

Department of International Economic and Social Affairs

1989 REPORT ON THE WORLD SOCIAL SITUATION



UNITED NATIONS

New York, 1989

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures.

ST/ESA/213
E/CN.5/1989/2

UNITED NATIONS PUBLICATION

Sales No. E.89.IV.1

02100

ISBN 92-1-130129-7

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PREFACE

The *1989 Report on the World Social Situation* is the twelfth in a series of reports on this subject dating from 1952.

Guidelines for the preparation of the report were provided by the General Assembly in resolution 40/100 and by the Economic and Social Council in resolution 1987/52 and in the annex to resolution 1985/21, which contains the conclusions of the Commission for Social Development on the *1985 Report on the World Social Situation*. In addition, the report of the Secretary-General entitled "Highlights of the world social situation 1987: recent developments and current issues" (E/CN.5/1987/2), submitted to the Commission for Social Development at its thirtieth session, in 1987, contained a draft framework for the 1989 report.

In resolution 1987/40, the Council requested the Secretary-General to include in the 1989 report a section on the impact of structural adjustment, including debt, on the social development of developing countries and to give special emphasis to the social aspects of rural development. The impact of structural adjustment is assessed in the introduction to the report and the consequences for the social situation and social development are discussed in several chapters. The social aspects of rural development have also been emphasized. In resolution 1987/46, the Council requested the Secretary-General to include in the report a section on recent views and trends concerning the family, making use of the survey of national policies for families. Chapter I (The changing structure of the family) responds to that request.¹ Pursuant to Council resolution 1987/39, information on the critical social situation in Africa is provided in the annex.

The decade of the 1980s has been a period of profound change, no less in the social sphere than in the economic. On the political front, major changes have occurred; international tensions have eased considerably and regional conflicts have subsided. In the preparation of this report a special effort was made to take account of the rapid and far-reaching changes that have occurred and to bring forth for discussion the consequences of such changes for the evolving social situation.

The second half of the 1980s witnessed important changes in socio-economic conditions in many countries. There has been a resumption of economic growth in developed market economies, yet unemployment remains high in most of Western Europe. In most industrialized socialist countries, a process of reform has been under way with wide political, economic and social implications. While in most of Asia, including the most populous countries, there has been some consolidation of the improvements in food and industrial production gained in the first half of the 1980s, in most of Africa and Latin America socio-economic conditions have worsened perceptibly.

Acute poverty and malnutrition prevail in many parts of the developing world. Widespread concerns have emerged about continuous environmental degradation and its long-term implications for development. These problems, together with issues that have arisen as a result of changes that have occurred during the current decade, will be the focus of attention of Member States as they begin to formulate a new international development strategy for the 1990s.

This report was prepared by the Office for Development Research and Policy Analysis of the Department of International Economic and Social Affairs of the United Nations Secretariat, with contributions from the Centre for Social Development and Humanitarian Affairs of the United Nations Office at Vienna. The annex was prepared by the secretariat of the Economic Commission for Africa.

NOTE

¹ A separate report of the Secretary-General (E/CN.5/1989/4) contains a comprehensive account of the results of the survey of national policies for families.

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Explanatory notes

References to dollars (\$) are to United States dollars unless otherwise stated.

A full stop is used to indicate decimals.

A comma is used to distinguish thousands and millions.

The term "billion" signifies a thousand million.

The following symbols have been used in tables:

Two dots (..) indicate that data are not available or are not separately reported.

A dash (—) indicates that the amount is nil or negligible.

A blank indicates that the item is not applicable.

A minus sign before a figure (-2) denotes a deficit or decrease, except as otherwise indicated.

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 Secretariat of the United Nations concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers.

The term "country" as used in the text of this report also refers, as appropriate, to territories or areas.

For analytical purposes, the following country classification has been used:

Centrally planned economies: China, Eastern Europe and Union of Soviet Socialist Republics

Developed market economies: North America, southern and western Europe (excluding Cyprus, Malta and Yugoslavia), Australia, Japan, New Zealand and South Africa

Developing countries: Latin America and the Caribbean area, Africa (other than South Africa), Asia (excluding Japan) and Cyprus, Malta and Yugoslavia

The designations of country groups in the text and the tables are intended solely for statistical or analytical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process.

INTRODUCTION

A. A NEW SETTING FOR SOCIAL DEVELOPMENT

The world social situation, as the last decade of the twentieth century approaches, is profoundly different from that of a few decades ago, let alone at the beginning of the century. Many countries can point with pride to extraordinary achievements and continuing progress. But this is also a time of severe deterioration in economic conditions in many countries and of rising concerns about social conditions in prosperous and poor countries alike. It is also a time of reassessment, in which new concerns and issues clamour for attention and old questions about the role of government in social development are being raised anew.

Poverty remains a major challenge to the world community. In rich countries, where absolute poverty has been virtually eliminated, new forms of poverty are emerging. In many low-income countries, social conditions have none the less greatly improved. Pockets of social poverty persist in all societies, but the greatest numbers of the absolutely poor in the world are in South Asia and sub-Saharan Africa.

In the 1980s, the improvement of world social conditions has been slowed down or reversed in a large number of countries, especially in Latin America and Africa. The favourable economic performance in the large countries of Asia has enabled them to make considerable social progress. Slower economic growth in industrial countries, whether centrally planned economies or market economies, has forced them to reconsider some of their social policies.

One of the most prominent features of the social situation at the present time is thus the impact of economic adversity. As an expected result there has been a widespread demand for more efficient use of resources in promoting social welfare. It is claimed in many countries that the public sector, which has for decades been regarded as the natural instrument of social policy, has been overloaded, and that the private sector and voluntary associations should play a more important role in social development. In this respect the setting for social development at the end of the 1980s is very different from that which has prevailed at any time since the first report on the world social situation was issued, in 1952.

The selection of themes included in the report has been largely governed by resolutions and decisions of the General Assembly, the Economic and Social Council and the Commission for Social Development. The main focus is the decade of the 1980s, especially the years since the 1985 report was issued.

The coverage of individual countries has been determined by the availability of up-to-date information. Consequently, there is some imbalance. There are fairly extensive comments on the situation in some countries, and little or none in others. Generally, information about the current social situation is more scarce in developing countries and centrally

planned economies than in developed market economies. However, an effort has been made to focus attention on the problems of social development where they are the most serious.

The report builds on a variety of sources. Government publications are a principal source, but they have been supplemented by papers and reports from intergovernmental agencies, research institutes and individual scholars. No attempt could be made to take full and systematic account of the academic literature.

In the following sections, some aspects of the economic penury of so many developing countries will first be recalled, followed by a brief summary of the report.

B. SLOW GROWTH AND SCARCE RESOURCES

It is already clear that the rate of growth of the world economy during the period 1981-1990 will turn out to have been substantially lower than it was in 1971-1980, probably 3 per cent compared with about 4 per cent. With population growth at 1.7 per cent, per capita output growth will probably not exceed 1.3 per cent for the 1980s (see table 1).

However, disparities in the structures of their economies and policies have contributed to substantial differences among countries. The old industrialized countries have grown more slowly, which has retarded the growth of many of the countries supplying them with commodities. On the other hand, countries with large domestic markets and sources of supply, such as China and India, have grown very fast. China's growth rate for the decade will probably be above 8 per cent per annum, which, after correction for population growth, implies a doubling of per capita income in 10 years and a quadrupling in 20 years. Small countries flexible enough to adjust rapidly to the changing world environment, such as the Republic of Korea, Singapore and Taiwan, Province of China, have grown even faster.

The countries with low or negative growth were generally more adversely affected by falls in their terms of trade, and by an abrupt shift in the net transfer of resources as their interest payments rose while new capital inflows dried up.

Commodity prices, which remain essential to most developing countries, declined sharply in the 1980s, not necessarily in absolute terms but in real terms—that is, in terms of the manufactured goods they could buy. The real purchasing power of oil, minerals and metals (in terms of manufactured goods) is now 50 per cent below that of the late 1970s or early 1980s, and that of agricultural commodities is some 20 per cent to 30 per cent lower.

The shifts in terms of trade have obviously affected countries unevenly, depending on the structure of their trade. The overall loss amounted to 20 per cent to 40 per cent (relative to 1980) for Africa, Latin America and West Asia. It was

TABLE 1. GROWTH OF POPULATION AND OUTPUT BY REGION, 1971-1989

	Population 1985 (millions)	Population growth rate 1985-1990 (annual percentage)	Gross domestic product 1985 (billions of 1980 dollars)	Rate of change of gross domestic product (annual percentage)					
				1971- 1980	1981- 1985	1986	1987	1988 ^a	1989 ^b
World	4 837	1.6	..	3.9	2.7	3.5	3.4	4.3	3.5
Developed market economies	789	0.6	7 640	3.1	2.2	2.7	3.3	4.0	3.1
Centrally planned economies of Europe ^c	394	0.8	..	5.2	3.3	4.2	2.6	4.6	4.0
China ^c	1 060	1.2	..	5.7	9.4	7.4	9.4	11.0	7.5
Developing countries	2 595	2.3	2 217	5.6	1.5	2.9	2.7	2.9	3.5
Western hemisphere	405	2.2	822	5.5	1.0	3.6	2.5	0.5	1.6
West Asia	108	3.2	343	6.5	-0.9	0.1	0.8	1.0	2.9
South and East Asia	1 486	1.9	606	5.6	4.8	5.5	5.5	7.4	5.2
Africa	523	3.1	305	4.9	-0.9	-2.1	1.0	2.4	2.5
Mediterranean	74	1.6	141	5.3	2.9	5.6	3.4	3.4	3.8

Source: Department of International Economic and Social Affairs of the United Nations Secretariat. Data on population and population growth rates are from *World Population Prospects: Estimates and Projections as Assessed in 1984* (United Nations publication, Sales No. E.86.XIII.3).

^a Preliminary estimates.

^b Forecast, based on Project LINK and Secretariat estimates.

^c Net material product.

less for Asia, where exports of manufactured goods have expanded substantially.

Another key price in the international economy is the rate of interest. In nominal terms, international rates of interest have found a level in the 1980s which is not too dissimilar from that of the 1970s. When account is taken of price movements, notably the prices of commodity exports required to service foreign debt, the picture is different, and the real interest rate in nominal terms increased so sharply in the 1980s that a debt crisis occurred in all the heavily indebted countries.

As the debt crisis checked the inflow of new lending, the obligations to pay old debts resulted in growing transfers of resources out of these countries and the consequent need to reduce imports and promote exports. Although exports from the heavily indebted countries have greatly increased, it has been necessary to contract imports, sometimes sharply. Public finances have been strained to the point where inflationary approaches become inevitable, and the ensuing disorder has in some cases resulted in capital flight, which further constrains domestic investment.

In many countries, particularly indebted developing countries, structural adjustment policies have been undertaken in a context of declining or depressed gross domestic investment. While a better allocation of resources as a consequence of such policies holds the promise of faster growth in the future, reduced investment levels are still preventing any significant recovery in most of these countries.

This is only one of the patterns of economic constraint that countries have experienced in recent years. Other patterns have other roots, and it is difficult to explain why so many countries, whether rich or poor, have run into such aggravated public finance crises in the 1980s, unless one recalls that public revenue in all countries is essentially a function of national income growth, whereas the pressures for spending tend to rise when incomes falter.

Indeed, the growth deceleration in the 1980s occurred in many countries at a time of increased concern about fiscal

deficits. The consequence in the case of developed countries was a much more cautious approach to social spending and a widespread review of the effectiveness of existing public programmes. In the case of many developing countries, the change was often much more abrupt. The rapid decline in the national income of the early 1980s led to a reduction in public revenues, which was aggravated by a major drop in external financial transfers. The adjustment of public expenditures had to be swift. In most cases public investment, including investment in social infrastructure, was cut substantially, while efforts were made to maintain current expenditures at levels that would maintain unaltered education, health and other social services. In the event, in several developing countries the latter were also affected, and by the second half of the 1980s the quantity and quality of social services had worsened significantly.

C. PRINCIPAL THEMES

Contemporary social policy covers a sprawling range of issues, but this report can raise only some of them. Demographic trends, inevitably, command primary attention. They reflect fundamental changes in life situations, not least in the role of the family and the household. To a large extent these changes have followed expected patterns in countries undergoing modernization, industrialization and urbanization. Households have become smaller and increasingly limited to core families rather than the extended families of the past. In the industrialized countries, children leave to establish separate households and families earlier than before. The number of single-parent families is increasing, raising legal and social problems. Single mothers with children form a disproportionate share of the poor, with faint prospects of escaping from the vicious circle of poverty.

The position of women varies greatly among countries. In developed countries there has been considerable progress in increasing the participation of women in the labour force, but the wages earned and the responsibilities handled by men and women remain very different. In developing coun-

tries, women have sometimes found new employment opportunities, but in countries that have suffered economic setbacks they have often been forced back into jobs with lower status and pay. A few women have become heads of government and hold high levels of responsibility in their societies in developing countries, but women still do not have equal access to education in all its forms.

The global supply of food, if equally distributed, would provide adequate nutrition for all. It is essential to resolve problems of distribution, effective demand and entitlements. Without purchasing power, neither nations nor individuals have access to food even if stocks are plentiful. But the drought in 1988 in the United States of America and the floods and drought in South Asia in 1987 and 1988 have brought world cereal stocks to dangerously low levels. Governments and international organizations have to ensure that the distribution of supplies in 1989 can meet emergency situations.

The distribution of world income among individuals cannot yet be assessed. However, while the disparity in per capita incomes between developed and developing countries has continued to widen in absolute as well as in relative terms, the distribution among developing countries improved somewhat during the 1980s, as the most populous developing countries grew rapidly. The gap between poor and rich countries remains a major challenge. If per capita incomes in the poor countries continue to grow more slowly than in the rich, as happened in the 1980s, the gap will widen. In virtually half the developing countries, per capita gross domestic product in 1988 was lower than in 1980.

Within the developed market economies, there is some evidence of growing inequality of income in the 1980s. In developing countries there is no hard statistical evidence of this, but many social indicators suggest it. The proportion of people living below the poverty line does not seem to have risen in the 1980s, although the absolute number increased as populations grew.

Technical progress is a powerful force in social change. Recent advances in electronics, biotechnology and materials development have already had a major impact on social life in the advanced industrial countries and, to some extent, on the world community as a whole, which has become more closely integrated owing to new facilities for instant communication.

The threats to the global environment have been matters of concern in the United Nations since the early 1970s, and there is no doubt that the accumulating evidence of ecological disruption is causing concern world wide, notably the "greenhouse effect" which is so evidently beyond the control of any one country.

The arms race and the pre-emption of resources for military uses have long obstructed efforts to promote economic and social development. Vast resources have been devoted to instruments of destruction rather than construction, and theatres of conflict in the developing world have been subjected to cruel devastation. The new prospects for relaxation of international tensions raise hopes that in the future re-

sources will be released from military purposes and used for peaceful purposes, and that development efforts can proceed undisturbed.

