRODUCTS	103	100	97	98	102	104	104	112	113	115	115	1.67
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	92	103	104	100	98	99	80	75	91	97	96	-1.16
FOOD	92	103	105	100	98	99	79	72	89	95	94	-1.45
FEED	90	106	104	99	111	92	88	113	123	128	112	2.19
RAW MATERIALS	98	105	97	96	91	95	90	86	93	95	102	-1.53
BEVERAGES	87	111	102	98	95	96	104	113	116	134	147	3.84
FOREST PRODUCTS	99	104	98	92	102	105	106	114	126	138	138	3.74
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	78	123	99	105	94	107	140	139	135	119	112	3.31
FOOD	75	125	100	106	93	108	142	141	135	118	110	3.33
FEED	150	67	83	102	98	67	74	96	124	128	115	1.91
RAW MATERIALS	110	98	93	100	106	100	110	122	134	127	129	3.15
BEVERAGES	86	100	115	113	160	165	157	191	274	382	338	15.54
FOREST PRODUCTS	94	105	101	87	88	89	88	89	93	104	104	.27

8. (Cont.) INDICES OF VOLUME OF EXPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 1979=100.....											PERCENT
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	95	97	108	110	114	116	125	124	121	131	135	3.33
FOOD	97	96	107	108	115	116	126	123	117	123	124	2.61
FEED	87	98	115	123	115	120	131	133	136	163	178	6.01
RAW MATERIALS	101	101	99	94	101	102	103	115	123	116	123	2.40
BEVERAGES	99	100	101	103	102	109	115	107	117	113	120	1.91
FOREST PRODUCTS	107	102	91	87	94	94	93	98	113	123	123	2.18
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	100	101	99	101	96	86	94	98	96	94	98	-1.52
FOOD	98	103	99	102	98	86	94	99	97	93	95	-1.67
FEED	129	95	76	89	97	56	73	69	70	89	93	-2.65
RAW MATERIALS	100	98	102	95	96	105	104	116	120	128	147	3.67
BEVERAGES	104	94	102	104	88	88	100	98	86	89	93	-1.15
FOREST PRODUCTS	108	106	86	85	84	93	86	78	78	82	82	-2.56
LATIN AMERICA												
AGRICULTURAL PRODUCTS	98	92	111	104	121	116	127	109	106	114	113	1.45
FOOD	100	89	111	103	120	114	126	105	98	105	99	.32
FEED	85	98	117	113	132	129	142	134	139	157	172	5.91
RAW MATERIALS	103	102	95	85	83	80	89	70	74	80	87	-2.61
BEVERAGES	100	102	98	103	110	117	122	104	135	118	128	2.66
FOREST PRODUCTS	92	105	103	94	113	128	117	123	120	156	156	4.89
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	88	97	115	136	137	135	112	125	145	193	173	6.08
FOOD	85	96	119	143	143	141	118	131	156	209	187	7.05
FEED	101	122	77	53	54	67	20	44	53	88	79	-4.47
RAW MATERIALS	107	99	94	99	100	105	88	101	82	77	75	-2.96
BEVERAGES	102	85	112	91	89	100	82	65	44	52	104	-4.90
FOREST PRODUCTS	90	85	124	138	163	219	173	166	188	189	189	8.08
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	94	100	106	113	108	119	119	131	130	137	156	4.44
FOOD	92	101	106	118	110	128	122	140	133	136	157	4.58
FEED	88	99	113	132	101	115	123	120	118	143	174	4.66
RAW MATERIALS	98	101	101	97	105	106	107	124	136	128	143	3.94
BEVERAGES	89	105	106	100	100	117	120	121	119	129	131	3.37
FOREST PRODUCTS	111	101	88	84	90	84	87	95	117	122	122	2.11
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	96	110	94	99	109	123	178	214	201	199	191	9.64
FOOD	102	111	87	93	99	113	171	185	165	154	162	7.05
FEED	23	97	180	165	205	190	220	470	512	658	450	28.88
RAW MATERIALS	106	98	96	121	190	244	264	477	601	453	308	19.97
BEVERAGES	105	105	91	112	130	145	136	162	168	189	191	7.55
FOREST PRODUCTS	107	93	101	93	95	84	88	90	100	102	102	-1.03

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

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 1979-81=100											PERCENT
WORLD												
AGRICULTURAL PRODUCTS	91	104	104	96	92	97	93	99	108	121	126	2.19
FOOD	89	104	107	97	92	96	92	96	105	119	126	2.01
FEED	88	100	113	109	113	100	88	101	120	148	137	3.36
RAW MATERIALS	98	104	98	91	90	100	95	95	115	134	137	3.06
BEVERAGES	104	109	87	88	87	97	99	125	108	111	110	1.70
FOREST PRODUCTS	95	108	97	94	91	97	96	111	140	158	158	5.19
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	95	104	101	94	90	95	93	103	113	124	126	2.47
FOOD	93	104	103	95	89	94	92	101	115	126	130	2.70
FEED	88	100	112	107	110	93	83	96	116	138	126	2.46
RAW MATERIALS	102	103	96	90	90	99	95	93	110	124	125	2.14
BEVERAGES	104	110	86	87	86	95	98	125	107	109	110	1.61
FOREST PRODUCTS	98	108	94	91	88	94	94	111	142	161	161	5.38
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	99	106	96	93	88	90	91	109	124	134	132	3.26
FOOD	98	106	96	93	87	87	89	108	128	137	138	3.62
FEED	89	101	110	110	105	95	85	100	113	127	111	1.55
RAW MATERIALS	104	104	91	89	88	99	102	101	116	128	128	2.75
BEVERAGES	104	110	86	86	86	92	95	130	117	122	119	2.71
FOREST PRODUCTS	94	110	96	89	84	88	87	112	146	168	168	5.95
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	84	102	114	99	94	97	90	82	84	94	101	-1.66
FOOD	80	101	119	101	90	97	90	79	78	86	95	-1.38
FEED	82	94	124	100	133	78	64	68	127	170	187	4.70
RAW MATERIALS	98	105	98	92	101	98	94	89	97	107	104	.21
BEVERAGES	96	112	92	90	94	102	102	107	97	96	107	.43
FOREST PRODUCTS	87	106	107	99	90	90	93	88	91	86	86	-1.42
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	98	102	100	92	86	104	103	110	108	112	115	1.80
FOOD	94	100	106	94	90	109	110	111	118	124	129	3.05
FEED	104	93	103	91	114	142	118	128	143	206	200	7.66
RAW MATERIALS	99	95	105	90	79	99	79	81	92	103	112	.24
BEVERAGES	106	109	85	89	80	95	97	119	92	87	86	-1.85
FOREST PRODUCTS	103	97	100	102	115	134	137	143	167	189	189	7.67
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	90	106	104	111	99	118	117	115	113	132	161	3.94
FOOD	91	103	106	128	111	136	134	129	128	154	198	5.86
FEED	48	87	165	75	338	107	192	171	309	164	372	15.39
RAW MATERIALS	88	107	105	90	78	90	82	78	85	103	111	.12
BEVERAGES	90	114	96	92	87	103	111	116	101	105	116	1.63
FOREST PRODUCTS	85	104	110	122	83	103	117	115	130	142	142	4.20

9. (Cont.) INDICES OF VALUE OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 1979=11:100											PERCENT
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	81	105	114	102	98	103	93	88	93	113	126	1.41
FOOD	79	105	117	104	98	102	90	83	85	102	117	.34
FEED	81	100	119	123	141	163	132	154	164	253	243	10.09
RAW MATERIALS	89	106	106	93	91	102	97	102	131	160	171	5.43
BEVERAGES	104	99	97	89	96	111	108	116	118	125	118	2.57
FOREST PRODUCTS	84	104	112	108	105	106	103	112	133	147	146	4.39
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	81	105	114	99	93	92	92	84	80	89	104	-1.76
FOOD	79	106	115	101	93	92	91	82	74	85	101	-1.28
FEED	78	98	124	115	92	123	114	152	179	224	255	10.60
RAW MATERIALS	95	100	105	103	101	105	110	104	111	121	121	2.06
BEVERAGES	93	105	102	71	86	77	82	87	120	89	102	.59
FOREST PRODUCTS	82	94	124	108	111	98	94	92	94	102	102	.11
LATIN AMERICA												
AGRICULTURAL PRODUCTS	78	110	112	87	84	86	76	76	71	85	95	-1.58
FOOD	74	111	114	87	85	85	76	73	66	77	91	-2.26
FEED	82	103	115	118	121	123	93	107	127	221	145	5.35
RAW MATERIALS	95	106	99	82	73	101	90	96	113	134	135	3.35
BEVERAGES	130	89	80	75	52	51	52	76	63	67	68	-4.52
FOREST PRODUCTS	75	111	115	114	89	83	79	86	92	95	90	-.95
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	76	101	123	117	113	127	110	99	101	115	129	2.05
FOOD	73	102	124	118	111	125	106	94	95	108	125	1.43
FEED	83	87	130	135	199	240	250	239	222	377	345	15.65
RAW MATERIALS	90	95	116	106	124	132	122	120	144	139	151	4.67
BEVERAGES	99	102	99	105	115	151	131	122	121	162	132	4.05
FOREST PRODUCTS	78	103	119	116	107	111	108	106	111	109	109	1.37
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	86	103	112	100	104	113	104	99	111	146	158	4.12
FOOD	84	103	113	100	103	107	99	89	96	127	135	2.25
FEED	84	105	111	124	141	166	102	162	170	233	277	10.15
RAW MATERIALS	92	101	107	98	100	121	113	116	157	208	231	8.64
BEVERAGES	95	97	108	112	136	182	195	213	176	169	171	7.82
FOREST PRODUCTS	92	104	104	101	111	118	115	133	174	205	205	8.36
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	86	106	108	102	83	73	61	68	91	120	134	1.03
FOOD	88	101	111	110	89	75	58	63	83	109	130	-.19
FEED	51	94	155	99	121	185	204	94	115	205	258	10.26
RAW MATERIALS	81	117	102	83	70	67	66	78	108	139	140	3.15
BEVERAGES	94	94	112	67	117	93	118	125	207	368	274	13.46
FOREST PRODUCTS	77	109	114	111	147	160	168	204	264	276	276	13.57