International terrorism, drug trafficking and abuse, and the spread of AIDS have arisen as major issues in recent years. They have provoked relatively quick international responses of various kinds. But they rely on national action. In the case of drug abuse and the spread of AIDS, Governments agree on the importance of education for survival. Against international terrorism, Governments have increased their vigilance and jointly agreed to refuse to concede to the demands of terrorists. In addition, the phenomenon of terrorism has given rise to much inquiry about its socio-political background and the vulnerability of modern society.

Migrants and refugees are an important part of the world social scene. In the 1980s the flow of migrants was attenuated by the decline of economic opportunity in both the industrialized and the oil-exporting countries. However, the number of refugees increased, mainly owing to armed conflicts and natural disasters. Many of those fleeing from natural disasters have become refugees or displaced persons within their own countries. The problems of migrant workers change if they lose their jobs or if their children face problems of assimilation. The question of their political and civil rights has arisen. International agreements governing their condition are under negotiation.

The spectrum of social problems is very wide, and this report does not embrace them all. Other organizations of the United Nations system give much attention to the urgent needs of the world's children and to problems of employment and health. This report takes up problems of social policy that are not discussed elsewhere, and attempts to place them within the overall consideration of economic and social policy.

This report is issued in 1989, the year in which the 200th anniversary of the French Revolution is celebrated. The origins and the consequences of that event remain, to this day, subjects of lively controversy among scholars of history. But no one can dispute the fact that the aspirations dominating political life during these 200 years have drawn much of their inspiration from the intense intellectual activity that preceded and accompanied the French Revolution. It crystallized the fundamental challenge of society in a few simple and immensely powerful ideas.

In the past decade many societies have been preoccupied with re-establishing the synthesis of liberty and equality. Should the State seek to promote equality by using its coercive powers and should fundamental liberties be sacrificed? Does the zealous pursuit of equality itself cause tensions that reduce fraternity? Is social solidarity consistent with inequalities stemming from the exercise of liberty?

Such questions are at the root of the controversies about the very nature of society and its governance. They have been raised from time to time in many parts of the world, but the ideas proclaimed two centuries ago gave to all such aspirations an unforgettable and unambiguous voice.

Chapter I

THE CHANGING STRUCTURE OF THE FAMILY

The family, as a fundamental unit of society and the traditional source of support, socialization and care of family members, has undergone significant structural transformation over the last generation in many regions of the world. This has prompted widespread concern about the ability of the family to discharge its functions towards its members and society at large. Consequently, there is a recognized need for governmental and other societal institutions to adjust their policies and services accordingly.¹

The family, as a social institution traditionally based on kin relationships resulting from marriage, descent or adoption, performs certain functions for its members and society, ranging from the care of family members and economic production for subsistence or exchange to reproduction and socialization. Family members rely on and contribute to these functions in varying ways and degrees over the course of their lives. Familial functions are very often determined by family structure—relationships and obligations between members, living arrangements and the size of the family. Family structure and the overall socio-economic system interact continually as a society changes, although the precise mechanisms of the interrelationship are still debated. As a result, there are vast variations in family structure in different regions of the world.²

Traditional definitions of family structure tended to be based on the major family types historically found in European and Asian societies—the “nuclear” and the “extended” family.³ A nuclear family comprises a husband and wife and their children, while an extended family is a group of kin consisting of more than one nuclear family that may or may not live in a common household. The strength of family ties and obligations, as well as shared residence, are salient characteristics of a family type. While this typology can encompass the “compound” family found in many parts of Africa, it excludes a major family type common in Latin America and the Caribbean—a family headed by a single woman with relatives and/or her dependent children. With the significant rise in marital dissolution, extra-marital births and remarriage in many developed countries, emerging family types, such as the single-parent family or the “re-constituted” family that results from remarriage, also defy the traditional characterization of family structures. The legal systems and public policy-making bodies of many countries have lagged behind recent changes in family structure in their definition of families and identification of problems specific to particular changes in family structure. As a result, policy makers may fail to consider the situation of family members, such as women, children and the elderly, in a fully integrated familial context, resulting in potentially less than adequate measures to ensure their well-being.⁴

From one perspective, changes in the nature and functions

of the family in society are a consequence of long-term social and economic changes. The extended family, which functioned well within the context of mostly agrarian societies, has been replaced by the nuclear family in more industrialized and urbanized societies. With the advances in technology that have given women much more control over child-bearing, the economic changes that have provided them with sources of sustenance independent of their spouse, and the social changes that have enabled women to achieve levels of education and training equal to those of men, the nuclear family itself is changing substantially. That this process does not always occur in line with economic and social changes is clear from the family structure prevalent in several countries in Latin America and the Caribbean, described above. It is perhaps likely that with the new technologies that permit people to work from home rather than in centralized factories and offices, the nuclear family may be newly strengthened.

This chapter considers certain aspects of recent changes in family structure, their consequences and the social responses to them. The focus is on the impact of these changes on the well-being of individuals, in particular the support, socialization and care of dependent family members.

A. CHANGES IN FAMILY STRUCTURE

1. *Demographic and long-term factors*

Family structure is affected by multifarious factors that determine the proximity and accessibility of kin, as well as the strength and nature of kinship ties and obligations. With fertility and mortality declining in developed countries and, more recently, in many developing countries as well, a trend has emerged towards smaller families and a smaller number of kin. The exceptions are countries in Central and West Africa, where fertility has not declined along with mortality.⁵

In addition to changes in size, changes in the functions of the family have significantly altered its structure, which has been manifested in new living arrangements and changes in the networks among family members and their obligations and rights. In many industrialized countries, there is a continuing tendency for adult family members to be independent of each other and the rest of the family. This can be seen in the greater incidence of separate residences for parents and adult children, their financial independence and the decline in control over the behaviour of younger family members, even in the traditionally family-dominated domain of marriage and family formation. The rise in the number of separate households has contributed to the decline in average household size, as married and unmarried adult children leave the parental household. As a result, the “extended”

family household has become the exception, while the nuclear family household and, more recently, the one-person household consisting of a young adult have become much more prevalent. Similarly, the substantial increase in marital dissolution and in cohabitation in the last two to three decades have increased the number of separate, and smaller, households. Although remarriage among the divorced has resulted in an increase in "reconstituted" family households, which tend to be larger, the net effect of the current demographic and social trends has been a smaller household and a smaller number of kin.

Estimates of the changes in household size in different regions of the world between 1970 and 1985 are shown in table 2. The average household size in more developed countries was expected to decline from 3.36 to 2.90 members between 1970 and 1985, while in developing countries the expected decline was from 5.07 to 4.76. While household size in developing countries was on average expected to be substantially larger (by 1.86 persons) than in developed countries, there was significant variation within the two groups.

TABLE 2. ESTIMATES OF AVERAGE HOUSEHOLD SIZE
BY REGION, 1970-1985
(Number of persons)

Region	1970	1975	1980	1985
Developed countries	3.36	3.18	3.03	2.90
Northern America	3.23	3.04	2.88	2.73
Japan	3.90	3.60	3.39	3.22
Oceania	3.65	3.52	3.40	3.25
Northern Europe	3.00	2.87	2.75	2.67
Western Europe	2.98	2.86	2.73	2.64
Southern Europe	3.67	3.53	3.40	3.28
Eastern Europe	3.10	2.97	2.84	2.73
USSR	3.57	3.32	3.14	2.98
Developing countries	5.07	5.00	4.89	4.76
Eastern Africa	4.99	4.97	4.95	4.93
Northern Africa	5.44	5.41	5.31	5.15
Middle Africa	4.58	4.60	4.62	4.66
Southern Africa	5.00	5.05	5.09	5.09
Western Africa	4.90	4.93	4.97	5.00
Caribbean	4.67	4.64	4.56	4.44
Middle America	5.01	4.99	4.90	4.80
Temperate South America	4.02	3.85	3.69	3.53
Tropical South America	5.19	5.10	4.96	4.81
China	4.58	4.42	4.21	4.01
East Asia ^a	5.63	5.33	5.02	4.64
South Asia	5.46	5.44	5.39	5.28

Source: United Nations, Department of International Economic and Social Affairs, "Estimates and projections of households" (provisional report, 22 January 1979), table 5.

^a Excluding China and Japan.

Among developing countries, there has been a small but discernible increase in the proportion of nuclear families and a corresponding decline in extended families in certain areas and countries of East and South-East Asia. In China, Hong Kong, the Republic of Korea, Singapore and Taiwan, Province of China, a small but growing percentage of the urban elderly no longer live with their adult children.⁶ The norm is, however, still the extended family, and in rural areas there has been little change from the traditional family structure. The interdependence of family members is still

quite strong, even where they reside separately, with a high incidence of adult children responsible for the support and, where necessary, the care of parents. The division of labour within the family has changed with urbanization and the increasing participation of women in the urban labour force. Older parents tend to be more dependent on adult children, as it is more difficult for them to be economically active in urban employment and social security or pension systems are generally not well developed. With more urban women working outside the homes, grandparents have assumed increasing responsibility for household tasks and child care.⁷

The incidence of single-parent families in developing Asian countries is very low, due to a variety of factors. Extra-marital childbearing, divorce and separation are rare. The practices of absorbing single parents and their children into the extended family, legitimization of pre-marital pregnancies through marriage, and the submission of illegitimate children for adoption also reduce the formation of single-parent families.

In tropical Africa, there has been no sustained decline in fertility of the type that has occurred in most other developing regions in the last decade or two. The structure of the family has remained relatively stable.⁸ The family system, based on lineage, is characterized by a conjugal family unit very closely linked to the relatives of the spouses. Marriage is for the continuation of lineage rather than the creation of a new family unit. This family system is supported by a range of kinship networks and transfers and family functions quite distinct from those of a nuclear or extended family. Conjugal bonds are not strong but kinship bonds are. There is little differentiation between one's parents and one's parents' siblings, with the obligation flowing from the younger to the older generation. Thus, one's source of support is not restricted to one's own children. Similarly, fosterage of children is a prevalent practice, which provides a wider familial base of support for the young. Because of the emphasis on lineage, the support of wives and care of children are not the responsibility of husbands/fathers but usually of the wives themselves, with assistance from their families. There has been no significant, long-term change in the structure of the family, except perhaps to a limited extent in some large urban areas. Short-term breakdown in the traditional structure and support functions of the family has occurred during the continuing economic crisis, war and recurring drought in the region.

2. The migrant family

Rural to urban migration in the course of economic development and international migration in response to differential economic conditions between countries or severe economic hardship in sending countries have increased the geographical movement of individuals and families. Some consequences of this rising mobility for the family are the potential for separation of family members, as well as the loss of a breadwinner if the migrant is unsuccessful in finding employment. Depending on the initial structure of the family and the role of the family member who migrates, the family must adjust its functions to compensate for the change.

The impact of migration on the family can be illustrated by the migration of workers from Asia to the Middle East in the 1970s and early 1980s.⁹ Most of these migrants were men and were not accompanied by their families. The families that remained at home tended to resort to increased joint family living arrangements and reliance on the extended family. The parents of the migrant generally provided the most assistance in caring for his family. In return, they received part of his remittances. In some countries, wives left behind have become more active in the management of the household and less dependent on male relatives. In most countries, where the culture dictated a more passive role for women, there was little change in the behaviour of the wives of migrants. The migrants' parents or brothers or other male relatives usually made major decisions concerning finances and the children. Separation had varying effects on marriages, ranging from significant increases in divorce to perceived improvement in marriages by the migrants. The implication of these findings is that despite disruptions and separation, the family was able to adjust quite effectively on the whole without experiencing widespread breakdown of its functions. It should be noted, however, that this was a case of highly organized labour migration where employment was already contracted and, therefore, the economic gain from the process probably helped to alleviate some personal and family problems.

More recently, there has been a large-scale migration of women from the Philippines to neighbouring countries to work primarily as domestics, while the flow of male workers to the Middle East has declined sharply due to the fall in the price of oil. The separation from family for months or years is bound to impose strain on the family, although the extended family provides substantial support in the management of the household and raising of children. Marital relations are strained by separation and can also be affected by the new role of the woman (wife), as a significant, if not primary, breadwinner.¹⁰ A more beneficial effect may be an increase in self-esteem among these migrant women as a result of their increased contribution to the finances of the family and the finances of the country.

In some Northern European countries, temporary migrant workers have been given the legal right to settle with their families in the receiving countries. While this alleviates the problems of separation, a new set of pressures on the family is created by the demands of adaptation to an alien culture and economic system. At the same time, the demands on the social welfare services of the host country, in such areas as health, education and housing, increase as dependent family members are settled.¹¹

Other experiences of large-scale family immigration, such as that in the United States, provide examples of the importance of the family and the immigrant community in the successful adaptation of immigrants. The family is important as a source of unpaid labour for small businesses owned by migrant families, which in turn is an important avenue to economic success for many immigrant groups. An established immigrant/ethnic community provides a market for small businesses, as well as the know-how for the establishment of certain businesses in which immigrants have found a niche.¹² The strength of the family is also important

in the perpetuation of those values from the country of origin that facilitate adaptation (particularly for the children of immigrant families), such as the value of education and a strong work ethic.¹³

3. *Short-term factors, including natural disaster, war and severe economic downturn*

In parts of Africa prolonged and recurrent devastation of nature, exacerbated by war and serious economic decline, have led to the disintegration of families, beginning a vicious circle of starvation and disease. Recent abrupt declines in income in many Latin American countries have also disrupted families and their normal functions. The extent of economic deterioration is illustrated by the high rate of decline of gross national product (GNP) per capita between 1980 and 1985 in many African countries. The declines range from under 1 per cent to 14 per cent annually, with the majority in the 1 to 5 per cent range. Similarly, GNP per capita in many Latin American countries declined by under 1 per cent to 7 per cent.