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

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
.....1979=100.....	PERCENT											
WORLD												
AGRICULTURAL PRODUCTS	94	100	105	106	105	109	109	106	114	117	118	1.86
FOOD	94	101	105	105	103	108	106	104	111	114	116	1.54
FEED	93	96	111	125	121	116	131	128	141	153	141	4.45
RAW MATERIALS	99	102	99	96	98	103	104	108	116	112	117	1.81
BEVERAGES	100	98	102	103	103	108	112	107	110	110	117	1.52
FOREST PRODUCTS	102	101	97	95	101	106	108	115	126	132	132	3.33
DEVELOPED COUNTRIES												
AGRICULTURAL PRODUCTS	97	99	104	105	100	104	107	104	109	112	112	1.25
FOOD	97	99	103	102	97	102	104	100	104	107	109	.84
FEED	94	95	111	125	119	111	127	122	135	142	129	3.50
RAW MATERIALS	102	100	98	96	98	104	106	105	108	104	105	.79
BEVERAGES	100	98	102	103	102	107	112	107	110	109	116	1.44
FOREST PRODUCTS	104	101	95	92	99	105	107	115	125	132	132	3.31
WESTERN EUROPE												
AGRICULTURAL PRODUCTS	99	100	101	108	101	100	107	108	113	114	111	1.37
FOOD	100	101	98	102	97	96	101	103	108	109	108	.94
FEED	94	95	111	128	115	113	128	124	132	133	118	2.78
RAW MATERIALS	104	100	96	95	97	103	108	111	112	104	106	1.05
BEVERAGES	102	97	102	103	101	102	109	106	111	113	120	1.67
FOREST PRODUCTS	103	101	96	95	102	106	106	117	127	137	137	3.67
USSR AND EASTERN EUROPE												
AGRICULTURAL PRODUCTS	89	97	114	105	94	103	102	83	91	98	103	-1.27
FOOD	88	96	116	107	91	106	105	83	88	95	100	-1.55
FEED	86	99	115	114	156	86	97	92	159	186	199	6.39
RAW MATERIALS	98	102	101	96	108	106	103	93	95	92	87	-1.12
BEVERAGES	95	103	102	99	98	105	108	85	85	85	89	-1.66
FOREST PRODUCTS	93	105	103	95	90	90	95	87	85	84	84	-1.84
NORTH AMERICA DEVELOPED												
AGRICULTURAL PRODUCTS	100	96	104	99	101	117	121	123	121	124	134	3.29
FOOD	99	96	105	98	99	115	119	122	118	122	134	3.16
FEED	106	94	100	100	126	164	173	167	188	231	206	9.66
RAW MATERIALS	105	90	106	93	97	111	113	106	112	112	126	2.19
BEVERAGES	99	100	101	106	108	120	126	125	127	115	123	2.60
FOREST PRODUCTS	106	97	96	88	107	122	130	136	144	145	145	5.07
OCEANIA DEVELOPED												
AGRICULTURAL PRODUCTS	94	107	99	114	120	128	128	118	132	148	175	5.02
FOOD	94	109	97	119	122	139	133	121	136	161	191	5.82
FEED	56	94	150	85	393	82	298	259	461	205	375	17.75
RAW MATERIALS	99	103	98	91	84	87	95	86	87	90	93	-1.05
BEVERAGES	94	104	102	111	102	105	112	111	102	118	125	1.87
FOREST PRODUCTS	96	100	104	113	83	100	125	117	115	128	128	2.95

10. (Cont.) INDICES OF VOLUME OF IMPORTS OF AGRICULTURAL, FISHERY AND FOREST PRODUCTS

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	ANNUAL RATE OF CHANGE 1979-89
	 1979=81=100.....											PERCENT
DEVELOPING COUNTRIES												
AGRICULTURAL PRODUCTS	89	103	108	109	114	118	111	112	124	127	132	3.00
FOOD	89	103	108	109	114	117	110	110	121	124	128	2.64
FEED	86	100	114	132	150	180	188	212	221	292	291	13.11
RAW MATERIALS	92	106	102	98	97	100	98	115	133	130	145	3.94
BEVERAGES	100	96	105	103	108	114	112	109	116	120	123	2.19
FOREST PRODUCTS	93	101	106	104	111	112	111	116	130	134	133	3.49
AFRICA DEVELOPING												
AGRICULTURAL PRODUCTS	90	102	108	110	109	117	123	113	110	115	121	2.02
FOOD	90	103	107	110	109	117	122	112	109	114	119	1.84
FEED	80	96	124	129	115	148	152	246	239	250	273	13.06
RAW MATERIALS	97	102	101	102	104	109	116	117	125	122	128	2.87
BEVERAGES	90	96	114	99	110	109	118	106	118	99	121	1.74
FOREST PRODUCTS	90	93	117	105	116	106	101	95	90	98	98	-1.47
LATIN AMERICA												
AGRICULTURAL PRODUCTS	81	111	108	92	106	102	93	90	93	94	94	-1.54
FOOD	81	111	108	91	106	101	91	87	89	88	90	-1.05
FEED	82	109	109	126	127	133	136	139	171	227	158	7.40
RAW MATERIALS	96	106	98	91	87	109	109	143	144	146	158	5.66
BEVERAGES	114	93	92	88	68	66	65	71	74	72	77	-3.72
FOREST PRODUCTS	84	110	106	99	88	83	78	84	89	87	83	-1.75
NEAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	87	99	114	122	128	151	137	135	147	135	151	4.68
FOOD	87	99	114	122	127	150	135	134	146	133	149	4.52
FEED	92	89	118	146	186	260	270	269	255	312	315	14.64
RAW MATERIALS	87	96	117	113	130	129	124	117	144	123	138	3.67
BEVERAGES	100	95	104	117	119	137	119	115	114	147	123	2.73
FOREST PRODUCTS	86	101	113	121	122	134	129	108	112	120	120	2.02
FAR EAST DEVELOPING												
AGRICULTURAL PRODUCTS	92	104	104	107	120	120	119	127	134	158	155	4.98
FOOD	92	105	102	107	120	118	118	121	125	150	142	4.09
FEED	88	101	111	138	159	184	163	240	256	336	365	15.21
RAW MATERIALS	96	100	104	101	106	118	113	132	159	158	177	6.33
BEVERAGES	94	96	109	118	137	165	161	169	169	172	197	7.73
FOREST PRODUCTS	101	98	101	99	116	119	122	142	169	175	175	6.91
ASIAN CENT PLANNED ECON												
AGRICULTURAL PRODUCTS	97	99	104	112	102	83	71	81	125	133	128	1.95
FOOD	98	97	105	113	102	83	68	80	126	133	125	1.73
FEED	59	90	152	102	131	239	530	190	141	367	482	18.40
RAW MATERIALS	87	119	94	88	77	64	65	85	104	97	115	.61
BEVERAGES	96	100	103	141	249	117	146	185	258	380	326	13.75
FOREST PRODUCTS	87	104	110	106	145	155	173	206	257	243	243	12.15

1 1. THE IMPORTANCE OF AGRICULTURE IN THE ECONOMY

COUNTRY	AGRIC. POPULATION AS % TOTAL POPULATION 1988	AGRIC. EXPORTS AS % TOTAL EXPORTS 1988	AGRIC. IMPORTS AS % TOTAL IMPORTS 1988	SHARE OF TOTAL IMPORTS FINANCED BY AGR. EXPORTS % 1988
ALGERIA	25		31	
ANGOLA	71	1	20	2
BENIN	63	65	21	21
BOTSWANA	65	3	14	4
BURKINA FASO	85	63	17	21
BURUNDI	92	97	12	61
REPUBLIC OF CAMEROON	63	56	16	41
CAPE VERDE	45	41	27	1
CENTRAL AFRICAN REPUBLIC	65	29	8	15
CHAD	77	79	5	27
COMOROS	80	85	32	35
CONGO	60	1	15	2
COTE D'IVOIRE	58	74	20	86
DJIBOUTI	78	26	32	2
EGYPT	42	12	22	3
EQUATORIAL GUINEA	58	31	15	24
ETHIOPIA	76	82	30	30
GABON	69		17	1
GAMBIA	82	27	48	12
GHANA	51	58	13	43
GUINEA	76	5	18	5
GUINEA-BISSAU	80	36	45	14
KENYA	78	69	7	37
LESOTHO	81	16	20	2
LIBERIA	71	29	25	41
LIBYAN ARAB JAMAHIRIYA	14		23	
MADAGASCAR	77	53	19	40
MALAWI	77	92	6	66
MALI	82	77	17	39
MAURITANIA	65	7	55	13
MAURITIUS	24	36	11	28
MOROCCO	38	16	15	12
MOZAMBIQUE	82	56	24	7
NAMIBIA	37			
NIGER	88	15	22	13
NIGERIA	65	4	9	6
REUNION	12	82	19	10
RWANDA	92	98	11	29
SAO TOME AND PRINCIPE	65	73	28	29
SENEGAL	79	19	25	14
SEYCHELLES	78	2	15	
SIERRA LEONE	64	28	60	20
SOMALIA	72	83	26	16
SOUTH AFRICA	16	7	5	8
SUDAN	63	95	26	45
SWAZILAND	68	42	11	37
UNITED REP. OF TANZANIA	80	68	7	22
TOGO	70	30	29	26
TUNISIA	26	8	18	5
UGANDA	82	98	5	66
ZAIRE	67	15	26	22
ZAMBIA	70	1	4	2
ZIMBABWE	69	35	4	50
BARBADOS	7	28	19	9
BELIZE	34	56	21	38
BERMUDA	3		16	
CANADA	4	8	6	8
COSTA RICA	26	58	10	54
CUBA	20	85	11	58
DOMINICA	29	79	18	58
DOMINICAN REPUBLIC	38	45	13	22
EL SALVADOR	39	64	14	38
GRENADA	29	74	22	26
GUADELOUPE	11	84	21	11
GUATEMALA	52	68	8	51
HAITI	61	29	45	16
HONDURAS	58	69	13	66
JAMAICA	31	25	16	14
MARTINIQUE	9	70	19	12
MEXICO	31	12	15	12
NICARAGUA	40	92	14	25
PANAMA	26	39	15	19
TRINIDAD AND TOBAGO	8	6	19	7
UNITED STATES OF AMERICA	3	13	5	9

11. (Cont.) THE IMPORTANCE OF AGRICULTURE IN THE ECONOMY

COUNTRY	AGRIC. POPULATION AS % TOTAL POPULATION 1988	AGRIC. EXPORTS AS % TOTAL EXPORTS 1988	AGRIC. IMPORTS AS % TOTAL IMPORTS 1988	SHARE OF TOTAL IMPORTS FINANCED BY AGR. EXPORTS % 1988
ARGENTINA	11	62	5	104
BOLIVIA	43	10	19	10
BRAZIL	26	28	7	59
CHILE	14	13	6	19
COLOMBIA	29	47	9	48
ECUADOR	32	28	6	36
FRENCH GUIANA	27	4	19	1
GUYANA	23	39	14	41
PARAGUAY	48	91	9	84
PERU	38	10	21	9
SURINAME	17	15	13	14
URUGUAY	14	42	9	51
VENEZUELA	11	1	14	1
AFGHANISTAN	56	45	26	31
BANGLADESH	70	12	31	5
BHUTAN	91	8	11	4
BRUNEI DARUSSALAM	54	1	21	1
MYANMAR	48	18	8	12
CHINA (MAINLAND)	69	16	10	14
CYPRUS	22	28	11	11
HONG KONG	1	5	9	5
INDIA	63	17	12	12
INDONESIA	46	17	10	25
IRAN, ISLAMIC REP. OF	28	4	20	4
IRAQ	22	1	21	1
ISRAEL	5	10	8	8
JAPAN	7		14	1
JORDAN	7	9	21	4
CAMBODIA	71	83	23	12
KOREA, DEM. POP. REP.	35	7	14	5
KOREA, REPUBLIC OF	24	2	10	2
KUWAIT	1	1	20	1
LAO POP. DEM. REP.	72	4	15	1
LEBANON	10	24	33	7
MALAYSIA	32	24	11	31
MALDIVES	65		9	
MONGOLIA	32	20	5	13
NEPAL	92	37	17	12
OMAN	42	1	20	2
PAKISTAN	54	28	17	19
PHILIPPINES	47	17	11	14
QATAR	2		20	
SAUDI ARABIA	41	2	17	2
SINGAPORE	1	6	7	5
SRI LANKA	52	43	19	28
SYRIAN ARAB REPUBLIC	25	13	20	8
THAILAND	62	32	5	26
TURKEY	46	26	7	21
UNITED ARAB EMIRATES	3	1	15	2
VIET NAM	62	18	9	8
YEMEN ARAB REPUBLIC	64	32	33	1
YEMEN, DEMOCRATIC	34	3	13	1

1 1. (Cont.) THE IMPORTANCE OF AGRICULTURE IN THE ECONOMY

COUNTRY	AGRIC. POPULATION	AGRIC. EXPORTS	AGRIC. IMPORTS	SHARE OF TOTAL
	AS %	AS %	AS %	IMPORTS FINANCED
	TOTAL POPULATION 1988	TOTAL EXPORTS 1988	TOTAL IMPORTS 1988	BY AGR. EXPORTS % 1988
AUSTRIA	5	4	7	3
BELGIUM-LUXEMBOURG	2	10	11	10
BULGARIA	13	10	7	10
CZECHOSLOVAKIA	10	3	9	3
DENMARK	5	25	11	26
FINLAND	9	3	6	3
FRANCE	5	16	10	15
GERMAN DEMOCRATIC REP.	9	2	8	2
GERMANY, FED. REP. OF	3	5	12	7
GREECE	23	30	19	15
HUNGARY	13	21	9	23
ICELAND	6	2	9	2
IRELAND	14	26	13	31
ITALY	7	7	15	6
MALTA	4	4	12	2
NETHERLANDS	4	23	16	24
NORWAY	6	2	6	2
POLAND	20	9	15	11
PORTUGAL	18	7	14	4
ROMANIA	19	5	4	6
SPAIN	11	17	10	11
SWEDEN	5	2	7	2
SWITZERLAND	4	3	7	3
UNITED KINGDOM	2	7	10	5
UNION OF SOV. SOC. REP	14	3	17	3
YUGOSLAVIA	21	9	10	9
AUSTRALIA	5	35	5	35
FIJI	40	45	15	35
FRENCH POLYNESIA	14	5	18	
KIRIBATI	14	66	38	17
NEW CALEDONIA	47		16	
NEW ZEALAND	10	58	7	62
PAPUA NEW GUINEA	69	20	12	21
SOLOMON ISLANDS	47	23	18	26
TOKELAU	14			
TONGA	14	43	25	6
VANUATU	47	65	16	19

12/A. RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	ARABLE LAND AS % OF TOTAL LAND 1987	IRRIGATED LAND AS % OF ARABLE LAND 1987	FOREST LAND AS % OF TOTAL LAND 1987	AGRIC. POPULATION PER HA OF ARABLE LAND 1987	AGRIC. LAB. FORCE AS % OF AGRIC. POPULATION 1987
ALGERIA	3	5	2	.8	23
ANGOLA	3		43	1.8	42
BEHIN	17		33	1.5	48
BOTSWANA	2		2	.6	34
BURKINA FASO	11	1	25	2.3	54
BURUNDI	52	5	3	3.4	53
REPUBLIC OF CAMEROON	15		53	1.0	39
CAPE VERDE	10	5		4.0	37
CENTRAL AFRICAN REPUBLIC	3		58	.9	49
CHAD	3		10	1.3	35
COMOROS	44		16	3.9	45
CONGO	2	1	62	1.6	40
COTE D'IVOIRE	11	2	20	1.8	38
DJIBOUTI					46
EGYPT	3	100		8.2	27
EQUATORIAL GUINEA	8		46	1.0	42
ETHIOPIA	13	1	25	2.4	43
GABON	2		78	1.6	45
GAMBIA	17	7	17	3.8	46
GHANA	12		36	2.5	37
GUINEA	6	4	41	3.1	46
GUINEA-BISSAU	12		38	2.2	47
KENYA	4	2	6	7.2	41
LESOTHO	11			4.2	47
LIBERIA	4	1	22	4.5	38
LIBYAN ARAB JAMAHIRIYA	1	11		.3	25
MADAGASCAR	5	29	25	2.8	44
MALAWI	25	1	46	2.5	44
MALI	2	10	7	3.4	32
MAURITANIA		6	15	6.2	32
MAURITIUS	58	16	31	2.4	39
MOROCCO	19	15	12	1.1	30
MOZAMBIQUE	4	3	19	3.9	53
NAMIBIA	1	1	22	1.0	30
NIGER	3	1	2	1.6	52
NIGERIA	34	3	16	2.1	38
REUNION	22	9	35	1.3	37
RWANDA	45		20	5.3	49
SAO TOME AND PRINCIPE	39			1.8	39
SENEGAL	27	3	31	1.0	44
SEYCHELLES	22		19	8.7	44
SIERRA LEONE	25	2	29	1.4	35
SOMALIA	1	12	14	5.3	40
SOUTH AFRICA	11	9	4	.4	32
SUDAN	5	15	20	1.2	32
SWAZILAND	10	38	6	3.0	41
UNITED REP. OF TANZANIA	6	3	48	3.8	49
TOGO	26		25	1.6	41
TUNISIA	30	6	4	.4	32
UGANDA	34		29	2.0	45
ZAIRE	3		77	3.3	38
ZAMBIA	7		39	1.0	32
ZIMBABWE	7	7	52	2.2	40
BARBADOS	77			.6	51
BELIZE	2	4	44	1.1	33
BERMUDA			20		49
CANADA	5	2	38		50
COSTA RICA	10	22	32	1.4	34
CUBA	30	26	25	.6	41
DOMINICA	23		41	1.4	47
DOMINICAN REPUBLIC	30	14	13	1.8	31
EL SALVADOR	35	16	5	2.6	31
GUENADA	38		9	2.2	47
GUADELOUPE	25	7	42	.9	45
GUATEMALA	17	4	37	2.4	28
HAITI	33	8	2	4.2	48
HONDURAS	16	5	31	1.5	30
JAMAICA	25	13	17	2.8	44
MARTINIQUE	19	30	25	1.5	46
MEXICO	13	21	23	1.1	34
NICARAGUA	11	7	31	1.1	31
PANAMA	8	5	52	1.0	36
TRINIDAD AND TOBAGO	23	18	43	.8	39
UNITED STATES OF AMERICA	21	10	29		44

12/A. (Cont.) RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	ARABLE LAND AS % OF TOTAL LAND 1987	IRRIGATED LAND AS % OF ARABLE LAND 1987	FOREST LAND AS % OF TOTAL LAND 1987	AGRIC. POPULATION PER HA OF ARABLE LAND 1987	AGRIC. LAB. FORCE AS % OF AGRIC. POPULATION 1987
ARGENTINA	13	5	22	.1	36
BOLIVIA	3	5	51	.9	31
BRAZIL	9	3	66	.5	37
CHILE	7	23	12	.3	34
COLOMBIA	5	9	49	1.7	32
ECUADOR	10	21	43	1.2	30
FRENCH GUIANA			83	3.9	35
GUYANA	3	26	83	.5	36
PARAGUAY	5	3	39	.9	33
PERU	3	33	54	2.1	30
SURINAME		84	92	1.0	32
URUGUAY	8	7	4	.3	39
VENEZUELA	4	8	35	.6	36
AFGHANISTAN	12	33	3	1.0	30
BANGLADESH	68	24	16	8.2	29
BHUTAN	3	26	55	10.0	44
BRUNEI DARUSSALAM	1	14	48	18.8	42
MYANMAR	15	11	49	1.9	44
CHINA (MAINLAND)	10	46	12	7.7	59
CYPRUS	17	20	13	1.0	46
HONG KONG	8	38	12	10.0	52
INDIA	57	25	23	3.0	40
INDONESIA	12	35	67	3.8	42
IRAN, ISLAMIC REP. OF	9	39	11	1.0	30
IRAQ	12	32	4	.7	27
ISRAEL	22	63	5	.5	38
JAPAN	13	61	67	1.9	52
JORDAN	5	11	1	.5	23
CAMBODIA	17	3	76	1.8	48
KOREA, DEM. POP. REP.	20	49	74	3.2	45
KOREA, REPUBLIC OF	22	59	66	5.0	46
KUWAIT		25		7.1	38
LAO POP. DEM. REP.	4	13	56	3.1	48
LEBANON	29	29	8	.9	30
MALAYSIA	13	8	60	1.2	42
MALDIVES	10		3	42.5	36
MONGOLIA	1	3	10	.5	47
NEPAL	17	28	17	7.0	42
OMAN		85		12.0	29
PAKISTAN	27	77	4	2.9	27
PHILIPPINES	27	19	37	3.5	36
QATAR				1.7	45
SAUDI ARABIA	1	36	1	4.5	29
SINGAPORE	5		5	10.0	48
SRI LANKA	29	28	27	4.6	37
SYRIAN ARAB REPUBLIC	31	12	3	.5	25
THAILAND	39	20	28	1.7	55
TURKEY	36	8	26	.9	47
UNITED ARAB EMIRATES		26		2.4	51
VIET NAM	20	28	40	6.1	47
YEMEN ARAB REPUBLIC	7	18	8	3.5	24
YEMEN DEMOCRATIC		49	5	6.6	26