As families are important producers of food in Africa, the temporary breakdown of the family threatens the survival of individuals and the economic viability of communities and countries. With severe fiscal pressures, social services are cut back, reducing the safety net for the population at the very time when it is most needed. The social functions of the family have also been found to break down under these extreme pressures. Under normal conditions, the integration of family, clan, village and larger social groups in African society would have provided a buffer against short-term economic set-backs encountered by families or individuals. For example, the fosterage of children within the clan, which would have been a means of assistance to a family in need, was no longer practised among those families fleeing drought and starvation, as their own resources became so limited. Children were abandoned by parents who could no longer support them in the hopes that they would be assisted by international relief organizations.¹⁴ The migration of whole families and households in search of relief from starvation in areas of extreme deprivation has uprooted families and communities and disrupted the existing system of production and services for members of these social groups.¹⁵

In less seriously impacted regions in Africa and Latin America, temporary out-migration of men in search of employment, which usually became rather extended absences, altered abruptly the established division of labour among the sexes. Women became heads of households and the major or sole source of care and support for the household and its dependants, with assistance from remittances when the migrant was successful in his job search. With the deterioration of the overall economy resulting in increasingly unstable and insufficient remittances and cuts in social services, the ability of the family to sustain its members was greatly eroded.¹⁶

Examples of other strategies of adjustment by the family in the face of a drastic decline in real income can be found in Latin America. These strategies demonstrate the ability of the family to generate additional income, goods and services but at the expense of mental and physical health, care and

education of children and stress on familial relations.¹⁷ One entails informal community efforts to provide support (monetary or in kind) to families to mitigate some of the negative impact of the adjustment. Substitution of the extended family for time regularly spent by the mother on child care, food preparation and nutrition-related activities is one frequently observed means of adjustment. At times the larger local community pools resources for child care and household tasks in order to release women on a rotating basis for remunerative work, which facilitates another strategy involving increased participation in the labour force by women. A third strategy is the involvement of the family or household in direct production of food, such as cultivating family plots to supplement the nutritional intake of family members with beans and fruits. There is also evidence of more pooling of resources within the extended family. This strategy is ultimately constrained by the total resources of the family, which are likely to decline in times of economic instability. Increased use of government transfer payments in times of crisis is another important means of survival for low-income families, but the availability and level of these payments are very limited.

Some adverse effects of the pressures to adjust are manifest in the observed increase in the emotional and physical strain on couples and the resultant rise in domestic violence and marital disruptions. The increase in child labour also takes its toll on children, and ultimately society, because these children endure poor nutrition in unhealthy working conditions and lose opportunities for education.

B. SELECTED ISSUES

1. *Single-parent families*

In many developed countries significant changes in marriage, family formation and increased life expectancy at older ages in the last two decades have also had a significant effect on the composition of families. The increase in cohabitation, extra-marital childbearing, divorce and remarriage (see table 3) and in the tendency to form separate households have resulted in the rise of new family structures. The most prevalent are single-parent families, reconstituted families when divorced persons remarry, and young adults or elderly people living alone.¹⁸ The increase in the single-parent family (see table 4), with a great majority headed by women, has one of the most far-reaching social impacts. The primary reason for the rise in single-parent families is marital dissolution, although extra-marital childbearing is rapidly catching up in some countries.¹⁹

Single-parent families headed by a woman tend to be economically vulnerable, as there is generally one wage-earner and the primary wage-earner tends to be a female who usually works at relatively low wages. Such families consequently tend to have a much higher rate of poverty than do other family types. For those families entitled to and receiving support from a divorced or separated husband, the additional source of income can mean the difference between poverty and an adequate standard of living. In the United States, for example, these support payments constituted approximately 20 per cent of the total income of ex-wives in

1985.²⁰ The importance of this source of support is recognized by some Governments. In 1988 the Government of the United States enacted legislation to strengthen the enforcement of court-ordered alimony and child-support payments. Other important sources of income are government transfer payments and wage earnings, with the proportion of each component depending on welfare and labour policies. The focus of policies regarding these families varies greatly among countries.²¹ One approach, such as that taken in Norway and the United States, offers special financial aid to single mothers without work incentives, on the premise that it is beneficial for the single mother to remain at home with the children. It should be noted, however, that there is a strong shift in emphasis in the United States towards increasing work incentives. Another approach, taken in Sweden, provides cash benefits and other supplementary supports that encourage single parents to enter and remain in the labour force in order to generate earnings sufficient to replace transfers as the mainstay of the family's income. A third approach is to include benefits to single-parent families under the umbrella of family-welfare policy, as in France. A fourth approach, such as that implemented in the Federal Republic of Germany, provides only very low social assistance payments to low-income, single-parent families. The result is that most single mothers must work. A fifth approach is practised in the United Kingdom, where single-parent families qualify for means-tested benefits under the same poverty programme as the general population.

Among single-parent families, those where the mother is a teenager with little or no resources present the greatest problem, because of the high health risk and hardship imposed on the children and the resultant cost to society of their poor

TABLE 3. EXTRA-MARITAL BIRTHS, DIVORCE AND REMARRIAGE IN SELECTED DEVELOPED COUNTRIES

Country	Births to unmarried women circa 1985	Divorce rate circa 1985	Remarriages circa 1980
	(as a percentage of total births)	(per thousand population)	(as a percentage of total marriages)
Japan	1.0	1.38	16.9
Belgium	5.7	1.86	15.0
France	19.6	1.95	11.4
Germany, Federal Republic of	9.4	2.10	17.4
Ireland	7.8		1.5
Italy	4.4	0.29	2.1
Netherlands	8.3	2.35	16.6
Portugal	12.3	0.88	4.9
Spain	3.9 ^a	0.57	1.1
Sweden	46.4	2.37	20.6
Switzerland	5.6	1.76	12.7
United Kingdom	19.2	3.20	23.7
Canada	12.1 ^b	2.44	17.9
United States	21.0	4.96	32.5

Source: *Demographic Yearbook* (United Nations publication, 1981, 1982 and 1986).

^a 1980.

^b 1973.

TABLE 4. CHANGES IN THE SIZE OF HOUSEHOLDS IN SELECTED DEVELOPED COUNTRIES

(Percentage of total households)

Country	One person			Couple with children			Single parent with children		
	circa			circa			circa		
	1960	1970	1980	1960	1970	1980	1960	1970	1980
Canada	9	13	20	..	50	37	..	2	3
England and Wales	12	18	22	49	44	39	7	7	8
France	20	22	24	45	41	39	4	5	5
Germany, Federal Republic of	21	26	31	55	47	42	2	2	3
Netherlands	12	17	22	56	53	43	6	7	6
Sweden	20	25	33	37	30	25	3	3	4
Switzerland	15	20	27	48	45	41	5	5	4
United States	13	17	23	44	40	29	4	5	8

Source: L. Roussel, "Evolution récente de la structure des ménages dans quelques pays industriels", *Population*, No. 6, 1986, p. 933.

health, socialization and education. The number of such families has increased as the tendency for teenagers to marry as a result of pregnancy has declined and with the apparent decline in support from the extended family. Those countries most affected are the United States, where the problem is by far the most serious, followed by Canada, Australia and the United Kingdom. One consequence of the problem in these countries is the growing demand on the existing system of social services to increase and adapt its delivery of services in response to this segment of the population. The needs range from pre-natal and neo-natal health care, child care and housing to education, training and employment of young mothers.

2. Child-care services

An important issue for all families with children, arising from the growth of single-parent families and increasing participation in work outside the home by women with children is the availability of child-care services. Again it is those parents earning relatively low wages who experience the greatest difficulty in obtaining safe and adequate child-care services. The variation in the participation of Government in the direct or indirect provision of child care is also quite significant among developed countries.²² A serious shortage of such services exists in some countries. The focus on child care is also shifting from a woman's issue to an issue shared by men and women and society as it is being recognized that the quality and availability of child care is an issue that impinges not only on the immediate and long-term welfare of children and society but also on the well-being and productivity of working parents.

National policies concerning child-care services differ widely, ranging from very broad measures, such as parental leave policies and income subsidies, to merely the establishment and enforcement of child-care services.²³ The underlying philosophy also varies considerably, spanning the continuum from a broad perspective of child care as an integral part of the development and socialization of children to a narrow view of child care as a substitute for maternal custodial care. The best developed parental leave policies are found in European countries. They include legislated job-

protected leaves often supplemented by additional, unpaid job-protected leaves of a minimum of two to three months to five to six months. Very few children under one year of age are in child care and the supply of infant care is not a major issue. In contrast, in the United States, there is no national legislation with regard to parental leave, so that 60 per cent of working women have no job-protected leave. As a result, the availability of safe and adequate infant care at an affordable price is a major problem.

The care of pre-school-age children is firmly established and coverage is becoming universal in both Eastern and Western Europe. It is operated as part of the public education system or publicly subsidized in the private system. Attendance is voluntary and free. In the United States, care of children of all ages is supplied and paid for overwhelmingly by the private sector and individuals. The Government's role is primarily in direct subsidization of low-income families or indirect subsidization of middle-income families through tax credits. More recently, there is the beginning of a movement among major private employers in the United States to offer child-care-related benefits to employees.²⁴ However, at present only 3,000 employers have such programmes. These benefits include the provision of child care at the work site, direct subsidies of child care provided externally and flexible work schedules and parental leave.

3. Socialization and education

The family has, historically, performed a fundamental role in the process of socialization and, in modern societies, a critically supportive role in education. The decline of the two-parent family, early maturation of children, their ability to earn incomes independently of the family and the development of a youth culture in developed countries have all lessened the influence of the family in the process of socialization in late childhood and early adulthood. Although the phenomenon is less common in developing countries, it is significant in urban households. The breakdown of the nuclear family has made socialization more difficult to perform. Where, as in poor families, children drop out of school early and the family fails to perform its socialization function, children tend to develop antisocial behaviour. Ad-

equate social mechanisms to provide solutions to these problems have yet to be developed. The Head Start programme in the United States, originally developed for underprivileged children, has been effective in improving the ability of young children to meet the requirements of formal schooling and the probability of their successful performance in school.²⁵

In cultures where education is valued highly, it has been observed that a very stable family system is a major factor in encouraging children to acquire education.²⁶ In contrast, in societies where the family is under strain, it no longer performs these traditional functions and a substitute has yet to be found. The decline in educational attainment in some developed countries has been partly attributed by some to the decline of the traditional two-parent family.

4. Reconstituted families

Families resulting from remarriage, or "reconstituted" families, are a small but growing proportion of families in some developed countries. In the United States, an estimated 20 per cent of all households maintained by a married couple fell into this category in 1980. Among these countries the percentage of such families varies widely, ranging from a low in Ireland, Japan, Portugal and Spain to a high percentage in Canada, the United Kingdom, the United States and the Scandinavian countries.²⁷ Because of the possible existence of children from previous marriages along with children from the present marriage, the network of relationships, authority and responsibility becomes much more complex and extended. Complications can arise in familial relationships between step-parents and children, which may in turn create tensions between the couple. Families with children from a previous marriage who live elsewhere but visit regularly and receive financial support have additional demands on their financial resources and time.²⁸

5. The elderly in the family

In developed countries, changes in family structure and increases in the labour force participation of women have altered the traditional role of the family in the daily care and financial support of elderly family members who need them.²⁹ At the same time, the significant improvement in the life expectancy of the elderly has increased the need for daily care and health care of the very elderly. The primary provision of daily care has shifted from female family members to non-family members or institutions. It is unclear whether the cost of care continues to be borne by the family or is borne by the elderly. The role of the Government remains small, as the provision of public formal daily care ranges from 20 per cent in Sweden to 10 per cent in the United Kingdom to 1 per cent in the United States. As advances in medical science and technology have made it possible to prolong life, although at exorbitant costs, the provision of these resources remains a major social issue both for individual families and society at large.

In most developing countries, the tradition of total family responsibility for care of the elderly remains, and public care is minimal. In some of the more rapidly developing and

aging societies, such economic and social changes as urbanization, increasing female employment and changing values concerning filial responsibility are beginning to undermine the traditional care system. In Hong Kong, the Republic of Korea and Singapore, for example, a small but increasing number of the elderly are living alone, although family support is generally provided. At present, while the provision of public care is growing, the emphasis is still on the family as the primary provider, based on the philosophy that only the family can provide fulfilment and happiness to the elderly.³⁰

In many developed countries, the elderly have independent sources of income primarily from publicly funded and/or private pensions, their own savings and the much higher current value of their material assets, such as dwellings. The adequacy of these resources for an acceptable standard of living varies from country to country. The poverty rate among the elderly in selected countries tends to be above that for the general population but varies from a negligible difference in Norway and Sweden to 20 per cent higher in the United Kingdom and the United States.³¹ This suggests that a sizeable proportion of the elderly are currently in need of supplementary support. While the separation of the finances and living arrangement of the generations (see table 5) has weakened the system of family support of the elderly that was in place before the era of public and private pensions, there is evidence that filial support of elderly parents is still a value and is practised in some form in developed countries.³²

TABLE 5. ELDERLY POPULATION LIVING ALONE IN SELECTED DEVELOPED COUNTRIES

Country	(Percentage)		
	Proportion of the population 65 years old and over		
	Total	Male	Female
Australia (1970)	..	14.8	34.2
Canada (1976)	..	11.9	28.9
Japan (1985)	9.5	..	..
United Kingdom (1980-1981)	..	17.0	45.0
United States (1981)	28.7	..	38.8

Source: *Consequences of Mortality Trends and Differentials* (United Nations publication, Sales No. E.85.XIII.3), table X.5, and S. Kono, "The social consequences of changing family and household structure associated with an aging population" in *Economic and Social Implications of Population Aging*, Proceedings of the International Symposium on Population Structure and Development, Tokyo, 10-12 September 1987 (New York, 1988), p. 288.

In developing countries, financial support of the elderly rests primarily with the family and the elderly themselves. Pensions, public and private, seldom exist. Where they do exist, the level of payment is generally not sufficient as a primary source of income. Most public welfare and housing programmes are directed at those without a family or who are destitute. In the more rapidly developing and urbanized countries and areas, such as Hong Kong and Singapore, public service programmes for the elderly are more systematically available but are still very limited. Although there has been a slight decline in multi-generational living arrange-

ments (as discussed earlier), the support of the elderly is still an accepted responsibility of the children. The traditional role and status of the elderly may be eroding as a result of modernization and urbanization, with an adverse impact on their psychological welfare.³³ The primary concern about family support and care of the elderly in developing countries is on the possible breakdown in the traditional functions of the family in this area and the ramifications for the intervention of Government.

C. CONCLUSIONS

The family has undergone changes in structure and function to varying degrees, largely depending upon the level of national economic development and diversification. The process of change has been aided by advances in technology and changes in mores and values. In societies that have not been subject to rapid economic development, urbanization and demographic transformations, the changes have been less drastic. In addition to those long-term, sustained influences, short-term influences, such as the migration of workers, natural disasters, war and drastic deterioration in economic conditions, have placed severe pressure on families and family structures in many developing countries. In performing functions vital to the well-being of its members and society, the response of the family to these changes has ranged from adaptation without significant dysfunction to total breakdown. Where the family system has broken down, the pressure on social institutions has generally been extreme. In contrast, where supporting social and economic mechanisms were still in place, adaptation has occurred, with less disruptive effects.

In some developed countries both new laws and social welfare programmes have been tried in answer to some of the problems that have emerged. Responses to social and economic changes are still emerging in most societies. As the family is so fundamental a unit of society, a more thorough understanding of the consequences of these changes for both individuals and society as a whole must be sought before the appropriate social mechanisms can be put in place.