12/A. (Cont.) RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	ARABLE LAND AS % OF TOTAL LAND 1987	IRRIGATED LAND AS % OF ARABLE LAND 1987	FOREST LAND AS % OF TOTAL LAND 1987	AGRIC. POPULATION PER HA OF ARABLE LAND 1987	AGRIC. LAB. FORCE AS % OF AGRIC. POPULATION 1987
AUSTRIA	18		39	.3	55
BELGIUM-LUXEMBOURG	25		21	.3	41
BULGARIA	37	30	35	.3	51
CZECHOSLOVAKIA	41	4	37	.3	53
DENMARK	61	16	12	.1	55
FINLAND	8	3	76	.2	50
FRANCE	35	6	27	.2	48
GERMAN DEMOCRATIC REP.	47	3	28	.3	57
GERMANY, FED. REP. OF	31	4	30	.3	57
GREECE	30	29	20	.6	44
HUNGARY	57	3	18	.3	48
ICELAND			1	2.0	61
IRELAND	14		5	.5	39
ITALY	41	25	23	.3	47
MALTA	41	8		1.1	37
NETHERLANDS	27	58	9	.7	41
NORWAY	3	11	27	.3	47
POLAND	48	1	29	.5	58
PORTUGAL	30	23	40	.7	43
ROMANIA	46	31	28	.4	57
SPAIN	41	16	31	.2	38
SWEDEN	7	4	68	.1	45
SWITZERLAND	10	6	26	.6	59
UNITED KINGDOM	29	2	10	.2	49
UNION OF SOV. SOC. REP	10	9	42	.2	50
YUGOSLAVIA	30	2	37	.7	50
AUSTRALIA	6	4	14		47
FIJI	13		65	1.2	34
FRENCH POLYNESIA	20		31	.3	32
KIRIBATI	52		3	.3	36
NEW CALEDONIA	1		38	3.8	31
NEW ZEALAND	2	51	27	.6	44
PAPUA NEW GUINEA	1		84	6.7	47
SOLOMON ISLANDS	2		91	2.4	33
TOKELAU					32
TONGA	67		11	.4	32
VANUATU	12		1	.5	31

12/B. RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	AGRICULTURAL GFCF	AGRICULTURAL GFCF	FERTILIZER USE	NOS. OF TRACTORS	OFFICIAL COMMIT.
	\$ PER HA	\$ PER CAPUT OF	PER HA ARAB. LAND	PER 000 HA	TO AGRICULTURE
	ARABLE LAND 1987	AGRIC. LAB. FORCE 1987	KG/HA 1987	ARABLE LAND 1987	\$ PER CAPUT 1988
ALGERIA			32	11	.6
ANGOLA			3	3	4.1
BENIN			5		20.2
BOTSWANA	3.1	17.2	1	2	25.3
BURKINA FASO	.3	.3	6		12.0
BURUNDI			2		5.6
REPUBLIC OF CAMEROON			7		16.2
CAPE VERDE			3		38.7
CENTRAL AFRICAN REPUBLIC					9.2
CHAD			2		17.1
COMOROS					12.1
CONGO			3	1	14.5
COTE D'IVOIRE			9	1	12.4
DJIBOUTI					14.2
EGYPT	532.1	239.7	351	18	9.9
EQUATORIAL GUINEA					5.0
ETHIOPIA			4		3.5
GABON			5	3	6.8
GAMBIA			15		24.5
GHANA			4	1	5.8
GUINEA			1		13.3
GUINEA-BISSAU					14.4
KENYA	54.8	18.9	42	4	5.9
LESOTHO			13	5	31.2
LIBERIA			9	1	2.9
LIBYAN ARAB JAMAHIRIYA	400.0	5934.0	42	14	
MADAGASCAR			2	1	7.6
MALAWI			20	1	7.4
MALI			6		16.2
MAURITANIA			6	2	21.7
MAURITIUS	92.5	100.0	307	3	11.5
MOROCCO			38	4	17.1
MOZAMBIQUE			2	2	5.6
NAMIBIA				4	
NIGER			1		16.4
NIGERIA			9		.1
REUNION			261	38	
RWANDA			2		4.3
SAO TOME AND PRINCIPE				3	
SENEGAL			4		23.4
SEYCHELLES				6	1.5
SIERRA LEONE					1.6
SOMALIA			4	2	10.8
SOUTH AFRICA	38.6	282.7	54	14	
SUDAN	8.1	22.1	4	2	14.5
SWAZILAND	61.7	46.8	40	20	4.4
UNITED REP. OF TANZANIA	3.4	1.8	9	4	8.7
TOGO			8		4.1
TUNISIA	72.9	526.1	22	6	10.7
UGANDA				1	6.6
ZAIRE			1		2.4
ZAMBIA			18	1	11.6
ZIMBABWE	22.1	26.7	50	7	9.3
BARBADOS			94	18	2.4
BELIZE			74	19	101.0
CANADA	46.7	4386.9	48	16	
COSTA RICA	175.1	366.9	181	12	11.8
CUBA			197	18	.1
DOMINICA			176	5	41.9
DOMINICAN REPUBLIC			56	2	2.0
EL SALVADOR	12.7	15.1	126	5	6.9
GRENADE				2	38.7
GUADELOUPE			143	37	
GUATEMALA	35.0	51.5	66	2	8.5
HAITI			3	1	2.8
HONDURAS	61.8	162.2	19	2	21.1
JAMAICA			91	11	12.9
MARTINIQUE			1150	40	
MEXICO			75	7	10.9
NICARAGUA			43	2	13.4
PANAMA			66	11	
TRINIDAD AND TOBAGO	75.4	228.2	45	22	22.3
UNITED STATES OF AMERICA	65.9	3977.8	94	25	

12/B. (Cont.) RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	AGRICULTURAL GFCF		AGRICULTURAL GFCF		FERTILIZER USE		NOS. OF TRACTORS		OFFICIAL COMMITM. TO AGRICULTURE \$ PER CAPUT 1988
	\$ PER HA		\$ PER CAPUT OF		PER HA ARAB. LAND		PER 000 HA		
	ARABLE LAND 1987		AGRIC. LAB. FORCE 1987		KG/HA 1987		ARABLE LAND 1987		
ARGENTINA					5		6		10.2
BOLIVIA					2		1		13.1
BRAZIL					49		9		2.4
CHILE					54		7		.1
COLOMBIA					94		6		4.5
ECUADOR					23		3		9.2
FRENCH GUIANA					167		30		
GUYANA					27		7		7.7
PARAGUAY					7		5		10.4
PERU					62		4		4.1
SURINAME					161		18		.1
URUGUAY					42		24		22.1
VENEZUELA	118.7		573.1		158		12		.6
AFGHANISTAN					10				
BANGLADESH					77		1		6.3
BHUTAN					1				9.4
BRUNEI DARUSSALAM					57		10		
MYANMAR					12		1		.6
CHINA (MAINLAND)	10.3		2.3		232		9		.9
CYPRUS	718.4		1644.9		135		86		65.4
HONG KONG							1		
INDIA	39.5		32.5		52		4		1.0
INDONESIA					107		1		3.3
IRAN, ISLAMIC REP. OF	120.3		419.5		66		7		
IRAQ	223.4		1171.6		40		8		1.6
ISRAEL	651.4		3562.0		224		56		5.8
JAPAN					433		404		
JORDAN					36		14		3.2
KOREA, DEM. POP. REP.					312		31		.5
KOREA, REPUBLIC OF	994.1		422.2		392		9		.8
KUWAIT					82		28		
LAO POP. DEM. REP.					1		1		12.3
LEBANON					67		10		.3
MALAYSIA	193.1		418.5		160		3		5.3
MALDIVES									45.5
MONGOLIA					18		9		.3
NEPAL					23		1		13.8
OMAN					41		3		
PAKISTAN	30.4		38.4		83		8		9.3
PHILIPPINES					61		3		9.9
QATAR					173		22		
SAUDI ARABIA					368		2		
SINGAPORE					1833		19		
SRI LANKA					109		15		13.9
SYRIAN ARAB REPUBLIC	111.7		870.0		40		9		.1
THAILAND					29		7		3.3
TURKEY					64		23		1.0
UNITED ARAB EMIRATES	1434.2		2369.6		163				
VIET NAM					65		6		.3
YEMEN ARAB REPUBLIC	31.7		38.6		6		2		9.8
YEMEN DEMOCRATIC					12		26		2.9

12/B. (Cont.) RESOURCES AND THEIR USE IN AGRICULTURE

COUNTRY	AGRICULTURAL GFCF	AGRICULTURAL GFCF	FERTILIZER USE	NOS. OF TRACTORS	OFFICIAL COMMIT.
	\$ PER HA	\$ PER CAPUT OF	PER HA ARAB. LAND	PER 000 HA	TO AGRICULTURE
	ARABLE LAND	AGRIC. LAB. FORCE	KG/HA	ARABLE LAND	\$ PER CAPUT
	1987	1987	1987	1987	1988
AUSTRIA	850.6	5465.5	221	216	
BELGIUM-LUXEMBOURG	628.8	5570.7	510	147	
BULGARIA			180	13	
CZECHOSLOVAKIA			303	27	
DENMARK	516.5	8853.0	233	63	
FINLAND	620.4	6532.3	216	100	
FRANCE	286.7	3609.9	299	78	
GERMAN DEMOCRATIC REP.			337	33	
GERMANY, FED. REP. OF	810.4	4961.1	421	197	
GREECE	97.3	366.2	154	47	
HUNGARY			260	10	6.6
ICELAND	2332.5	1866.0	2917	1638	
IRELAND	340.9	1655.3	681	165	
ITALY	865.2	5239.0	189	108	
MALTA	346.2	900.0	46	34	
NETHERLANDS	2502.5	9286.3	688	208	
NORWAY	1276.3	8740.0	270	176	
POLAND			222	71	
PORTUGAL	80.0	278.6	103	29	1.7
ROMANIA			130	17	
SPAIN			99	34	
SWEDEN	331.6	5292.4	136	62	
SWITZERLAND			431	262	
UNITED KINGDOM	190.2	2192.7	355	74	
UNION OF SOV. SOC. REP			118	12	
YUGOSLAVIA	108.2		133	131	
AUSTRALIA			29	7	
FIJI	36.6	89.7	90	18	35.1
FRENCH POLYNESIA			12	2	10.2
KIRIBATI					44.6
NEW CALEDONIA			60	64	64.1
NEW ZEALAND	576.0	2060.6	709	153	
PAPUA NEW GUINEA			38	3	18.0
SOLOMON ISLANDS					48.1
TONGA	87.2	683.3		2	56.9
VANUATU					26.7