NOTES

- ¹ See "International Year of the Family" (A/43/570).
- ² See R. Coser, ed., *The Family, Its Structure and Functions* (New York, St. Martin's Press, 1966); W. Goode, "The sociology of the family" in *Sociology Today*, R. Merton, ed. (New York, Basic Books, 1959); W. Goode, *World Revolution and Family Patterns* (New York, Free Press, 1963); J. Caldwell, "A theory of fertility: from high plateau to destabilization", *Population and Development Review*, vol. IV, No. 4, pp. 553-578; J. Heslin, *Marriage and Family in a Changing Society*, 2nd edition (New York, Free Press, 1985), and United Nations, *The Role of the Family in the Development Process* (United Nations publication, Sales No. E.86.IV.7) among the vast literature on the family as a social and economic institution and its changes over time. For a concise description of family systems, see also *First Marriage: Patterns and Determinants* (ST/ESA/SER.R/76, pp. 3-6).
- ³ W. Goode, "Industrialization and family change", in *Industrialization and Society*, B. Hoselitz and W. Moore, eds. (Mouton-Paris, UNESCO, 1966)
- ⁴ S. De Vos, "Latin American households in comparative perspective", *Population Studies*, No. 41 (1987), pp. 501-517, and L. Roussel, "Evolution récente de la structure des ménages dans quelques pays industriels",

Population, No. 6 (1986), pp. 913-934. See also, United Nations, "Survey of national policies for families" (preliminary unpublished results, 1988).

⁵ The magnitude of net declines in family size due to the demographic transition varies by family type and the stage of the transition. It can be generalized that mortality decline results in an increase in size while fertility decline results in a decrease, assuming a stable population. See T. Burch, "Some demographic determinants of average household size: an analytical approach", *Demography*, vol. 7, No. 1 (February 1970).

⁶ W. S. Chow, "The urban elderly in developing east and southeast Asian countries", in *Aging China: Family, Economics and Government Policies in Transition*, Proceedings of the International Forum on Aging, Beijing, China, 20-23 May 1986, J. Schulz and D. Davis-Friedman, eds. (Washington, D.C., The Gerontological Society of America, 1987).

⁷ *Ibid.*

⁸ J. Caldwell and P. Caldwell, "The cultural context of high fertility in sub-Saharan Africa", *Population and Development Review*, vol. 13, No. 3 (September 1987), pp. 409-437.

⁹ Based on N. M. Shah and Fred Arnold, "The non-economic consequences of Asian labor migration to the Middle East", *International Population Conference*, 5-12 June 1985, vol. 3 (Florence, International Union for the Scientific Study of Population).

¹⁰ *The Economist*, 10 September 1988, pp. 21-24.

¹¹ B. Heisler, "Immigrant settlement and the structure of emergent immigrant communities in Western Europe", in *The Annals of the American Academy of Political and Social Science* (May 1986), pp. 76-86.

¹² M. Piore, "Shifting grounds for immigration", in *The Annals of the American Academy of Political and Social Science* (May 1986), pp. 23-33.

¹³ *Business Week*, 19 September 1988, pp. 76-86.

¹⁴ See *Within Human Reach: A Future for Africa's Children* (New York, UNICEF, 1985).

¹⁵ G. Cornia and others, eds., *Adjustment with a Human Face*, vol. 1, *Protecting the Vulnerable and Promoting Growth* (New York and Oxford, Oxford University Press, 1987).

¹⁶ See *ibid.*, p. 101, and *The Invisible Adjustment: Poor Women and the Economic Crisis* (Santiago, Chile, UNICEF, Regional Office for the Americas and the Caribbean).

¹⁷ *Ibid.*

¹⁸ J. McCarthy and A. Cherlin, "Demographic aspects of single-parent and reconstituted families in developed countries", paper presented at the International Union for the Scientific Study of Population Seminar on the Family in More Developed Countries, Paris, September 1987.

¹⁹ S. Kameron and A. Kahn, "Mother-only families in Western Europe: social problems and societal response", report prepared for the German Marshall Fund of the United States, 1987.

²⁰ *Who's Helping Out? Support Networks Among American Families*, Current Population Reports Series, P-70, No. 13 (Washington, D.C., Department of Commerce, Bureau of the Census, 1988).

²¹ See S. Kameron and A. Kahn, *op. cit.*, 1987.

²² See S. Kameron, "Child care, women, work and the family: an international overview of child care services and related policies", in *Child Care in the United States*, S. Scarr and J. Lande, eds. (Erlbaum Associates, forthcoming).

²³ See *ibid.* and M. Lueck, A. Orr and M. O'Connell, *Trends in Child Care Arrangements of Working Mothers*, (Washington, D.C., Department of Commerce, Bureau of the Census, P-23, No. 117, 1982).

²⁴ D. Friedman, "Estimates from The Conference Board and other monitors of employer-supported child care", unpublished memorandum (New York, The Conference Board, 1988).

²⁵ See *Business Week*, 19 September 1988, pp. 140-141.

²⁶ See, for example, C. Jencks and others, *Inequality: A Reassessment of the Family and Schooling in America* (New York, Harper and Row, 1973).

²⁷ J. McCarthy and A. Cherlin, *op. cit.*

²⁸ *Ibid.* and P. Morrison, "Changing family structure: who cares for America's dependents?" (The Rand Corporation, N-2518-NICHD, December 1986).

²⁹ The sections on daily and health care draws on J. Habib, "Aging population and support for the elderly", in *Economic and Social Implications*

of Population Aging, Proceedings of the International Symposium on Population Structure and Development, Tokyo, 10-12 September 1987 (New York, 1988).

³⁰ W. S. Chow, *loc. cit.*

³¹ J. Habib, *loc. cit.*

³² D. Davis-Friedmann, "The impact of demographic change on the family life of American elderly", in *Aging China: Family, Economics and Government Policies in Transition...*, and A. Hashimoto, "Social support for the aged in rural and urban areas in Japan", in *Aging China: Family, Economics and Government Policies in Transition...*

³³ W. S. Chow, *loc. cit.*

Chapter II

THE ADVANCEMENT OF WOMEN

Changes in the participation of women in economic activities at all levels, including decision-making, are an important determinant of the advancement of women in society. This chapter opens with a discussion of the contribution made by women and men to total output and of the disparities in their earnings; the difficulty of providing reliable data is referred to briefly. The sections that follow consider the major factors that explain these disparities and the types of policies adopted or likely to be adopted to bring about greater equality between women and men in society. These factors are inequities in access to health services, inequalities in obtaining education, and inadequacies in institutional arrangements to relieve working women of the burden of child-rearing. The final section contains a brief discussion of policies, both national and international, which promote the advancement of women in society. National policies are expected to take various forms, depending on the culture, political philosophy and economic resources.

A. WOMEN'S PARTICIPATION IN THE LABOUR FORCE

Current methods of estimating output and employment exclude a sizeable portion of the economic contribution of women, especially in household and farm production in all countries and in the subsistence sector in many developing countries.¹ Women's participation in the economy is under-reported when they work in the informal sector or as unpaid family workers. The value of household work is not included in gross national product as defined by the United Nations System of National Accounts. The International Research and Training Institute for the Advancement of Women (INSTRAW), in co-operation with the Statistical Office of the United Nations, has initiated work to redress some of these weaknesses. This is in line with the conclusions of several international bodies, including the Interna-

tional Conference of Labour Statisticians of the International Labour Organisation (ILO), which at several sessions has stressed the importance of correcting the current substantial under-reporting of the contribution of women to national output.²

Women's participation in the labour force differs widely from country to country. The factors that cause these differences include cultural sex roles, educational levels, occupational structure, wage levels and the incomes of households.

In 1985, women accounted for 36.5 per cent of an economically active world population of 2.2 billion.³ Women's share in the economically active population increased from 1950 to 1980 in both developed and developing countries. In 1980, the share of women in the labour force reached 41.8 per cent in developed countries and 35.0 per cent in developing countries (see table 6). By 1985, however, the share of women had declined slightly in both groups.

There are marked variations among countries in the share of women in the labour force. In the centrally planned economies, the share of women in the labour force in 1985 was nearly half of the total labour force. In developed market economies, the corresponding proportion was 42 per cent. Among developed market economy countries, the share of women was particularly high in North America (41 per cent). Among developing countries, the highest female share in 1985—43 per cent—was in China, compared with 28 per cent in other Asian countries. The female share in Africa was 35 per cent and in Latin America and the Caribbean 27 per cent in the same year.

The distribution of the female labour force by industry and changes in this distribution from 1970 to 1980 are shown in table 7. In 1980, more than two thirds of the female labour force in Africa worked in agriculture, compared with 79 per cent in China, 68 per cent in the rest of the developing coun-

TABLE 6. PARTICIPATION OF WOMEN IN THE LABOUR FORCE, 1970-2000

Region	Year	Share of females in total labour force (percentage)	Female labour force distribution (percentage)	Annual rate of growth	
				Male	Female
World	1970	35.99	100.00		
	1980	36.86	100.00	1.92	2.30
	1985	36.52	100.00	2.13	1.84
	2000	35.50	100.00	1.63	1.36

Region	Year	Share of females in total labour force (percentage)	Female labour force distribution (percentage)	Annual rate of growth	
				Male	Female
Developing countries	1970	34.37	66.98		
	1980	34.96	68.59	2.28	2.54
	1985	34.73	70.14	2.50	2.29
	2000	33.78	73.89	1.95	1.69
Africa	1970	35.95	9.24		
	1980	35.62	9.34	2.56	2.42
	1985	35.03	9.48	2.67	2.13
	2000	33.40	10.88	2.90	2.45
Asia (excluding China)	1970	29.44	23.13		
	1980	28.51	21.88	2.20	1.74
	1985	27.98	22.01	2.49	1.95
	2000	26.70	23.37	2.20	1.85
China	1970	41.69	31.07		
	1980	43.18	32.75	2.21	2.84
	1985	43.24	33.82	2.44	2.49
	2000	43.47	33.84	1.09	1.19
Latin America and the Caribbean	1970	21.76	3.44		
	1980	26.36	4.51	2.50	5.12
	1985	26.63	4.73	2.51	2.78
	2000	27.74	5.68	2.24	2.70
Developed countries	1970	39.78	33.02		
	1980	41.83	31.41	0.94	1.79
	1985	41.55	29.86	1.04	0.81
	2000	41.51	26.11	0.49	0.49
Centrally planned economies	1970	48.58	14.50		
	1980	48.33	12.95	1.26	1.15
	1985	47.57	12.12	1.11	0.50
	2000	47.50	10.59	0.55	0.59
Eastern Europe	1970	44.27	4.18		
	1980	45.67	3.57	0.14	0.71
	1985	45.73	3.36	0.55	0.60
	2000	46.33	2.98	0.51	0.69
Soviet Union	1970	50.57	10.32		
	1980	49.42	9.38	1.80	1.33
	1985	48.32	8.76	1.35	0.46
	2000	47.97	7.61	0.56	0.55
Market economies	1970	36.36	22.35		
	1980	39.30	21.62	0.70	1.96
	1985	39.31	20.69	0.93	0.94
	2000	39.36	18.09	0.45	0.46
Europe	1970	35.77	12.69		
	1980	38.51	11.63	0.23	1.41
	1985	38.54	11.04	0.75	0.78
	2000	38.81	9.46	0.24	0.33
North America	1970	36.14	6.04		
	1980	41.46	7.00	1.52	3.82
	1985	41.36	6.78	1.29	1.20
	2000	41.18	6.18	0.81	0.77
Japan	1970	39.03	3.62		
	1980	37.75	2.99	0.91	0.36
	1985	37.82	2.86	0.90	0.96
	2000	37.29	2.46	0.43	0.19
Oceania (Australia and New Zealand)	1970	30.94	0.35		
	1980	36.92	0.41	1.35	4.10
	1985	37.24	0.42	1.67	1.96
	2000	37.77	0.41	1.13	1.21

Source: ILO, *Economically Active Population—Estimates: 1950-1980, Projections: 1985-2025*, 3rd ed. (Geneva, 1986).

tries in Asia and only 15 per cent in Latin America and the Caribbean. The proportion of women in agriculture all over the world declined between 1970 and 1980, while the proportion in other sectors increased, especially in the service sector. In developed market economy countries, about two

thirds of the women's labour force was in services, one fifth in industry and less than one tenth in agriculture in 1980. In the centrally planned economies, almost half of the women who were economically active worked in services, one third in industry and one fifth in agriculture.

TABLE 7. PERCENTAGE COMPOSITION OF THE LABOUR FORCE, BY SEX AND MAIN SECTOR OF ACTIVITY

	Total			Males			Females		
	Agriculture	Industry	Services	Agriculture	Industry	Services	Agriculture	Industry	Services
World total									
1970	55.00	19.75	25.25	53.30	22.35	24.35	58.05	15.10	26.85
1980	50.75	20.95	28.30	49.50	23.55	26.95	52.90	16.55	30.60
Developing countries									
1970	70.75	12.20	17.10	67.60	13.90	18.50	76.70	8.85	14.45
1980	65.35	14.95	19.70	62.35	16.65	21.00	70.90	11.75	17.35
Africa									
1970	74.35	9.70	15.95	69.65	12.85	17.50	82.80	4.00	13.20
1980	68.70	11.85	19.45	63.65	15.35	21.00	77.80	5.50	16.65
Asia (excluding China)									
1970	68.37	12.73	18.90	65.82	13.42	20.76	74.49	11.07	14.44
1980	62.88	14.52	22.61	60.76	15.34	23.89	68.18	12.44	19.38
China									
1970	78.35	10.10	11.55	75.00	12.00	13.00	83.00	7.50	9.50
1980	74.25	14.00	11.75	71.00	15.50	13.50	78.50	12.00	9.50
Latin America and the Caribbean									
1970	40.55	23.25	36.20	46.80	24.20	28.95	18.05	19.75	62.25
1980	31.80	25.85	42.35	37.95	28.00	34.05	14.60	19.85	65.55
Developed countries									
1970	18.05	37.55	44.40	16.65	44.00	39.35	20.15	27.80	52.05
1980	12.65	36.70	50.65	12.05	43.75	44.25	13.55	26.95	59.50
Industrial market economies									
1970	10.76	31.51	42.38	10.92	37.59	38.05	10.49	20.87	49.95
1980	7.11	29.73	48.95	7.53	36.76	42.99	6.45	18.89	58.15
North America									
1970	4.60	32.30	63.10	5.95	38.90	55.15	2.20	20.55	77.25
1980	3.65	30.85	65.50	4.95	39.35	55.70	1.80	18.90	79.30
Europe (market economies)									
1970	11.34	30.36	31.71	12.16	36.41	28.36	9.88	19.50	37.72
1980	7.99	27.92	38.22	8.41	34.78	33.95	7.31	16.96	45.05
Japan									
1970	19.65	34.50	45.85	15.25	39.85	44.90	26.50	26.15	47.35
1980	11.15	34.25	54.60	9.40	39.05	51.55	14.05	26.35	59.60
Centrally planned economies									
1970	27.67	38.21	34.12	25.81	45.38	28.80	29.63	30.61	39.75
1980	20.59	40.48	38.92	19.35	47.30	33.35	21.93	33.19	44.88
Eastern Europe									
1970	32.00	39.40	28.55	27.45	47.65	24.85	37.75	29.05	33.20
1980	22.05	44.05	33.90	20.15	52.05	27.80	24.35	34.50	41.15
Soviet Union									
1970	25.65	37.65	36.70	24.95	44.20	30.85	26.35	31.25	42.40
1980	20.00	39.00	41.00	19.00	45.20	35.80	21.00	32.70	46.30
Oceania (Australia and New Zealand)									
1970	8.70	36.40	54.90	10.50	42.55	46.95	4.70	22.70	72.60
1980	7.60	32.20	60.15	8.95	40.30	50.80	5.35	18.45	76.20

Source: ILO, *Economically Active Population—Estimates: 1950-1980, Projections: 1985-2025*, 3rd ed. (Geneva, 1986).

In the developing countries, where agriculture is still the predominant source of employment for both men and women, the proportion of women in industrial work increased from 9 per cent to 12 per cent between 1970 and 1980. The mobilization of female labour into industry has been fastest where the growth of total industrial output and employment has been particularly rapid. In the Philippines, the Republic of Korea, Singapore and Thailand, for instance, the share of women in the manufacturing labour force is more than 40 per cent; in Hong Kong, Taiwan (Province of China) and Tunisia it is approximately 50 per cent.⁴

The service sector comprises many disparate occupations, such as community services (health, education and social welfare), commerce (retail trade) and domestic service. In developing countries, 17 per cent of all employed women worked in the service sector in 1980. The problem of underestimation is probably more severe in this sector than in other sectors because many of the personal services in the small-scale and informal sector are performed by women. About two thirds of the women in Latin America and the Caribbean were in the service sector in 1980. Nearly half of all women in the service sector are engaged in domestic work. This picture is likely to change significantly with growth in other service activities. The modern non-agricultural sector is still relatively small in many developing countries, but it will be the fastest growing sector as development proceeds.

A complex set of social and economic changes have made women's work outside the home increasingly essential for the welfare of the family. Economic and technological progress and improved educational opportunities in almost all regions have facilitated the access of women to the labour force. Increasing income inequalities have resulted in the pauperization of large segments of the population, especially in those developing countries where women have been deprived of traditional sources of income and have increasingly sought new avenues for survival in both the rural and urban areas.⁵ The lack of even rudimentary capital equipment tends to increase the work load. The introduction of grinding mills would obviate the need for some four hours of daily labour to turn grain into flour in some parts of Africa. Sources of water closer to home would similarly save several hours of female work each day. The departure of male workers to cities or other work places often puts the responsibility for food production on women. For instance, in India, when men migrate to cities to secure regular employment and a cash income for the family, women shoulder major farming responsibilities.⁶ They prepare the soil, plough, transplant, hoe and weed; they husk, winnow and store food grains. Recent large-scale migration of men for work overseas (see chap. XI below) has cast similar responsibilities on women in several developing countries. Many other women in the developing countries have themselves migrated from rural to urban areas in search of work. Transnational corporations have taken advantage of the increase in women entering the labour force. The trend has been towards greater subcontracting of production of electronic components in "offshore" assembly operations located in developing countries in order to take advantage of low labour costs. Women make up the majority of the work force in these

multinational assembly operations and they meet discrimination and exploitation, and find only strenuous, monotonous and low-paid jobs.

Poverty also impels women to participate in the work force when they become the sole breadwinners in their families. Desertion by the male partner in consensual unions and the break-up of marriages leave the mother as the single breadwinner. The number of households headed by women has increased in all countries. In developing countries, they constitute from 25 per cent to 30 per cent of all households.⁷ These households tend to have lower incomes but more children than households headed by men.

In Latin America, the proportion of children born to women not legally married is 53 per cent in Venezuela, 49 per cent in Peru, 43 per cent in Paraguay⁸ and 77 per cent in the Caribbean.⁹ In North Africa, women become heads of households mainly because of migration and divorce.¹⁰ In Morocco, approximately 25 per cent of urban households are headed by women.¹¹ In West Africa, the existence of households headed by women is linked to the practice of polygamy, which still flourishes.¹²

The number of female-headed households has been increasing in most developed countries too. The rise in the divorce rate, which is a characteristic of all industrialized countries in recent decades, has been a factor in the increasing participation of women in the labour force: women become household heads and need a job to support their families (see table 8). The rising number of young women who are single heads of families is one element contributing to what has been identified as "the feminization of poverty", a situation in which women make up the majority of the poor.¹³ In the United States, two out of every three adults at or below the poverty level are women.¹⁴

The observed differences between the growth of the working age population and that of the labour force are principally the result of the rapid increase in the participation rates of women and, to a lesser extent, of declining rates in the case of men. Between 1960 and 1980 labour participation rates among men, especially older men, decreased in the OECD countries.¹⁵ In the centrally planned economies of Eastern Europe, as in developed market economies, the number of economically active women increased much faster than that of men during the Second World War, especially in Poland and the Union of Soviet Socialist Republics. In the USSR, there are regional differences in the sex imbalance of the rural population due to out-migration and, since 1970, the number of young men has outweighed the number of young women in the rural population, just as the proportion of the entire male labour force engaged in agriculture outweighs the proportion of the female labour force engaged in agriculture.¹⁶

Another major factor raising the participation of women in the labour force is an increased awareness of the need for economic and social self-reliance on the part of women and their desire for self-realization outside the boundaries of the home. Women of high-income households in developing countries who have had access to education behave in the labour market in a manner much similar to women in the developed countries. They are motivated to work by aspirations for a more meaningful integration into society. In addition,

tion, changing attitudes to the equality of the sexes have also favoured the trend towards paid employment.

TABLE 8. CRUDE DIVORCE RATES IN SELECTED DEVELOPED COUNTRIES^a

Country	1970	1980	1985
Japan	0.94	1.21	1.06
Austria	1.39	1.77	2.05
Belgium	0.66	1.47	1.86
Bulgaria	1.16	1.48	1.60
Czechoslovakia	1.74	2.21	2.47
Denmark	1.93	2.65	2.81
Finland	1.31	1.98	..
France	0.79	1.59 ^b	1.95
German Democratic Republic	1.61	2.68	3.08
Germany, Federal Republic of	1.26	1.56	2.10
Greece	0.40	0.69	0.76
Hungary	2.21	2.59	2.75
Italy	..	0.21	0.29
Luxembourg	0.64	1.60	1.81
Netherlands	0.79	1.82	2.35
Norway	0.88	1.62	1.95
Poland	1.06	1.12	1.32
Portugal	0.06	..	0.88
Sweden	1.61	2.39	2.37
Switzerland	1.02	1.79	1.76
United Kingdom	1.18	2.99	3.20
Canada	1.37	0.77	2.44
United States	3.45	5.19	4.96
USSR	2.62	3.50	3.60

Source: *Demographic Yearbook* (United Nations publication), various issues.

^a Crude divorce rates are the annual number of divorces per 1,000, mid-year population.

^b 1979 data.

The wage gap

There is a substantial gap in earnings between men and women, with female workers receiving lower wages than male workers. Earning differentials between male and female employees vary greatly among countries. In 1986, among the developed countries, the highest salary differential was in Japan, where women employees earned 43 per cent of average male earnings, followed by Luxembourg (60 per cent), Switzerland (67 per cent), Czechoslovakia (68 per cent), the United Kingdom (68 per cent) and Ireland (69 per cent) (see table 9). The Scandinavian countries show the narrowest difference between male and female earnings. In Sweden, average earnings of women were only 10 per cent lower than those of males, while in Denmark and Norway women earned 15 per cent and 16 per cent, respectively, less than men. A comparison between the figures for 1977 and 1986 shows that in the course of the decade, the differential declined in almost all countries except Denmark, Japan, Luxembourg, the Netherlands, New Zealand and the United Kingdom, where it increased. In developing countries the gap was widest in the Republic of Korea, with women workers earning 52 per cent less than men.

The factors which contribute to the inequality in earnings are difficult to establish with precision. On the one hand, there are employers' preferences for employing women in certain occupations; on the other hand, workers' skills, pref-

erences and constraints vary. Women tend to be placed in tasks that are repetitive, of short cycle and relatively quick to learn, for which little technical knowledge of the production process as a whole is necessary. The lower pay of women compared with men in manufacturing is also related to the concentration of women in low-paying labour-intensive industries.

Moreover, women seldom occupy jobs at the management or decision-making level or in skilled manual work, which is an important reason why, on average, they earn less than men.¹⁷ In many cases, women also have less access to training than men. Often, women accept part-time jobs which

TABLE 9. WAGES OF FEMALES AS A PERCENTAGE OF WAGES OF MALES

	1977	1980	1986
Developing countries or areas			
Cyprus	49.6	50.2	56.1
El Salvador	80.8	81.2	81.5 ^a
Hong Kong	..	77.7	77.9
Kenya	55.6	62.5	75.6 ^a
Republic of Korea	44.7	45.1	48.5
Singapore	..	61.5	63.4 ^a
Sri Lanka	..	75.4	75.5
Developed countries			
Belgium	70.7	69.7	74.1
Czechoslovakia	67.4	67.9	67.9
Denmark	86.5	86.1	84.9
Finland	74.3	75.4	77.4
France	75.8	77.0	79.5
Germany, Federal Republic of	72.3	72.7	72.9
Greece	68.8	67.8	76.9
Ireland	61.2	68.7	68.7
Japan	46.0	43.6	42.5
Luxembourg	62.5	61.2	59.8
Netherlands	75.5	75.3	74.3
New Zealand	73.3	71.4	71.8
Norway	79.8	81.9	83.8
Switzerland	65.4	66.4	67.4
Sweden	87.4	89.9	90.4
United Kingdom	70.8	68.8	67.9

Source: ILO, *Year Book of Labour Statistics, 1987* (Geneva, 1987).

^a Based on 1985.

TABLE 10. PERCENTAGE OF WOMEN IN PARLIAMENT

Region	Lower chamber of bicameral assembly		Upper chamber of bicameral assembly	
	1975	Latest year	1975	Latest year
Africa	4.08	6.30	..	4.92
Asia	13.16	12.84	6.87	6.93
Latin America and the Caribbean	3.41	10.61	4.18	6.50
North America	3.58	6.97	2.94	7.35
Oceania	1.87	4.93	9.38	22.37
Europe	13.15	17.62	6.41	8.21
Soviet Union	32.13	34.53	30.51	31.07

Source: United Nations Women's Indicators and Statistical Data Base (WISTAT), 1988, based on data compiled by the Inter-Parliamentary Union, "Distribution of seats between men and women in the 144 National Parliaments in existence as at 30 June 1987".

pay little and provide few benefits because they handle the major responsibilities for child-rearing and maintaining a household.

At high-level political institutions, women are seriously underrepresented (see table 10), although their ability to assume high responsibility has been demonstrated time and again (women have served or currently serve as the head of State or prime minister of India, Israel, Norway, Pakistan, the Philippines, Portugal, Sri Lanka and the United Kingdom). Women have played vital roles in national liberation movements and have contributed substantially to the development of many newly independent countries.¹⁸ Women vote in increasing numbers but in most countries, they have made slow progress in political participation.

B. HEALTH

In most human populations, the average expectation of life at birth, an indicator of health conditions, is higher for women than men (see table 11). However, there are marked differences among countries. In the developed countries, during the period 1985-1990, women live about 11 per cent longer than men; in the developing countries, they live less than 5 per cent longer. Over time, the gap has tended to increase in developing countries, where there is substantially greater room for improving health conditions. Among developing countries, women live substantially longer than men in Latin America but less so in Asia and Africa. The expectation of life at birth is actually lower for women than for men in Bangladesh, Bhutan, India, Nepal and Pakistan, contravening the general rule. However, over the past 20 years, the average expectation of life at birth for women has risen at a faster rate in Asia than in Africa and Latin America.

In almost every country, male infants have a higher mortality rate than females. However, mortality is higher for girls of one to four years of age in nearly two thirds of all developing countries. At a later age, females run the risk of maternal mortality. The maternal mortality rate varies among regions of the world (see table 12). Maternal mortality is among the leading causes of death for women of reproductive age in most developing countries. Each year, about half a million women die from causes related to pregnancy and childbirth.¹⁹ All but 6,000 of these deaths take place in developing countries, which account for 99 per cent of all maternal deaths. Some 62 per cent of all maternal deaths in the world take place in Asia, three quarters of them in Bangladesh, India and Pakistan. Thirty per cent take place in Africa, although Africa contains only 11.5 per cent of the world's population. In Africa, at 640 per 100,000 live births, the maternal mortality rate is 21 times higher than in developed countries, somewhat less than three times higher than in Latin America and one-and-a-half times higher than that in Asia.

The high maternal mortality rates in developing countries are the compounded effect of several factors, including first of all general conditions of nutrition and health. Nutritional anaemia afflicts half of all women of childbearing age in developing countries, compared with 7 per cent in developed countries. Since fertility rates are higher in developing

TABLE 11. LIFE EXPECTANCY AT BIRTH
(years)

Region	1970- 1975	1985- 1990	2000- 2005
World total			
Both sexes	56.7	61.5	65.9
Male	55.6	60.0	64.2
Female	57.8	63.0	67.6
Developing countries			
Both sexes	54.2	59.7	64.6
Male	53.6	58.6	63.1
Female	54.9	61.0	66.1
Africa			
Both sexes	46.1	51.9	57.6
Male	44.5	50.3	55.9
Female	47.7	53.6	59.4
Asia			
Both sexes	55.8	61.7	67.1
Male	55.5	60.9	65.9
Female	56.1	62.6	68.4
Latin America and the Caribbean			
Both sexes	60.9	66.0	69.7
Male	58.7	63.4	67.0
Female	63.2	68.8	72.7
Developed countries			
Both sexes	70.9	73.4	76.2
Male	67.4	69.8	72.9
Female	74.6	77.2	79.6
North America			
Both sexes	71.5	75.5	77.7
Male	67.7	72.1	74.6
Female	75.4	79.1	81.0
Europe			
Both sexes	71.3	74.2	76.6
Male	68.4	70.9	73.6
Female	74.5	77.6	79.8
Oceania (Australia and New Zealand)			
Both sexes	71.7	75.8	78.0
Male	68.5	72.7	75.0
Female	75.1	79.2	81.1
Soviet Union			
Both sexes	68.6	69.5	73.2
Male	64.0	65.0	69.2
Female	73.5	74.2	77.3

Source: *World Population Prospects: 1988* (ST/ESA/SER.A/106). To be issued as a United Nations publication.

than in developed countries, women run the risk of maternal mortality several times more often than in developed countries. The lack of prenatal care also raises the risk. Poor sanitary conditions and limited access to medical care are further contributing factors.