13. MEASURES OF OUTPUT AND PRODUCTIVITY IN AGRICULTURE

COUNTRY	INDEX OF FOOD PRODUC. PER CAPUT 1979-81=100 1987-89	INDEX OF TOT. AGR. PRODUC. PER CAPUT 1979-81=100 1987-89	PER CAPUT DIETARY ENERGY SUPPLIES 1986-88	INDEX OF VALUE OF AGRIC. EXPORTS 1979-81=100 1986-88
ALGERIA	97	98	2786	98
ANGOLA	84	81	1806	63
BENIN	114	117	2164	84
BOTSWANA	66	66	2296	144
BURKINA FASO	115	117	2036	90
BURUNDI	98	98	2338	75
REPUBLIC OF CAMEROON	96	95	2180	154
CAPE VERDE	126	125	2703	119
CENTRAL AFRICAN REPUBLIC	90	90	2050	111
CHAD	101	103	1840	188
COMOROS	110	110	2067	115
CONGO	98	98	2577	125
COTE D'IVOIRE	96	92	2449	96
DJIBOUTI				117
EGYPT	109	102	3343	153
EQUATORIAL GUINEA				99
ETHIOPIA	91	90	1715	352
GABON	81	81	2521	115
GAMBIA	92	92	2357	161
GHANA	109	107	2201	99
GUINEA	90	91	2029	130
GUINEA-BISSAU	137	137	2543	123
KENYA	101	101	2117	97
LESOTHO	80	81	2308	102
LIBERIA	95	93	2408	83
LIBYAN ARAB JAMAHIRIYA	109	109	3479	86
MADAGASCAR	93	92	2258	62
MALAWI	85	87	2098	67
MALI	97	99	2147	153
MAURITANIA	88	88	2621	135
MAURITIUS	100	100	2749	81
MOROCCO	120	120	2856	73
MOZAMBIQUE	83	83	1622	162
NAMIBIA	95	93	1890	110
NIGER	86	86	2372	92
NIGERIA	96	96	2106	30
REUNION	72	72	2967	133
RWANDA	77	81	1831	133
SAO TOME AND PRINCIPE	70	70	2352	103
SENEGAL	106	106	2208	92
SEYCHELLES			2337	124
SIERRA LEONE	89	89	1838	100
SOMALIA	97	97	2009	92
SOUTH AFRICA	90	89	3082	130
SUDAN	87	88	2071	84
SWAZILAND	97	95	2587	111
UNITED REP. OF TANZANIA	90	89	2229	78
TOGO	89	93	2149	119
TUNISIA	96	96	2971	97
UGANDA	87	87	2068	68
ZAIRE	94	94	2115	114
ZAMBIA	97	99	2066	35
ZIMBABWE	90	97	2283	97
BARBADOS	76	76	3188	105
BELIZE	92	92	2627	87
BERMUDA			3004	122
CANADA	103	103	3451	116
COSTA RICA	89	93	2781	89
CUBA	106	107	3103	89
DOMINICA	147	147	2884	119
DOMINICAN REPUBLIC	94	91	2359	117
EL SALVADOR	90	69	2396	74
GRENADA	89	89	2959	125
GUADELOUPE	116	116	2713	132
GUATEMALA	103	94	2327	90
HAITI	93	91	1992	116
HONOURAS	88	87	2138	55
JAMAICA	92	92	2579	93
MARTINIQUE	116	116	2844	132
MEXICO	98	97	3123	75
NICARAGUA	63	59	2373	85
PANAMA	92	94	2484	99
TRINIDAD AND TOBAGO	86	84	2983	78
UNITED STATES OF AMERICA	92	91	3644	120

13. (Cont.) MEASURES OF OUTPUT AND PRODUCTIVITY IN AGRICULTURE

COUNTRY	INDEX OF FOOD	INDEX OF TOT. AGR.	PER CAPUT DIETARY	INDEX OF VALUE
	PRODUC. PER CAPUT	PRODUC. PER CAPUT	ENERGY SUPPLIES	OF AGRIC. EXPORTS
	1979-81:100 1987-89	1979-81:100 1987-89	1986-88	1979-81:100 1986-88
ARGENTINA	91	91	3168	56
BOLIVIA	102	101	2096	88
BRAZIL	115	112	2703	69
CHILE	107	106	2581	29
COLOMBIA	102	98	2544	81
ECUADOR	106	106	2302	82
FRENCH GUIANA			2778	152
GUYANA	70	70	2423	44
PARAGUAY	115	118	2784	57
PERU	101	99	2277	121
SURINAME	91	91	2775	103
URUGUAY	106	108	2746	61
VENEZUELA	88	89	2534	68
AFGHANISTAN	88	88	2110	120
BANGLADESH	93	92	1925	135
BHUTAN	121	121		228
BRUNEI DARUSSALAM	115	115	2839	171
MYANMAR	120	119	2545	41
CHINA (MAINLAND)	128	130	2637	75
CYPRUS	99	99		108
HONG KONG	61	61	2883	139
INDIA	113	112	2104	123
INDONESIA	124	122	2645	74
IRAN, ISLAMIC REP. OF	87	87	3124	81
IRAQ	98	98	2950	100
ISRAEL	106	97	3133	95
JAPAN	97	94	2822	117
JORDAN	117	116	2884	105
CAMBODIA	146	150	2162	36
KOREA, DEM. POP. REP.	108	109	3172	90
KOREA, REPUBLIC OF	96	94	2867	116
KUWAIT			3127	113
LAO POP. DEM. REP.	116	116	2614	42
LEBANON	107	106	3275	85
MALAYSIA	142	127	2665	110
MALDIVES	98	98	2140	102
MONGOLIA	91	89	2481	97
NEPAL	107	106	2034	205
OMAN				153
PAKISTAN	103	106	2167	130
PHILIPPINES	86	87	2238	114
QATAR				112
SAUDI ARABIA	249	247	2805	90
SINGAPORE	86	86	2882	128
SRI LANKA	87	87	2297	90
SYRIAN ARAB REPUBLIC	86	87	3142	75
THAILAND	104	105	2288	131
TURKEY	97	97	3084	350
UNITED ARAB EMIRATES			3489	113
VIET NAM	111	112	2217	71
YEMEN ARAB REPUBLIC	98	98	2277	75
YEMEN, DEMOCRATIC	83	83	2314	86

13. (Cont.) MEASURES OF OUTPUT AND PRODUCTIVITY IN AGRICULTURE

COUNTRY	INDEX OF FOOD	INDEX OF TOT. AGR. PER CAPUT	DIETARY	INDEX OF VALUE
	PRODUC. PER CAPUT	PRODUC. PER CAPUT	ENERGY SUPPLIES	OF AGRIC. EXPORTS
	1979-81=100	1979-81=100	1986-88	1979-81=100
	1987-89	1987-89		1986-88
AUSTRIA	109	109	3476	126
BELGIUM-LUXEMBOURG	116	116	3901	120
BULGARIA	100	98	3650	160
CZECHOSLOVAKIA	121	121	3540	97
DENMARK	120	120	3605	120
FINLAND	101	102	3120	106
FRANCE	105	105	3312	120
GERMAN DEMOCRATIC REP.	114	115	3855	79
GERMANY, FED. REP. OF	112	112	3528	120
GREECE	100	103	3702	202
HUNGARY	113	112	3635	76
ICELAND	85	85	3361	124
IRELAND	105	106	3688	114
ITALY	100	101	3571	133
MALTA	105	105	3258	82
NETHERLANDS	110	110	3303	135
NORWAY	109	109	3266	104
POLAND	106	105	3434	50
PORTUGAL	100	100	3284	115
ROMANIA	109	109	3327	45
SPAIN	111	112	3494	125
SWEDEN	94	94	3031	116
SWITZERLAND	102	102	3623	121
UNITED KINGDOM	105	105	3218	111
UNION OF SOV. SOC. REP.	112	111	3382	93
YUGOSLAVIA	98	98	3570	81
AUSTRALIA	95	101	3347	127
FIJI	80	80	2785	85
FRENCH POLYNESIA	77	76	2856	138
KIRIBATI			2952	84
NEW CALEDONIA	95	92	2919	112
NEW ZEALAND	107	103	3476	122
PAPUA NEW GUINEA	97	97	2227	87
SOLOMON ISLANDS	82	82	2140	118
TONGA	87	87	2964	119
VANUATU	80	79	2533	86

14. CARRYOVER STOCKS OF SELECTED AGRICULTURAL PRODUCTS

	CROP YEAR ENDING IN				
	1986	1987	1988	1989	1990
	MILLION METRIC TONS				
CEREALS					
DEVELOPED COUNTRIES	289.6	319.7	276.0	184.3	167.2
CANADA	14.4	18.5	13.5	9.7	10.9
UNITED STATES	181.2	203.8	169.4	86.1	61.1
AUSTRALIA	6.1	4.1	3.1	3.2	3.2
EEC	36.1	31.6	28.7	28.5	30.6
JAPAN	5.2	5.8	5.6	5.4	5.1
USSR	31.0	38.0	39.0	36.0	39.0
DEVELOPING COUNTRIES	136.8	135.3	121.5	123.0	131.9
FAR EAST	98.8	90.9	81.7	82.5	93.3
BANGLADESH	1.0	0.7	1.5	1.2	1.1
CHINA	52.0	46.3	47.5	43.4	42.3
INDIA	17.0	15.0	5.4	4.4	11.1
PAKISTAN	2.0	3.1	1.6	4.4	11.1
NEAR EAST	16.9	19.7	16.2	17.0	14.6
TURKEY	0.4	0.9	1.0	0.8	0.7
AFRICA	8.8	11.6	8.7	10.3	10.6
LATIN AMERICA	12.0	12.9	14.6	13.0	13.0
ARGENTINA	0.7	0.7	1.3	1.3	0.7
BRAZIL	3.0	4.6	5.7	4.8	5.1
WORLD TOTAL	426.4	455.0	397.5	307.4	299.1
WHEAT	160.2	166.5	140.1	113.2	116.0
RICE (MILLED)	58.1	54.5	45.0	46.8	52.3
COARSE GRAINS	208.2	233.9	212.3	147.4	130.8
SUGAR (RAW VALUE)					
WORLD TOTAL AS OF 1 SEPT.	39.0	36.2	33.4	29.7	29.3
	THOUSAND METRIC TONS				
SKIM MILK POWDER					
UNITED STATES	311.5	80.3	24.1	22.5	...
EEC	824.7	524.0	81.2	101.4	...
TOTAL OF ABOVE	1 136.2	604.3	105.3	123.9	...
CHEESE					
UNITED STATES	357.9	204.5	180.4	149.5	...
EEC	357.5	407.8	307.1	211.3	...
TOTAL OF ABOVE	715.4	612.3	487.5	360.8	...
BUTTER					
UNITED STATES	113.7	66.8	97.5	124.6	...
EEC	1 394.8	1 835.2	163.2	108.2	...
TOTAL OF ABOVE	1 508.5	1 902.0	260.7	232.8	...