In developing countries, on the average, women have their first child at a young age (19-20 years), have a large family (6-7 children), spend many years in childbearing (16-18 years) and have their last child late (37 years).

In developed countries, the childbearing period is roughly half as long (7 years). The higher age at birth of the first child provides young women with longer periods for educa-

TABLE 12. ESTIMATES OF MATERNAL MORTALITY, AROUND 1983

Region	Maternal deaths	Maternal mortality rate (per 100,000 live births)
World	500 000	390
Developing countries	494 000	450
Africa	150 000	640
Asia	308 000	420
Latin America and the Caribbean	34 000	270
Oceania	2 000	..
Developed countries ^a	6 000	30

Source: Data of WHO.

^a Japan, Australia and New Zealand are excluded from the regional estimates but are included in the total for developed countries.

tion. As they have fewer children and live longer, women in developed countries have much longer (47 years) to participate in other spheres of society.

C. EDUCATION

In the integration of women into the development process and in providing opportunities for upward mobility, the acquisition of knowledge and skills is an essential requirement. Further, literate women, with a capacity to learn, are among the first members of a household to use those skills and knowledge to raise levels of sanitation, reduce malnutrition, improve the educational level of their children, and in general contribute to higher living standards. There is also evidence that higher levels of education among women generally help to substantially reduce fertility rates and population growth.

There has been much progress over the past three decades in providing education facilities for women. Yet there were 890 million illiterate persons in 1985 compared with 760 million in 1970.²⁰ Women accounted for 60 per cent of the total in 1985. In the developed countries, in 1985, the proportion of women who were illiterate was 2.6 per cent, and of men 1.7 per cent. In contrast, in the developing countries of Africa, 64.5 per cent of women and 43.3 per cent of men were illiterate; in Asia, the corresponding figures were 47.4 per cent and 25.6 per cent; and in Latin America 19.2 per cent and 15.3 per cent. Inequalities in literacy and other educational achievements are a direct result of social or family attitudes and unequal access to educational institutions.

In both centrally planned economies of Europe and market economy countries, educational opportunities are virtually the same for both boys and girls at almost all levels of education. However, in developing countries, girls lag behind boys. While enrolment ratios at the first level are not widely different among the three groups of countries, they become so at higher levels. In 1985, girls represented 44 per cent of all children enrolled in first-level schools in the developing countries and 48 per cent in the developed countries. The corresponding figures were 44 per cent in Africa, 43 per cent in Asia and 49 per cent in Latin America (see figure I). Although there had been some progress between 1970 and 1980, the most recent information suggests that there were no further advances towards equality of access to first-level education; there is some worsening in certain areas.

In the developing countries, except in Latin America and the Caribbean region, the proportion of female students declines rapidly with increasing education levels. In 1985, there was parity between male and female enrolment at the second level in Latin America and in developed countries, where females represented 51 per cent of the total enrolment (see figure II). In Africa and Asia, women enrolled at the same level accounted for 35 per cent and 39 per cent of the total, respectively. At the tertiary level, Latin America is the one developing region where enrolment at the tertiary level in 1985 equalled that of men (see figure III). Women represented 35 per cent of students at the third level in Africa and 39 per cent in Asia.

Disparities in enrolment between boys and girls in developing countries are accounted for partly by cultural and partly by economic factors. In both Africa and Asia, in choosing children to continue to higher levels of education, there is a general preference for boys over girls. Daughters rather than sons are more likely to be kept at home caring for younger siblings, collecting firewood, preparing food and fetching water. These tasks are emphasized partly because of early marriage and motherhood. Long distances to secondary schools, inadequate transport facilities and schools without elementary sanitary facilities deter parents from continuing the education of older daughters. In general, girls from low-income households in the more remote parts of countries are more likely to be held back on account of these factors than are girls in high-income urban households. In the developed countries, male-female differences in education are mainly in the field of study rather than the duration of the study.

Despite improvements made in education in both developed and developing countries, there are important differences in the type of education and training received by boys and girls. Females are seriously underrepresented in those courses of study that will most likely lead them to highly skilled, well-paid occupations with opportunities for advancement in fields which are critical to future development. There is similar underrepresentation of women in vocational education, while in occupational training programmes there is marked segregation by gender. Moreover, the type of training given to women frequently reinforces existing occupational and job segregation.

D. CHILD CARE AND SUPPORTIVE MECHANISMS

A major factor limiting the participation of women in the labour force with the same consistency and commitment as men in their responsibilities is that women bear and nurture children. Many competent and able women opt out of the labour force for these purposes. Some have their careers interrupted to bear and rear children and in the process lose out to male workers. Others may seek employment only after these responsibilities have been dealt with and may come to the labour force with skills attenuated by disuse. Some others work part time in order to devote the rest of the time to their maternal and other functions.

The principal response to this problem has been the establishment of child-care facilities and a growing tendency for men to participate in child-rearing on an equal footing with

women. The widespread availability of child-care and other facilities in the centrally planned economies goes a long way to explain the much higher participation of women in the work force in these countries. Women are granted long maternity leave, ranging from 112 to 182 days, paid for by the social insurance system.²¹ The extent of leave is based on the length of previous service and resumption of the previous employment is guaranteed. In addition to fully paid maternity leave which has existed for many years in the USSR, mothers, under a scheme introduced in 1981, are entitled to partially paid leave until the child is 12 months old. Unpaid child-care leave has been extended to 18 months. During the period of leave the job is kept open for the woman and the period of leave is added to the length of her service. For mothers who go to work, child-care services are provided either at the work place or in the neighbourhood.

Paid leave from work following childbirth varies substantially among countries and ranges from three months to three years.²² Many developed countries have extended the period of maternity leave beyond the ILO standard of 12 weeks, which is related to the need for the physical recovery of the mother. In Finland, the maximum duration is 258 working days, while in Sweden it is 360 days. An important innovation in some countries has been the introduction of extended leave, which may be taken by either parent. This is an indication of a moving away from segregation of roles and a recognition that fathers, too, participate in caring for children. The system is most highly developed in Sweden, where parental insurance gives entitlement to a cash allowance equivalent to 90 per cent of the parents' pay for 270 days and a smaller allowance for a further 90 days, regardless of income.²³ The key portion of the policy is leave from work, which is covered by a cash benefit replacing earnings forgone at the time of childbirth. In France, this covers 16 weeks, including 6 weeks before childbirth, and is equal to full wage replacement. In the Federal Republic of Germany, seven and a half months are covered, the first 14 weeks with a statutory flat rate benefit equal to about 70 per cent of the wages, supplemented by payments by the employers. During the remaining period, leave benefits are paid at the statutory level.

The development of day-care facilities for children is also essential in order to allow parents, particularly mothers, to participate in the labour market. Day-care is viewed largely as the care of children under the age of three in Europe, except in Finland and Sweden, where there are separate but integrated special child-care programmes for children up to the age of seven. France has the most extensive child-care programme, serving 95 per cent of children aged three to six. In the Federal Republic of Germany, the Government provides child care for 75 per cent of the children in this age group, but it is limited to half a day. For most working families in Europe, child care is available from the age of two, two and a half, or three years, at least to cover the normal school day.

Canada, the United Kingdom and the United States maintain separate child-care services, provided by agencies responsible for social welfare and education.

In the United States, companies are increasingly looking for ways to help ease the unavoidable conflicts between ca-

reer and family. More than half of all United States firms provide some form of family benefits, which include paternity leave and provision of child-care services for employees.²⁴ Flexible and shortened working hours are available for some United States government employees.

In developing countries, child-care services for working women are generally provided by grandparents or relatives and, when incomes permit, by family employees. These arrangements are under threat in the formal and modern sectors of these economies, where the extended family is breaking up and a rise in wages for domestic work makes the services of family employees unaffordable.

One source of fundamental change in these respects is the opportunity that modern technology provides for both men and women to work from home. The electronic transfer of information and the use of inexpensive computers enable people to work from home rather than in centralized places such as factories and offices. While these developments will take time to become widespread, they are not uncommon in some of the developed market economy countries. Working from home provides opportunities for parents to be near their children and requires social planners to think of the nature of the child-care services the family will need in the new circumstances and of measures that might have to be taken to provide legal protection against the exploitation of workers.

E. CONCLUSIONS

The advancement of women economically and socially requires changes in a whole range of policies, especially those relating to education, health and employment. Such changes are unlikely to come about unless it is widely perceived that it is both unjust and unproductive not to promote broader participation of women in the economy and society. In bringing about these changes, many agents besides Governments play very important roles. Trade unions and employers determine many job opportunities available for women. Education and the media help to shape attitudes and public opinion.

The extent to which women will participate in the labour force will vary with the economic situation, institutional arrangements and cultural preferences. However, education and vocational training, including both pre-employment and on-the-job training, are essential in combating segregation the labour market. It is important that women have a full range of education and training options, particularly in high-technology fields. Women should also have access to and participate in adult educational programmes which teach literacy and marketable income-generating skills.

Access to health services to reduce maternal morbidity and mortality is especially important if the potential output of an educated female labour force is to be fully realized. The division of family responsibilities must evolve in such a way that women can realize their potential. Part of the solution lies in laws and regulations entitling women to maternity leave and job security when employment is interrupted by childbirth and child care. While education and employment outside the home will themselves help reduce fertility,²⁵ access to effective means of contraception will enable

women to choose more freely the roles they wish to play in society. Legislation to permit equitable property rights and access to credit for women is another requirement. Women will be handicapped in the absence of institutional arrangements which permit them to work while bearing and caring for children. Provision for leave, child-care facilities and an equitable sharing of the burden of child-rearing between parents are thus necessary to enable women to participate fully in the economic and social life of their societies. The participation of fathers in sharing the burden of child-rearing is the outcome of changes in social norms and perceptions.

The United Nations Decade for Women: Equality, Development and Peace, 1976-1985, has helped to draw attention to the nature of relevant problems and probable solutions. During the Decade, the Convention on the Elimination of All Forms of Discrimination Against Women was adopted (1979) and entered into force (1981). The Convention establishes legal norms for those States acceding to it and provides guiding principles aimed at fostering a heightened awareness of the problem on the part of those Governments which were not parties to the Convention. In the report of the Secretary-General on the status of the Convention, submitted to the General Assembly at its forty-third session (A/43/605), it was stated that 94 States had ratified or acceded to the Convention. However, the goals of the Convention will be reached only when States convert its principles into national policy and procedures. Although significant progress has been made in repealing or modifying discriminatory laws, action is still needed to implement the Convention fully through measures to promote *de facto* equality. It is necessary both to undo discriminating laws and practices and to promote equality in an affirmative way, especially by ameliorating the condition of the most disadvantaged women.

NOTES

¹ ILO, *World Labour Report*, vol. 2 (Geneva, 1985), p. 203; Barbara Rogers, *The Domestication of Women* (London, Kogan Page, 1980).

² ILO, "Women in the labour force", *World Labour Report*, vol. 2 (Geneva, 1985), p. 204.

³ See ILO, *Economically Active Population—Estimates: 1950-1980, Projections: 1985-2025*, 3rd ed. (Geneva, 1986).

⁴ Susan P. Joakes, *Women in the World Economy* (New York, Oxford University Press, 1987), p. 80.

⁵ *World Survey on the Role of Women in Development* (United Nations publication, Sales No. E.86.IV.3); and UNICEF, *The Invisible Adjustment: Poor Women and the Economic Crisis* (Santiago, Chile, Regional Office for the Americas and the Caribbean).

⁶ Surinder Jetley, "Impact of male migration on rural females", *Economic and Political Weekly*, 31 October 1987.

⁷ *Economic Recession and Special Population Groups* (United Nations publication, Sales No. E.86.IV.4), p. 44.

⁸ M. Buvinc, N. H. Youssef and B. von Elm, *Women-headed Households: The Ignored Factor in Development Planning* (Washington, D.C., International Center for Research on Women, 1978).

⁹ Guy Standing, *Unemployment and Female Labour: A Steady Labour Supply in Kingston, Jamaica* (London, Macmillan, 1981).

¹⁰ M. Buvinc, *op. cit.*

¹¹ S. P. Joakes, *Female-led Industrialization—Women's Jobs in Third World Export Manufacturing: The Case of the Moroccan Clothing Industry*, Research Report No. 15 (Brighton, Institute of Development Studies, University of Sussex, 1982).

¹² H. Ware, "Female and male life-cycles", in *Male and Female in West Africa*, C. Oppong, ed. (London, George, Allen and Unwin, 1983).

¹³ Alice H. Cook, "International comparisons: problems and research in the industrialized world", in *Working Women: Past, Present, Future*, Karen S. Koziara, Michael H. Moskow and Lucretia D. Tanner, eds. (Washington, D.C., Bureau of National Affairs, 1987), pp. 342-343.

¹⁴ Gilda Berger, *Women, Work and Wages* (New York, Franklin Watts, 1986), p. 14.

¹⁵ ILO, *World Labour Report*, vol. 1 (Geneva, 1984), p. 52.

¹⁶ Ksenya Khinchuk, "The agricultural labour force in the Soviet Union", *Soviet Geography*, vol. 28 (February 1987), pp. 100-101.

¹⁷ See *World Economic Survey 1988* (United Nations publication, Sales No. E.88.II.C.1), annex I.

¹⁸ See Kumari Jayawardena, *Feminism and Nationalism in the Third World* (London, Zed Books, 1986).

¹⁹ WHO, *Maternal Mortality Rates: A Tabulation of Available Information*, 2nd ed. (Geneva, 1986).

²⁰ UNESCO, "A summary statistical review of education in the world, 1970-1984" (ED/BIE/CONFINTED 40/Ref.1), p. 55.

²¹ ILO, "Women, job opportunities and conditions of work", *World Labour Report*, vol. 2 (Geneva, 1985), p. 228.

²² Sheila Kameron, "Child care and family benefits: policies of six industrialized countries", *Monthly Labour Review*, November 1980.

²³ OECD, *The Integration of Women into the Economy* (Paris, 1985), p. 150.

²⁴ Janice Castro, "Home is where the heart is", *Time*, 3 October 1988, p. 46.

²⁵ *Women's Employment and Fertility: A Comparative Analysis of World Fertility Survey Results for 38 Developing Countries* (United Nations publication, Sales No. E.85.XIII.5 and corrigendum).

Chapter III

FOOD CONSUMPTION AND SUPPLY

During the past three or four decades food supplies have increased considerably, famine has been reduced and nutritional levels raised. The world feeds twice as many people now (5.1 billion people) as in 1950 (2.5 billion) and feeds them more adequately, as indicated by the substantial decline in infant mortality, among other things. Food stocks are larger, the means of transporting food have improved and the distribution of food is managed more competently in times of distress.

Despite these achievements, however, hunger and malnutrition continue to be world-wide problems. Although the vast improvements in food production during the past few decades have increased the average daily supply of grains in the world to the point that it would be possible to provide everyone with 3,000 calories and 65 grams of protein,¹ food supplies are not distributed equally among consumers. Some 40 per cent of the grain output is fed to livestock. The total consumption of cereals in 1987 in the United States of America was about 823 kg per capita. If cereal supplies were distributed equally among the people of the world, each would consume no more than 51 per cent of the average direct and indirect consumption in the United States of America.² Yet because the distribution of food among consumers is principally determined by their capacity to procure food either by producing it or through trade, there are wide variations in food consumption. In countries where food cannot be procured through either domestic production or import, hunger and malnutrition are inevitable. Similarly, families that cannot produce or purchase adequate food supplies go without them. Within families, in some instances there is discrimination against women and children.³

The problem of unequal distribution has been ameliorated by food aid and by the policies of Governments in some countries to ensure a minimum supply of food to its entire population. These policies were strained during the 1980s, when natural disasters cut down production and import capacity was curtailed by shortfalls in export earnings and the dearth of external borrowing. This chapter is devoted to a discussion of these problems and the domestic and international approaches adopted to resolve them.

A. FOOD CONSUMPTION

1. *Per capita dietary energy supplies*

Global per capita dietary energy supplies (DES) increased from 2,340 calories a day in 1961-1963 to 2,666 in 1983-1985, bringing the ratio of average DES in developing countries as a group to that in developed countries to 72 per cent in 1983-1985, as compared to 69 per cent in 1980 and 62 per cent in 1961-1963.⁴ However, the nutritional status of the

population in many developing countries has deteriorated. Per capita dietary energy supplies declined in 42 out of 102 countries, and in only one third of them were there gains of 0.5 per cent a year or more.⁵ Although there were significant increases in per capita consumption in most Asian countries, in many countries in Africa and some in Latin America, calorie consumption per capita was lower during the latter years of the decade than at the beginning of the 1980s (see table 13).

In 65 low-income countries, per capita consumption of staples declined by 1.2 per cent in 1987, whereas it had increased by 0.9 per cent during the period 1980-1986.⁶ The declines in the low-income countries of Africa, West Asia and Oceania averaged over 4 per cent, while in the low-income countries of Latin America per capita consumption fell by 2.4 per cent in 1987. Per capita consumption also fell in some of the higher-income developing countries.

In the mid-1980s there were 44 countries where the daily per capita consumption of dietary energy was less than the required minimum (see table 14). Of them, 27 were in Africa. They also included countries with large populations, such as Bangladesh, India and Pakistan. Three of the four countries where consumption was most deficient were in Africa. Some island economies, including Antigua and Barbuda, Grenada, Samoa, Solomon Islands and Vanuatu, also failed to provide adequate levels of dietary energy to their population.

The number of people "chronically deprived of the food necessary for them to lead and enjoy an active, healthy life and develop their human potential" in the mid-1980s was estimated by the World Food Council to be over 500 million, about 10 per cent of the total world population.⁷ The World Bank estimates the number to be 730 million, about 15 per cent of the world population.⁸

There was a rapid increase in the number of hungry people in the first half of the 1980s, on the average 8 million people per year, compared to 1.5 million per year between 1971 and 1980.⁹ The increase was more marked in Africa and Latin America than in Asia. Of the 40 million people added to the ranks of the hungry between 1980-1985, 8 million were in Africa.

Of all those deprived of adequate food in the late 1980s, 60 per cent live in Asia, 25 per cent in Africa, 10 per cent in Latin America and 5 per cent in West Asia. If one accepts the lower estimate of 500 million, there would be over 300 million people in Asia, 125 million in Africa, 50 million in Latin America and 25 million in West Asia.

Both civil strife and the loss of crops due to drought and desertification, floods and cyclones contributed to the fall in per capita production of food. Drought reduced food pro-

TABLE 13. AVERAGE DAILY PER CAPITA SUPPLIES^a OF CALORIES, PROTEIN, IRON AND VITAMIN A^b

Economic grouping, region and country or area	Calories				Protein			Iron			Vitamin A		
	1969- 1971	1979- 1981	1983- 1985	1983-1985 supplies as % of requirement	1969- 1971	1979- 1981	1983- 1985	1969- 1971	1979- 1981	1983- 1985	1969- 1971	1979- 1981	1983- 1985
	(number)	(number)	(kilo-cal)	(grams)	(milligrams)	(micrograms)	(micrograms)						
Developing market economies	2 173	2 337	2 364	..	54.1	57.2	57.4	15.1	15.1	15.0	544	613	654
Africa	2 103	2 204	2 129	..	52.7	54.3	51.7	19.4	18.8	17.5	908	878	847
Algeria	1 825	2 617	2 710	129	47.7	67.4	71.1	9.7	13.0	13.5	325	473	532
Benin	2 078	2 140	2 136	93	47.2	48.7	47.7	14.2	13.8	13.4	1 079	1 142	1 407
Botswana	2 138	2 139	2 164	93	72.9	68.7	67.5	17.9	16.1	16.1	496	570	504
Burkina Faso	1 968	2 033	1 961	82	66.5	65.2	61.8	23.4	22.6	21.5	201	223	300
Burundi	2 363	2 344	2 217	95	83.0	77.8	71.3	27.1	24.8	22.6	673	691	675
Cameroon	2 185	2 173	2 074	89	51.1	51.2	47.9	21.6	21.2	20.2	1 562	1 453	1 454
Cape Verde	1 894	2 545	2 614	112	45.1	65.7	63.3	12.1	16.2	13.6	206	244	193
Central African Republic	2 159	2 115	2 045	90	40.8	41.6	41.7	16.7	16.0	15.9	313	312	362
Comoros	2 219	2 074	2 090	89	38.1	38.4	38.6	13.8	12.8	11.6	252	248	239
Congo	2 174	2 443	2 532	114	37.4	43.6	45.9	13.2	14.2	14.2	1 473	1 668	1 712
Côte d'Ivoire	2 369	2 569	2 448	106	52.1	58.4	50.8	14.4	14.0	12.7	1 440	1 638	1 492
Egypt	2 499	3 027	3 262	130	68.5	77.1	82.8	19.1	19.7	20.7	560	710	842
Gambia	2 249	2 176	2 229	97	53.8	52.2	54.2	13.2	11.3	11.7	900	912	853
Ghana	2 200	1 785	1 679	73	48.6	41.0	36.7	16.7	13.7	12.8	827	784	801
Guinea	1 907	1 768	1 724	75	40.3	38.9	37.8	10.6	9.5	9.1	1 572	1 343	1 316
Kenya	2 245	2 192	2 162	93	65.5	58.6	58.0	17.4	14.9	14.0	462	534	492
Lesotho	2 020	2 347	2 346	103	60.5	69.2	68.2	14.4	16.6	16.5	250	312	321
Liberia	2 209	2 381	2 342	101	41.4	44.1	41.2	13.6	14.3	13.0	1 715	1 735	2 118
Libyan Arab Jamahiriya	2 367	3 653	3 619	153	62.7	98.1	94.2	12.9	20.5	19.2	535	1 059	1 154
Madagascar	2 494	2 510	2 467	109	59.8	57.8	55.6	15.6	14.6	14.2	649	646	644
Malawi	2 323	2 472	2 429	105	70.5	69.9	68.9	18.2	18.2	18.0	319	303	279
Mali	1 836	1 752	1 793	76	52.6	50.4	49.2	19.9	18.3	17.9	367	374	383
Mauritania	1 988	1 998	2 076	90	78.2	68.9	68.0	17.8	13.3	11.4	583	648	674
Mauritius	2 300	2 723	2 721	120	48.4	62.2	61.2	8.4	10.5	10.9	223	316	374
Morocco	2 424	2 728	2 688	111	63.9	70.9	71.4	14.3	15.7	15.7	537	571	561
Mozambique	2 075	1 805	1 664	71	39.2	31.2	29.1	15.2	12.1	11.2	243	219	242
Niger	2 002	2 363	2 265	96	55.6	69.7	66.6	23.4	27.4	25.8	319	373	410
Nigeria	2 131	2 245	2 061	87	47.8	50.9	45.0	17.5	16.8	15.4	1 586	1 372	1 341
Reunion	2 519	2 918	2 918	129	66.0	75.3	73.4	11.0	11.7	11.9	322	479	522
Rwanda	1 967	2 073	2 013	87	54.6	50.5	52.5	19.2	19.3	19.1	641	852	847
Sao Tome and Principe	2 152	2 353	2 435	104	48.0	47.8	52.0	17.8	17.1	17.0	194	1 634	262
Senegal	2 371	2 389	2 339	98	66.2	67.2	61.7	16.3	16.0	12.3	667	583	561
Seychelles	1 993	2 299	2 289	..	46.0	46.0	55.3	8.5	10.7	10.5	200	308	306
Sierra Leone	1 956	2 049	2 289	2 300	40.4	44.2	38.7	10.6	10.9	13.4	2 684	2 647	2 283
Somalia	2 181	2 054	2 059	89	76.9	67.6	63.7	19.8	17.3	17.4	954	690	629
Sudan	2 115	2 319	2 003	85	64.6	69.7	63.6	29.9	29.3	23.9	464	541	541
Swaziland	2 224	2 497	2 562	110	62.9	64.0	61.2	14.7	14.8	13.7	444	505	415
Togo	2 194	2 217	2 202	96	47.2	49.3	50.4	15.8	14.4	15.2	808	880	748
Tunisia	2 271	2 772	2 827	118	60.6	77.3	79.1	13.4	16.7	17.6	694	857	923
Uganda	2 282	2 169	2 291	98	52.6	50.8	53.6	20.9	20.6	22.2	704	742	735
United Republic of Tanzania	1 949	2 427	2 314	2 330	43.7	52.6	52.2	12.3	15.3	15.4	630	639	580
Zaire	2 253	2 127	2 154	97	38.5	34.7	33.5	14.2	13.2	13.2	1 610	1 635	1 374
Zambia	2 192	2 203	2 123	92	63.9	59.2	56.4	16.8	15.3	14.5	310	289	277
Zimbabwe	2 115	2 111	2 094	88	57.6	54.3	51.0	15.1	13.2	12.6	259	235	221

TABLE 13 (continued)

Economic grouping, region and country or area	Calories										Protein			Iron			Vitamin A		
	1969-1971		1979-1981 (number)		1983-1985		Requirements (kilo-cal)		1983/1985 supplies as % of requirement		1969-1971	1979-1981 (grams)	1983-1985	1969-1971	1979-1981 (milligrams)	1983-1985	1969-1971	1979-1981 (micrograms)	1983-1985
	1969-1971	1979-1981 (number)	1983-1985	Requirements (kilo-cal)	1983/1985 supplies as % of requirement	1969-1971	1979-1981 (grams)	1983-1985	1969-1971	1979-1981 (milligrams)	1983-1985	1969-1971	1979-1981 (micrograms)	1983-1985	1969-1971	1979-1981 (micrograms)	1983-1985		
Latin America and the Caribbean	2 517	2 677	2 700	..	..	65.2	68.3	68.0	14.0	13.7	588	649	665					
Antigua and Barbuda	2 293	2 142	2 105	2 420	87	60.9	65.2	57.7	8.7	11.3	470	627	576						
Argentina	3 318	3 252	3 195	2 650	121	105.0	108.7	104.4	18.7	18.2	1 144	1 057	1 106						
Bahamas	2 640	2 497	2 703	2 420	112	78.8	71.7	76.2	17.3	15.3	1 006	1 011	1 043						
Barbados	2 889	3 125	3 129	2 420	129	79.4	85.4	88.2	12.6	15.4	1 006	887	923						
Belize	2 463	2 711	2 546	2 260	113	61.9	68.1	66.6	11.3	15.0	279	401	376						
Bermuda	2 934	2 555	2 530	..	..	105.7	96.9	92.1	17.0	16.3	1 195	1 269	1 303					
Bolivia	1 971	2 084	2 114	2 390	88	49.9	54.5	54.9	12.3	13.1	522	550	544						
Brazil	2 472	2 623	2 629	2 390	110	60.9	61.6	60.6	13.0	11.5	415	487	491						
Chile	2 674	2 642	2 589	2 440	106	70.3	72.5	69.4	15.3	16.0	615	602	570						
Colombia	2 158	2 505	2 578	2 320	111	49.0	54.5	56.7	13.7	15.3	822	1 109	1 205						
Costa Rica	2 405	2 621	2 772	2 240	124	57.0	64.0	64.4	12.1	12.8	1 014	1 372	1 593						
Cuba	2 573	2 834	3 094	2 310	134	68.3	73.8	76.2	12.4	13.5	517	626	652						
Dominica	2 174	2 379	2 615	2 420	108	56.0	62.6	64.2	11.9	13.1	619	626	635						
Dominican Republic	2 083	2 316	2 468	2 260	109	45.0	50.3	51.9	10.9	12.0	709	687	695						
Ecuador	1 957	2 063	2 031	2 290	89	48.8	46.8	45.0	11.6	9.6	616	500	495						
French Guiana	2 619	2 665	2 783	..	..	73.9	84.5	88.4	15.3	16.7	651	911	1 159					
Guyana	2 292	2 412	2 492	2 270	110	57.8	57.3	54.2	10.0	8.4	338	255	254						
Grenada	2 347	2 297	2 371	2 420	98	61.0	64.9	57.8	12.0	12.2	490	513	437						
Guadeloupe	2 333	2 521	2 672	2 420	110	69.5	84.6	87.4	12.3	15.4	930	739	848						
Guatemala	2 101	2 220	2 298	2 190	105	57.4	59.5	60.4	13.2	13.6	277	263	261						
Haiti	1 920	1 904	1 843	2 260	82	44.5	45.2	44.0	17.5	16.7	821	806	801						
Honduras	2 151	2 197	2 208	2 260	98	54.8	54.3	54.0	13.3	12.3	580	732	718						
Jamaica	2 531	2 572	2 576	2 240	115	65.5	60.9	59.2	11.6	11.7	587	696	751						
Martinique	2 360	2 652	2 830	2 420	117	71.2	83.0	83.4	13.5	16.1	1 036	1 765	1 346						
Mexico	2 703	3 053	3 147	2 330	135	69.3	79.1	81.3	15.5	16.3	577	688	731						
Netherlands Antilles	2 449	2 759	2 850	2 420	118	70.2	84.9	88.0	12.8	18.0	463	642	684						
Panama	2 346	2 322	2 420	2 310	105	57.3	59.0	60.7	12.8	12.2	551	501	492						
Paraguay	2 754	2 780	2 813	2 310	122	74.3	77.6	78.6	19.1	18.7	997	841	669						
Peru	2 289	2 179	2 144	2 350	91	61.0	59.0	56.8	12.8	11.0	538	486	504						
St. Kitts and Nevis	2 123	2 264	2 233	..	..	47.7	65.8	60.9	8.8	11.9	361	447	525					
Saint Lucia	2 132	2 312	2 421	2 420	100	53.3	62.2	64.3	9.7	14.2	316	255	278						
St. Vincent	2 252	2 459	2 684	2 260	109	52.4	58.6	64.3	9.7	10.3	216	255	278						
Suriname	2 340	2 553	2 666	2 260	118	58.7	62.3	64.3	11.1	14.2	363	605	722						
Trinidad and Tobago	2 567	2 853	2 967	2 420	121	65.2	76.4	78.1	11.1	14.2	693	653	648						
Uruguay	3 002	2 832	2 721	2 670	102	90.9	87.4	79.1	14.5	13.3	693	653	648						
Venezuela	2 412	2 665	2 550	2 470	103	61.8	71.8	69.0	11.3	11.8	534	646	602						
Asia																			
Bangladesh	2 013	1 850	1 859	2 210	84	43.5	39.2	38.6	8.2	6.5	310	224	342						
Brunei Darussalam	2 339	2 774	2 790	2 240	125	56.7	73.8	72.6	13.6	17.2	486	743	900						
Burma	2 069	2 375	2 518	2 160	117	53.5	62.4	65.9	8.5	9.2	416	437	446						
Hong Kong	2 659	2 729	2 715	2 290	119	77.1	84.0	79.3	15.8	16.1	850	919	755						
India	2 021	2 104	2 161	2 210	98	49.9	50.4	52.3	15.4	14.9	483	501	525						
Indonesia	2 012	2 440	2 504	2 160	116	41.0	50.4	51.4	11.3	13.7	203	559	684						
Fiji	2 708	2 774	2 932	2 660	110	56.1	65.0	63.3	17.3	15.9	330	322	354						
Korea, Republic of	2 528	2 824	2 822	2 350	120	64.5	75.8	73.6	17.2	17.4	578	939	905						
Kuwait	2 777	3 162	3 135	..	..	80.3	95.7	92.5	17.0	20.5	928	1 253	1 318					