15. ANNUAL CHANGES IN CONSUMER PRICES: ALL ITEMS AND FOOD

REGION AND COUNTRY	ALL ITEMS				FOOD			
	1970	1975	1980	1988	1970	1975	1980	1988
	TO	TO	TO	TO	TO	TO	TO	TO
	1975	1980	1985	1989	1975	1980	1985	1989
	PERCENT/YEAR							
DEVELOPED COUNTRIES								
WESTERN EUROPE								
AUSTRIA	7.4	3.8	4.8	2.5	6.7	4.4	4.1	1.3
BELGIUM	8.3	6.4	13.3	3.1	7.5	4.6	7.5	3.1
DENMARK	9.5	10.4	7.9	4.8	10.7	...	8.1	3.8
FINLAND	2.0	10.6	8.5	6.6	12.4	10.8	9.3	3.6
FRANCE	8.8	10.4	9.6	3.6	9.6	10.0	9.7	4.3
GERMANY, FED. REP.	6.2	4.0	3.8	2.8	5.6	3.3	3.2	2.3
GREECE	13.1	16.3	20.5	13.7	14.7	17.6	20.6	18.2
ICELAND	24.8	42.0	50.5	21.1	28.3	41.0	53.1	19.2
IRELAND	13.0	12.9	12.1	4.0	14.3	13.7	10.0	4.7
ITALY	11.4	3.0	13.8	6.3	11.6	15.6	12.5	3.9
NETHERLANDS	8.6	6.1	4.0	1.1	6.9	...	3.3	0.8
NORWAY	8.3	8.4	8.9	4.5	8.3	7.4	6.6	2.7
PORTUGAL	15.3	...	23.9	12.6	16.3	21.0	24.2	14.4
SPAIN	12.0	18.6	12.3	6.8	12.1	16.0	12.3	7.7
SWEDEN	7.8	10.5	8.9	6.4	7.9	10.7	11.7	5.7
SWITZERLAND	7.9	2.4	4.1	3.2	7.3	2.9	4.9	1.7
UNITED KINGDOM	12.3	14.4	6.8	7.7	15.1	13.9	5.5	5.7
YUGOSLAVIA	19.3	18.2	45.7	1 251.8	19.1	19.4	47.1	1 207.0
NORTH AMERICA								
CANADA	7.4	8.4	7.3	5.0	11.1	9.9	5.9	3.7
UNITED STATES	6.7	8.9	5.2	4.8	9.5	7.6	3.8	5.7
OCEANIA								
AUSTRALIA	10.2	10.6	8.4	7.6	9.8	12.0	7.8	8.8
NEW ZEALAND	9.8	14.8	11.3	5.7	9.4	16.8	9.6	...
OTHER DEVELOPED COUNTRIES								
ISRAEL	23.9	60.0	193.7	20.2	25.1	65.0	192.9	20.5
JAPAN	12.0	6.5	2.6	2.2	13.0	5.5	2.6	2.2
SOUTH AFRICA	9.3	12.0	13.7	14.7	11.7	13.0	12.9	10.9
DEVELOPING COUNTRIES								
LATIN AMERICA								
ARGENTINA	59.5	100.0	207.9	3 079.5	58.0	...	327.0	3 050.8
BAHAMAS	9.5	6.9	5.5	...	11.8	7.7	5.1	...
BARBADOS	18.6	10.0	6.1	6.2	21.0	9.1	6.1	9.1
BOLIVIA	23.7	17.0	51.6 ¹	15.2	27.2	16.4	...	14.3
BRAZIL	23.5 ²	46.0	133.7	1 430.9	25.9 ²	49.0	142.8	1 344.9
CHILE	225.4	70.0	41.0	17.0	245.5	70.0	18.0	20.7
COLOMBIA	19.5	23.0	21.9	...	24.0	25.0	22.5	...
COSTA RICA	13.7	8.1	36.3	16.5	3.7	9.6	38.5	17.9
DOMINICAN REPUBLIC	11.1	8.3	10.6 ¹	51.2 ³	13.3	3.4	8.6 ¹	60.3 ³
ECUADOR	13.7	11.7	27.2	75.6	18.4	11.2	35.6	87.9
EL SALVADOR	8.4	...	14.0	17.7	8.8	...	14.3	26.9
GUATEMALA	2.9	10.7	...	11.4	3.3	9.4	...	10.9
GUYANA	8.2	12.8	19.6 ¹	4.0	12.2	14.1	26.5 ¹	4.1
HAITI	13.7	8.0	8.8	7.0	15.5	9.3	6.6	7.5
HONDURAS	6.5	9.2	7.1	10.2	8.0	9.6	4.2	12.0
JAMAICA	14.9	22.0	...	...	17.2	24.0	15.7	20.0
MEXICO	12.4	21.0	18.9	20.0	13.9	19.5	63.7	20.3
PANAMA	7.8	6.9	9.6	-0.1	9.9	6.6	3.6	-1.4
PARAGUAY	12.6	14.7	3.1	...	15.4	14.9	...	...
PERU	12.1	37.0	100.2	3 398.6	13.9	50.0	87.8	2 632.7
PUERTO RICO	8.8	5.6	2.9	3.7	12.6	5.5	2.8	5.1
SURINAME	8.2	11.5	6.4	...	9.5	12.2	4.8	...
TRINIDAD & TOBAGO	13.7	12.9	13.1	11.4	17.1	11.1	14.8	22.5
URUGUAY	73.4	55.0	43.7	80.4	76.0	55.0	43.1	80.5
VENEZUELA	5.5	11.4	10.5	84.5	8.5	15.7	13.6	125.8
FAR EAST								
BANGLADESH	39.0 ⁴	7.6	10.1	10.0	42.0 ⁴	5.0	10.9	8.8
BURMA	17.8	3.8	4.5	37.8 ⁵	21.0	2.6	4.2	45.8 ⁵
INDIA	13.2	1.3	6.9	7.9	14.2	0.8	6.7	8.1
INDONESIA	21.3	...	10.1	6.4	25.2	...	8.4	8.0
KOREA, REP.	14.3	17.2	6.3	5.7	16.8	17.2	5.4	6.8
MALAYSIA	6.7	4.6	4.5	2.8	10.4	3.7	2.5	3.7
NEPAL	10.3	6.7	11.6	8.8 ⁵	9.8	6.1	4.1	...
PAKISTAN	15.2	9.0	7.6	7.8	16.6	8.0	7.5	8.7
PHILIPPINES	18.7	12.0	20.6	10.6	20.1	11.0	20.2	12.9
SRI LANKA	8.0	9.9	12.6	11.6	9.1	10.7	12.6	10.3
THAILAND	9.8	10.4	4.6	6.3	11.9	10.6	3.0	10.2

15. (Cont.) ANNUAL CHANGES IN CONSUMER PRICES: ALL ITEMS AND FOOD

REGION AND COUNTRY	ALL ITEMS					FOOD		
	1970	1975	1980	1988	1970	1975	1980	1988
	TO	TO	TO	TO	TO	TO	TO	TO
	1975	1980	1985	1989	1975	1980	1985	1989
	PERCENT/YEAR							
AFRICA								
ALGERIA	5.1	12.4	7.1 ¹	9.3	7.2	15.7	4.0 ¹	9.0
BOTSWANA	...	12.4	8.5	11.7	...	13.8	...	10.2
BURKINA FASO	...	...	5.5 ⁶	-0.5	...	...	6.5 ⁶	-4.1
BURUNDI	...	18.3	8.9	...	...	16.2	9.4	...
CAMEROON	10.2	10.7	11.6	...	11.5	11.8	...	...
CENTRAL AFRICAN REPUBLIC	...	...	10.1 ⁷	0.7	...	...	10.1	1.0
ETHIOPIA	3.7	15.7	6.6	7.5	2.7	19.2	6.8	6.7
GABON	11.4	12.9	10.1	...	2.7	...	...	...
GAMBIA	10.5	10.2	12.0	8.2	12.8	9.7	13.4	6.9
GHANA	17.4	70.0	118.5	24.2	20.3	45.0	51.3	23.7
COTE D'IVOIRE	8.2	16.7	11.7	1.3 ⁸	9.3	19.3	4.2	1.4 ⁸
KENYA	13.9 ⁴	9.8	15.3	10.9	14.7 ⁴	10.2	12.9	10.4
LESOTHO	14.7 ⁴	15.1	13.7	...	16.4 ⁴	18.6	13.1	...
LIBERIA	12.1	8.8	3.4	5.8	13.7	8.1	2.1	10.9
MADAGASCAR	9.7	9.2	20.0	9.0	12.0	9.0	19.8	9.2
MALAWI	8.9	9.2	...	12.4	10.7	9.5	...	15.7
MALI	...	...	...	0.1	12.7	16.1	9.0	-3.1
MAURITIUS	13.1	16.9	...	12.6	14.7	16.3	...	14.0
MOROCCO	5.4	9.7	9.7	3.1	7.2	9.3	10.3	2.0
NIGER	7.9	14.6	6.8	1.6	10.6	14.8	8.4	-6.0
NIGERIA	11.5	14.4	19.9	40.8	13.1	20.0	21.3	39.7
SENEGAL	13.0	6.8	12.3	0.4	16.5	6.4	11.5	0.8
SIERRA LEONE	8.4	13.8	45.0 ¹	...	11.0	12.9	43.1 ¹	...
SOMALIA	7.8	...	40.0	...	9.0	...	33.0	...
SWAZILAND	9.3	13.2	13.9	20.5	9.8	14.0	13.7	12.8
TANZANIA	13.1	14.5	30.2	25.8	17.7	13.4	30.5	24.5
TOGO	8.9	8.1	6.3	-1.2	9.7	9.9	5.3	-17.6
TUNISIA	4.8	...	10.2 ¹	7.3	5.2	...	10.8 ¹	8.4
ZAIRE	18.6	...	...	...	21.2	...	...	...
ZAMBIA	7.1	15.2	19.4	124.7	7.4	13.7	19.9	131.2
ZIMBABWE	...	9.8	15.9	12.9	...	8.4	17.8	14.2
NEAR EAST								
CYPRUS	8.0	...	6.4	3.8	10.2	...	7.2	4.6
EGYPT	5.8	12.9	14.9	21.8	8.6	14.4	15.9	26.6
IRAN	9.6	16.1	16.1	...	10.0	18.9	15.4	...
IRAQ	11.3	...	14.5	...	18.1	...	...	...
JORDAN	6.0	11.6	...	25.7	9.2	9.8	...	20.8
KUWAIT	10.1	7.1	4.6	3.3	15.4	6.1	2.6	3.9
SAUDI ARABIA	...	11.3	-0.1	0.9	...	9.5	0.9	2.0
SUDAN	11.6	16.8	27.2 ¹	66.1	12.0	14.2	26.6 ¹	44.7
SYRIA	16.7	10.9	12.0	11.4	18.2	...	11.2	-11.9
TURKEY	6.2	50.0	30.0 ⁷	90.1	7.7	47.0	18.7 ⁷	70.6

¹ 1980-84² 1972-75³ JANUARY-JUNE⁴ 1973-75⁵ JANUARY-JULY⁶ 1983-85⁷ 1981-85⁸ JANUARY-AUGUSTSOURCE: ILO, *BULLETIN OF LABOUR STATISTICS*

16. PER CAPUT DIETARY ENERGY SUPPLIES IN SELECTED DEVELOPED AND DEVELOPING COUNTRIES

COUNTRY	1972-74	1975-77	1978-80	1981-83	1986-88
----- CALORIES PER CAPUT PER DAY -----					
ALGERIA	2004	2239	2528	2618	2758
ANGOLA	2001	2008	2162	2012	1806
BENIN	2090	2050	2154	2082	2164
BOTSWANA	2124	2138	2153	2199	2296
BURKINA FASO	1667	1786	1801	1795	2036
BURUNDI	2205	2392	2355	2395	2338
REPUBLIC OF CAMEROON	2245	2245	2244	2145	2180
CAPE VERDE	2044	2283	2552	2610	2703
CENTRAL AFRICAN REPUBLIC	2251	2193	2108	2039	2050
CHAD	1801	1789	1805	1562	1840
COMOROS	2199	2025	2060	2112	2067
CONGO	2256	2310	2405	2475	2577
EGYPT	2566	2727	2941	3184	3343
ETHIOPIA	1600	1575	1750	1754	1715
GABON	2173	2361	2374	2387	2521
GAMBIA	2074	2015	2018	2130	2357
GHANA	2182	2111	1980	1839	2201
GUINEA	2067	2086	2052	2056	2029
GUINEA-BISSAU	1925	1869	1878	2046	2543
COTE D'IVOIRE	2342	2322	2498	2543	2449
KENYA	2249	2253	2242	2187	2117
LESOTHO	1961	2173	2374	2326	2308
LIBERIA	2226	2312	2396	2372	2408
LIBYAN ARAB JAMAHIRIYA	2885	3343	3445	3510	3479
MADAGASCAR	2458	2502	2464	2452	2258
MALAWI	2425	2375	2282	2251	2098
MALI	1737	1807	1717	1806	2147
MAURITANIA	1877	1947	2090	2168	2621
MAURITIUS	2430	2606	2702	2740	2749
MOROCCO	2534	2611	2729	2736	2856
MOZAMBIQUE	1772	1802	1794	1742	1622
NAMIBIA	1979	1922	1906	1884	1890
NIGER	1978	2046	2277	2317	2372
NIGERIA	2065	2130	2241	2186	2106
REUNION	2590	2658	2821	2908	2967
RWANDA	1822	1995	1989	2026	1831
SAO TOME AND PRINCIPE	2043	2042	2290	2277	2352
SENEGAL	2266	2291	2358	2355	2208
SEYCHELLES	2199	2163	2312	2305	2337
SIERRA LEONE	2025	2010	2077	2005	1838
SOMALIA	1707	1746	1895	2052	2009
SOUTH AFRICA	2867	2929	2934	2997	3082
SUDAN	2098	2224	2340	2256	2071
SWAZILAND	2371	2480	2480	2564	2587
UNITED REP. OF TANZANIA	1857	2194	2270	2238	2229
TOGO	2104	1959	2123	2127	2149
TUNISIA	2510	2616	2718	2782	2971
UGANDA	2273	2228	2141	2213	2068
ZAIRE	2297	2264	2115	2099	2115
ZAMBIA	2255	2340	2220	2157	2066
ZIMBABWE	2179	2146	2198	2214	2283
ANTIGUA AND BARBUDA	2119	2015	2000	2136	2178
BAHAMAS	2440	2225	2246	2539	2680
BARBADOS	2925	2969	3085	3159	3188
BELIZE	2575	2618	2732	2615	2627
BERMUDA	2971	2904	3032	3102	3004
CANADA	3254	3259	3255	3273	3451
COSTA RICA	2500	2591	2604	2640	2781
CUBA	2641	2647	2783	2970	3103
DOMINICA	2163	2289	2404	2599	2884
DOMINICAN REPUBLIC	2140	2191	2249	2273	2359
EL SALVADOR	1910	2141	2246	2330	2396
GRENADE	2445	2389	2552	2739	2959
GUADELOUPE	2332	2375	2423	2564	2713
GUATEMALA	2105	2151	2154	2224	2327
HAITI	1989	2006	2015	2057	1992
HONDURAS	2119	2162	2201	2166	2138
JAMAICA	2623	2682	2613	2557	2579
MARTINIQUE	2422	2544	2622	2751	2844
MEXICO	2680	2780	2948	3099	3123
NETHERLANDS ANTILLES	2550	2735	2882	2983	2794
NICARAGUA	2370	2406	2339	2326	2373
PANAMA	2309	2335	2288	2409	2484
ST. KITTS AND NEVIS	2246	2289	2310	2378	2822
SAINT LUCIA	2149	2149	2310	2458	2760

16. (Cont.) PER CAPUT DIETARY ENERGY SUPPLIES IN SELECTED DEVELOPED AND DEVELOPING COUNTRIES

COUNTRY	1972-74	1975-77	1978-80	1981-83	1986-88
----- CALORIES PER CAPUT PER DAY -----					
SAINT VINCENT/GRENADINES	2336	2284	2416	2517	2764
TRINIDAD AND TOBAGO	2619	2660	2843	2940	2983
UNITED STATES	3392	3423	3489	3499	3644
ARGENTINA	3171	3235	3259	3163	3168
BOLIVIA	1958	2027	2068	2063	2096
BRAZIL	2487	2514	2595	2621	2703
CHILE	2640	2534	2628	2626	2581
COLOMBIA	2270	2383	2455	2544	2544
ECUADOR	2090	2188	2228	2198	2302
FRENCH GUIANA	2478	2420	2506	2611	2778
GUYANA	2333	2336	2427	2445	2423
PARAGUAY	2673	2723	2798	2791	2784
PERU	2272	2239	2184	2195	2277
SURINAME	2327	2380	2527	2616	2775
URUGUAY	2912	2842	2754	2737	2746
VENEZUELA	2336	2529	2656	2584	2534
AFGHANISTAN	2272	2298	2279	2184	2110
BANGLADESH	1907	1910	1911	1933	1925
BRUNEI DARUSSALAM	2439	2603	2742	2846	2839
MYANMAR	2050	2113	2254	2411	2545
CHINA	2029	2087	2275	2460	2637
HONG KONG	2680	2713	2758	2790	2883
INDIA	2003	1999	2100	2113	2104
INDONESIA	2187	2194	2368	2546	2645
IRAN, ISLAMIC REP. OF	2540	2924	2877	3037	3124
IRAQ	2264	2405	2606	2788	2950
ISRAEL	3066	3073	3099	3024	3133
JAPAN	2802	2766	2785	2806	2822
JORDAN	2455	2400	2563	2753	2884
CAMBODIA	2098	1758	1740	1829	2162
KOREA, DEM. PDP. REP.	2591	2787	2980	3054	3172
KOREA, REPUBLIC OF	2680	2783	2839	2837	2867
KUWAIT	2673	2788	3009	3004	3127
LAO PDP. DEM. REP.	2166	1993	2297	2502	2614
LEBANON	2475	2526	2788	3017	3275
MACAU	2278	2278	2278	2284	2233
MALAYSIA	2516	2574	2655	2619	2665
MALDIVES	1703	1766	1917	2019	2140
MONGOLIA	2379	2405	2457	2453	2481
NEPAL	1957	1964	1953	1987	2034
PAKISTAN	2049	2188	2232	2208	2167
PHILIPPINES	1863	2108	2268	2267	2238
SAUDI ARABIA	1899	2036	2685	2835	2805
SINGAPORE	2730	2709	2710	2717	2882
SRI LANKA	2157	2207	2292	2240	2297
SYRIAN ARAB REPUBLIC	2517	2542	2843	3152	3142
THAILAND	2263	2296	2310	2291	2288
TURKEY	2904	2987	3039	3017	3084
UNITED ARAB EMIRATES	3136	3371	3383	3362	3489
VIET NAM	2094	2003	2037	2161	2217
YEMEN ARAB REPUBLIC	1981	2066	2176	2224	2277
YEMEN, DEMOCRATIC	1969	1908	2075	2220	2314

16. (Cont.) PER CAPUT DIETARY ENERGY SUPPLIES IN SELECTED DEVELOPED AND DEVELOPING COUNTRIES

COUNTRY	1972-74	1975-77	1978-80	1981-83	1986-88
----- CALORIES PER CAPUT PER DAY -----					
ALBANIA	2568	2584	2727	2769	2743
AUSTRIA	3272	3271	3350	3420	3476
BELGIUM-LUXEMBOURG	3507	3511	3577	3765	3901
BULGARIA	3494	3551	3591	3660	3650
CZECHOSLOVAKIA	3408	3396	3406	3491	3540
DENMARK	3372	3339	3466	3504	3605
FINLAND	3178	3117	3086	3080	3120
FRANCE	3124	3162	3249	3216	3312
GERMAN DEMOCRATIC REP.	3370	3486	3609	3711	3855
GERMANY, FED. REP. OF	3210	3208	3345	3327	3528
GREECE	3400	3458	3499	3612	3702
HUNGARY	3375	3438	3478	3524	3635
ICELAND	3041	2987	3077	3192	3361
IRELAND	3603	3544	3607	3675	3688
ITALY	3522	3401	3600	3479	3571
MALTA	3098	3123	3081	3013	3258
NETHERLANDS	3253	3228	3320	3286	3303
NORWAY	3118	3135	3318	3242	3266
POLAND	3473	3570	3584	3345	3434
PORTUGAL	3029	3068	3051	3158	3284
ROMANIA	3199	3377	3397	3292	3327
SPAIN	3080	3248	3323	3338	3494
SWEDEN	2883	2990	3016	3059	3031
SWITZERLAND	3577	3466	3567	3585	3623
UNITED KINGDOM	3264	3255	3227	3170	3218
UNION OF SOV. SOC. REP	3319	3369	3378	3370	3382
YUGOSLAVIA	3370	3508	3529	3597	3570
AUSTRALIA	3109	3280	3286	3257	3347
FIJI	2729	2720	2780	2781	2785
FRENCH POLYNESIA	2746	2737	2776	2812	2856
KIRIBATI	2632	2719	2862	2921	2952
NEW CALEDONIA	2865	2882	2895	2912	2919
NEW ZEALAND	3479	3401	3373	3404	3476
PAPUA NEW GUINEA	2082	2077	2143	2190	2227
SAMOA	2168	2340	2390	2435	2474
SOLOMON ISLANDS	2124	2131	2145	2172	2140
TONGA	2720	2819	2896	2937	2964
VANUATU	2554	2552	2543	2526	2533

17. ANNUAL AGRICULTURAL (BROAD DEFINITION) SHARES OF TOTAL OFFICIAL COMMITMENTS TO ALL SECTORS, BY MULTILATERAL AND BILATERAL SOURCES, 1980-88

	1980	1981	1982	1983	1984	1985	1986	1987	1988 ¹
	PERCENT								
TOTAL COMMITMENTS									
MULTILATERAL AGENCIES ²	38	34	35	35	29	31	33	29	29
WORLD BANK ³	35	32	32	38	27	28	32	22	24
REGIONAL DEVELOPMENT BANKS ³	44	38	36	25	26	32	34	40	32
OPEC MULTILATERAL ³	15	11	17	21	25	28	35	23	19
BILATERAL									
DAC/EEC	10	10	10	11	11	12	12	12	11
OPEC BILATERAL	...	...	...	...	...	...	...	...	...
ALL SOURCES	...	...	...	...	...	...	...	...	...
CONCESSIONAL COMMITMENTS ONLY									
MULTILATERAL AGENCIES ²	51	54	49	48	47	55	42	55	52
WORLD BANK ³	46	56	45	52	49	54	29	35	37
REGIONAL DEVELOPMENT BANKS ³	63	61	56	38	33	51	51	63	65
OPEC MULTILATERAL ³	30	16	30	26	47	65	45	73	21
BILATERAL	13	14	16	14	15	15	15	(15)	(16)
DAC/EEC	16	18	17	17	17	16	16	16	(16)
OPEC BILATERAL	1	4	12	4	6	5	6	4	6
ALL SOURCES	19	21	22	20	21	22	19	(20)	(21)

¹ PRELIMINARY

² INCLUDING, UNDP, CGIAR, FAO (TF/TPC), IFAD

³ EXCLUDING COMMITMENTS TO CGIAR

**18. PERCENTAGE DISTRIBUTION OF OFFICIAL COMMITMENTS TO AGRICULTURE (BROAD DEFINITION),
BY MULTILATERAL AND BILATERAL SOURCES, 1980-88**

	1980	1981	1982	1983	1984	1985	1986	1987	1988 ¹
	PERCENT								
TOTAL COMMITMENTS									
MULTILATERAL AGENCIES	60	60	59	63	55	59	61	53	46
WORLD BANK ²	35	35	35	44	29	36	38	28	25
REGIONAL DEVELOPMENT BANKS ²	16	17	15	11	17	15	15	18	15
OPEC MULTILATERAL ²	1	1	2	2	3	2	3	2	1
OTHER ³	8	6	7	6	6	6	5	5	5
BILATERAL	40	40	41	37	45	41	39	47	54
DAC/EEC	39	37	35	35	43	39	37	46	53
OPEC BILATERAL	1	3	6	2	2	2	2	1	1
ALL SOURCES (MULTILATERAL + BILATERAL)	100	100	100	100	100	100	100	100	100
CONCESSIONAL COMMITMENTS ONLY (ODA)									
MULTILATERAL AGENCIES	45	42	40	41	37	42	31	37	33
WORLD BANK ²	21	21	20	18	19	24	11	14	14
REGIONAL DEVELOPMENT BANKS ²	12	12	7	11	7	8	9	14	11
OPEC MULTILATERAL ²	1	1	2	2	2	2	3	2	2
OTHER ³	11	9	11	10	8	8	8	7	6
BILATERAL	55	58	60	59	63	58	69	63	67
DAC/EEC	53	54	51	56	60	56	66	62	66
OPEC BILATERAL	2	4	9	3	3	2	3	1	1
ALL SOURCES (MULTILATERAL + BILATERAL)	100	100	100	100	100	100	100	100	100

¹ PRELIMINARY

² EXCLUDING COMMITMENTS TO CGIAR

³ INCLUDING UNDP, CGIAR, FAO(TF/TCP), IFAD

SOURCE: FAO AND OECD

19. DAC COUNTRIES: BILATERAL ODA COMMITMENTS FROM INDIVIDUAL COUNTRIES AND PROPORTION TO AGRICULTURE (BROAD DEFINITION), 1983-88

	BILATERAL ODA TO ALL SECTORS						PROPORTION OF ODA TO AGRICULTURE					
	1983	1984	1985	1986	1987	1988 ¹	1983	1984	1985	1986	1987	1988 ¹
	US\$ MILLIONS						PERCENT					
AUSTRALIA	536	694	532	532	527	927	5	0	9	13	13	6
AUSTRIA	183	79	60	126	147	(100)	2	1	3	5	3	(5)
BELGIUM	187	180	132	318	404	430	5	1	23	14	18	11
CANADA	1 139	1 575	1 172	1 179	1 644	1 911	25	2	24	24	19	20
DENMARK	260	288	340	480	416	642	22	38	33	29	38	31
FINLAND	96	171	233	276	222	399	24	3	11	19	41	37
FRANCE	4 380	4 403	3 756	4 822	5 493	(6 366)	11	0	10	12	10	(10)
GERMANY, FED. REP.	2 271	2 800	2 427	3 337	4 303	4 841	15	4	15	18	13	18
IRELAND	14	13	17	25	27	22	-	-	...	8	7	14
ITALY	882	903	1 178	2 327	3 135	3 040	20	0	17	16	21	21
JAPAN	3 483	3 968	4 076	4 342	7 343	12 326	17	9	25	18	13	19
NETHERLANDS	901	902	731	1 299	1 709	1 809	23	7	18	29	34	25
NEW ZEALAND	40	41	47	34	51	78	15	5	26	15	10	8
NORWAY	288	350	346	548	514	313	17	35	23	20	20	16
SWEDEN	526	576	566	779	900	1 078	24	6	25	19	21	20
SWITZERLAND	239	218	307	329	462	519	55	22	32	27	26	29
UNITED KINGDOM	927	1 009	731	1 081	1 441	1 691	12	4	14	17	9	9
UNITED STATES	6 989	8 144	9 157	8 746	7 412	7 928	14	4	11	11	13	11
TOTAL/DAC COUNTRIES	23 341	26 314	25 808	30 580	36 150	(44 420)	15	6	17	18	15	(16)

¹ PRELIMINARY

SOURCE: OECD

20. PERCENTAGE DISTRIBUTION OF OFFICIAL COMMITMENTS TO AGRICULTURE, BY PURPOSE, 1981-1988

	1981	1982	1983	1984	1985	1986	1987	1988 ¹
	PERCENT							
LAND AND WATER DEVELOPMENT ²	17	23	20	22	23	19	15	16
AGRICULTURAL SERVICES	7	12	15	16	11	19	16	11
SUPPLY OF INPUTS	5	6	6	7	4	3	7	8
CROP PRODUCTION	6	8	7	7	6	6	4	6
LIVESTOCK	2	1	2	2	3	2	2	4
FISHERY ³	3	2	2	2	2	2	2	2
RESEARCH, EXTENSION, TRAINING ⁴	5	5	6	9	7	7	8	5
FORESTRY	2	3	2	3	5	2	3	5
AGRICULTURAL ADJUSTMENT AND UNALLOCATED	1	1	2	4	7	9	5	10
TOTAL NARROW DEFINITION	48	61	62	72	69	69	62	69
RURAL INFRASTRUCTURE	11	15	12	7	8	8	11	10
MANUFACTURE OF INPUTS ⁵	9	4	1	5	2	5	2	7
AGRO-INDUSTRIES	5	3	6	3	4	3	3	4
INTEGRATED RURAL AND REGIONAL DEVELOPMENT	27	17	19	13	17	15	22	10
TOTAL BROAD DEFINITION	100	100	100	100	100	100	100	100

NOTE: THIS TABLE NOW INCLUDES FORESTRY IN THE NARROW DEFINITION

¹ PRELIMINARY² INCLUDING RIVER DEVELOPMENT³ INCLUDING INPUTS SUCH AS FISHING TRAWLERS, FISHING GEAR⁴ INCLUDING COMMITMENTS TO CGIAR⁵ MOSTLY FERTILIZERS

SOURCE: FAO COMPUTERIZED DATA BANK ON EXTERNAL ASSISTANCE TO AGRICULTURE

21. DISTRIBUTION OF OFFICIAL COMMITMENTS TO AGRICULTURE (BROAD DEFINITION) FROM ALL SOURCES, BY REGION AND ECONOMIC GROUPS, 1981-88

	1981	1982	1983	1984	1985	1986	1987	1988 ²
	PERCENT							
TOTAL COMMITMENTS								
FAR EAST AND PACIFIC	42	48	42	46	46	40	40	45
AFRICA	28	29	26	28	26	27	34	27
LATIN AMERICA	23	18	24	18	19	24	22	20
NEAR EAST	7	5	9	7	10	9	4	8
TOTAL DEVELOPING REGIONS	100	100	100	100	100	100	100	100
LOW-INCOME FOOD-DEFICIT COUNTRIES ²	68	71	68	75	72	63	78	77
CONCESSIONAL COMMITMENTS								
FAR EAST AND PACIFIC	49	46	48	51	49	48	46	49
AFRICA	32	40	31	34	30	37	40	31
LATIN AMERICA	12	9	12	8	12	7	8	10
NEAR EAST	8	6	9	8	8	8	6	10
TOTAL DEVELOPING REGIONS	100	100	100	100	100	100	100	100
LOW-INCOME FOOD-DEFICIT COUNTRIES ²	82	83	83	85	82	80	89	88
NON-CONCESSIONAL COMMITMENTS								
FAR EAST AND PACIFIC	28	52	33	39	40	32	29	36
AFRICA	21	11	19	18	18	18	22	14
LATIN AMERICA	46	34	40	36	30	41	49	46
NEAR EAST	5	3	8	7	12	9	-	4
TOTAL DEVELOPING REGIONS	100	100	100	100	100	100	100	100
LOW-INCOME FOOD-DEFICIT COUNTRIES ²	40	50	47	56	53	48	55	48

¹ PRELIMINARY

² 74 COUNTRIES DEFINED BY THE WORLD BANK ACCORDING TO GNP PER HEAD OF \$1 135 IN 1989

SOURCE: FAO COMPUTERIZED DATA BANK ON EXTERNAL ASSISTANCE TO AGRICULTURE



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