Macau	2 155	2 093	2 109	2 290	92	57.0	62.6	58.4	10.4	12.5	10.9	348	453	616
Malaysia	2 409	2 596	2 634	2 240	118	49.4	58.5	54.5	10.8	10.4	10.7	444	1 360	1 801
Nepal	1 996	1 974	2 048	2 200	93	51.0	50.9	53.0	10.7	10.6	10.9	278	291	294
Pakistan	2 027	2 221	2 186	2 310	95	54.4	58.0	56.4	17.5	18.1	16.8	295	403	597
Philippines	2 053	2 355	2 313	2 260	102	48.7	52.5	48.7	8.2	10.1	9.2	352	484	521
Saudi Arabia	1 887	2 826	3 093	2 420	128	48.7	78.1	88.8	17.9	20.1	21.7	358	1 360	2 398
Singapore	2 587	2 667	2 729	2 300	119	67.9	71.9	73.2	13.4	13.0	13.4	529	602	795
Sri Lanka	2 260	2 228	2 410	2 220	109	44.8	43.5	47.3	12.6	12.4	13.2	448	389	481
Syrian Arab Republic	2 355	2 880	3 198	2 480	129	63.4	80.6	85.1	14.6	20.0	20.7	466	908	895
Thailand	2 258	2 405	2 440	2 220	110	48.5	48.4	47.8	9.5	10.1	9.9	406	416	409
United Arab Emirates	3 130	3 594	3 664	..	..	78.5	105.1	98.7	19.3	25.1	24.0	1 022	1 169	1 306
Yemen Arab Republic	1 841	2 197	2 254	2 420	93	58.7	68.5	65.5	31.9	28.2	24.7	278	697	1 130
Yemen, Democratic Republic of	2 078	2 211	2 293	2 410	95	48.8	63.3	66.3	17.0	15.5	15.3	426	372	359
French Polynesia	2 840	2 863	2 860	2 660	108	71.5	75.0	70.4	17.2	17.6	17.2	660	748	802
Kiribati	2 189	2 672	2 616	..	..	50.6	68.0	58.4	14.7	18.3	17.1	418	490	451
New Caledonia	2 871	2 937	2 909	2 660	109	73.2	75.1	75.6	18.8	17.2	15.3	872	795	730
Samoa	2 070	2 403	3 373	2 660	89	48.1	58.7	55.1	15.4	18.3	17.4	595	798	677
Solomon Islands	2 146	2 119	2 085	2 660	78	48.9	53.4	48.6	17.1	16.3	16.0	1 640	1 212	1 078
Tonga	2 524	2 851	2 870	2 660	108	55.9	75.6	73.1	20.9	27.1	27.5	390	617	565
Vanuatu	2 586	2 403	2 331	2 660	88	66.7	67.5	60.7	19.8	18.5	17.0	721	671	632
Near East	2 397	2 836	2 957	..	..	67.3	77.6	79.8	17.7	18.9	19.1	597	741	849
Far East	2 059	2 195	2 239	..	..	49.2	51.5	52.4	13.8	13.8	13.8	416	497	553
Asia, centrally planned	1 995	2 289	2 555	..	..	48.2	54.7	60.0	11.5	11.1	11.4	654	577	571
China	1 974	2 288	2 564	2 360	109	47.6	54.6	60.2	11.5	11.1	11.5	670	585	578
Korea, Democratic Republic of	2 501	3 060	3 131	2 340	134	73.6	84.2	83.3	17.4	18.0	18.2	921	971	927
Mongolia	2 385	2 715	2 811	2 430	116	88.3	93.3	92.0	15.3	16.6	17.0	928	923	933
All developing countries	2 113	2 321	2 424	..	..	52.1	56.4	58.2	13.9	13.8	13.8	581	601	628
Developed market economies	3 231	3 355	3 356	..	..	93.3	97.4	96.5	15.1	15.1	15.0	1 100	1 125	1 144
Australia	3 285	3 376	3 343	2 660	126	101.3	97.9	96.4	19.0	18.6	18.7	1 271	1 163	1 124
Austria	3 303	3 453	3 484	2 630	132	87.3	91.7	91.9	15.0	15.5	15.0	989	1 212	1 120
Belgium-Luxembourg	3 483	3 695	3 695	2 640	140	94.7	102.0	103.5	16.5	16.9	17.1	1 322	1 343	1 401
Canada	3 350	3 401	3 443	2 660	129	94.1	95.1	94.2	11.2	11.3	11.5	970	1 064	1 065
Denmark	3 394	3 585	3 528	2 690	131	90.2	101.5	97.3	14.2	16.8	15.7	1 372	1 635	1 654
Finland	3 141	3 075	3 008	2 710	111	88.0	93.2	89.6	12.7	13.6	13.3	1 179	1 241	1 256
France	3 257	3 321	3 337	2 520	132	100.5	108.0	106.6	19.2	19.0	18.8	1 790	1 708	1 865
Germany, Federal Republic of	3 273	3 433	3 475	2 670	130	85.2	91.0	92.8	15.0	16.8	16.9	1 078	1 149	1 221
Greece	3 189	3 571	3 660	2 500	146	99.3	106.9	107.8	19.2	20.8	20.3	1 249	1 557	1 835
Iceland	2 920	3 140	3 041	2 660	114	103.7	126.1	112.9	14.3	18.8	18.4	1 605	1 922	1 925
Ireland	3 508	3 713	3 795	2 510	151	103.0	105.2	107.3	17.2	19.1	20.0	2 024	2 341	2 331
Israel	3 018	2 993	3 049	2 570	119	97.4	101.4	101.5	17.5	16.2	17.0	2 071	1 950	2 119
Italy	3 422	3 622	3 486	2 520	138	96.8	108.0	104.7	17.0	17.2	16.9	1 138	1 203	1 297
Japan	2 751	2 851	2 804	2 340	120	82.5	90.2	85.6	15.1	15.5	14.5	921	971	927
Malta	3 057	2 735	2 590	2 480	104	89.2	84.4	79.8	15.9	13.9	13.3	705	864	781
Netherlands	3 247	3 352	3 355	2 690	125	85.3	92.7	95.5	13.4	13.8	13.4	1 626	1 791	1 886
New Zealand	3 411	3 399	3 402	2 640	129	104.6	103.8	103.6	17.7	17.2	16.7	1 874	1 891	1 886
Norway	3 078	3 375	3 203	2 680	120	87.6	109.2	96.7	13.3	15.5	14.7	1 222	1 234	1 210
Portugal	3 008	3 135	3 203	2 450	128	85.0	83.1	84.5	18.1	16.8	17.2	1 275	1 254	1 277
Spain	2 868	3 337	3 335	2 460	136	83.1	96.3	93.6	14.9	16.5	16.2	782	1 011	973
Sweden	2 924	3 068	3 053	2 690	113	86.1	95.1	92.7	12.9	13.8	13.4	1 244	1 241	1 265
Switzerland	3 495	3 494	3 440	2 690	128	88.7	94.2	91.6	15.2	15.4	15.1	1 446	1 602	1 700
Turkey	2 819	3 104	3 180	2 520	126	79.8	84.8	84.3	16.5	16.5	17.6	649	687	706
United Kingdom	3 337	3 174	3 130	2 520	124	92.4	88.2	85.5	13.6	13.4	13.1	1 417	1 166	1 133
United States	3 467	3 660	3 652	2 640	138	103.2	102.6	104.4	12.5	12.7	13.0	958	972	998
South Africa	2 718	2 932	2 945	2 450	120	72.7	77.3	75.1	12.7	13.6	13.5	778	846	809

TABLE 13 (continued)

Economic grouping, region and country or area	Calories										Protein			Iron			Vitamin A			
	1969- 1971		1979- 1981 (number)		1983- 1985		Require- ments (kilo-cal)	1983-1985 supplies as % of requirement	1969- 1971		1979- 1981 (grams)		1983- 1985		1969- 1971		1979- 1981 (micrograms)		1983- 1985	
North America	3 456	3 586	3 632	..	..	..	..	102.3	101.9	103.4	12.3	12.6	12.9	960	981	1 004				
Western Europe	3 261	3 392	3 379	..	..	..	..	91.6	98.1	96.8	15.8	16.5	16.3	1 244	1 275	1 324				
Oceania	3 308	3 380	3 353	..	..	..	..	101.9	98.9	97.7	18.7	18.3	18.3	1 382	1 291	1 245				
Other	2 751	2 870	2 839	..	..	..	..	81.1	88.0	84.0	14.8	15.2	14.4	922	973	935				
Eastern Europe and USSR	3 332	3 405	3 410	..	..	..	..	97.3	100.6	98.8	16.3	16.4	16.4	1 004	1 111	1 174				
Bulgaria	3 500	3 628	3 626	2 500	145	2 500	145	98.4	105.5	105.8	16.3	15.9	16.0	857	963	1 089				
Czechoslovakia	3 417	3 434	3 479	2 470	141	2 470	141	94.3	98.0	98.4	15.8	15.3	15.6	1 306	1 322	1 417				
German Democratic Republic	3 348	3 645	3 768	2 620	144	2 620	144	93.4	103.6	108.1	15.3	16.3	17.3	1 326	1 530	1 755				
Hungary	3 338	3 496	3 522	2 630	134	2 630	134	90.5	95.0	95.0	15.4	15.9	15.4	1 334	1 642	1 461				
Poland	3 333	3 433	3 253	2 620	124	2 620	124	100.6	108.9	97.5	15.2	15.6	15.0	1 342	1 696	1 648				
Romania	3 068	3 352	3 394	2 650	128	2 650	128	88.6	101.7	102.4	14.5	15.9	16.8	591	911	995				
Soviet Union	3 348	3 385	3 403	2 560	133	2 560	133	98.5	99.6	98.3	16.7	16.7	16.6	948	1 001	1 076				
Yugoslavia	3 327	3 587	3 599	2 540	142	2 540	142	93.9	103.1	101.4	16.4	17.2	17.0	557	715	714				
All developed countries	3 264	3 371	3 374	..	..	..	..	94.6	98.4	97.3	15.2	15.5	15.4	1 069	1 120	1 154				
World	2 449	2 599	2 666	..	..	..	..	64.5	67.5	68.2	14.3	14.3	14.2	724	738	762				
All developing as per cent of all developed countries	65	69	72	..	..	..	..	55	57	60	91	89	90	54	54	54				

Source: Department of International Economic and Social Affairs, based on FAO, *The State of Food and Agriculture, 1984 and Production Yearbook, 1986*, vol. 40.

^a Of food for human consumption available from both vegetable and animal products converted into energy, protein, mineral and vitamin equivalents by applying food composition factors in terms of

nutrients. Food supplies equal food production plus net food imports plus beginning food stocks minus feed and seed uses minus wastage through transportation, storage, etc.

^b Retinol equivalent (Retinol + 1/6 beta-carotene equivalent).

duction in 1987/88 in Djibouti, Ethiopia, the Sudan, Uganda, and parts of Chad, Mali, Mauritania and Somalia. There was some loss of crops in Algeria and Tunisia in 1988 due to locust infestations. Civil strife adversely affected food production in Angola, Mozambique and Sri Lanka. Poor monsoons reduced food production in India, Indonesia, Pakistan, Sri Lanka and Viet Nam in 1987. The disastrous floods in Bangladesh in 1988 can be expected to severely worsen problems of food availability.

2. Malnutrition

Developing countries

There was a long-term improvement in nutrition world wide during the last quarter century.¹⁰ Per capita dietary energy supplies in developing countries rose from 64 per cent of that in developed countries in 1964 to 70 per cent in 1980 and 72 per cent in 1983-1985. Falling infant and child mortality rates reflect the improvements in these conditions. However, the situation has deteriorated in many developing countries during the past five years. Malnutrition is endemic in many developing countries and severe malnutrition (where a person is 60 per cent of normal body weight) is a grave problem in several of them. Malnutrition is associated with over half the 15 million deaths of children between six months and five years of age in developing countries.¹¹ Where undernourishment does not exact an immediate toll, it shortens life expectancy and jeopardizes the full mental and physical development of surviving children. Malnutrition among pregnant women raises complications in pregnancy, reduces the weight of the newborn and increases risks of morbidity and mortality for both mother and child. Among lactating mothers, there is a fall in both the quantity and quality of breast milk, which contributes to malnutrition among children.¹² Problems are especially severe in many developing countries owing to deficiencies in the intake of vitamin A, iodine and iron.

The proportion of the population in sub-Saharan Africa who were undernourished is estimated to have increased from 22 per cent in 1979-1981 to 26 per cent in 1983-1985,

from nearly 80 million to over 100 million.¹³ In Central America, however, the proportion of underweight children fell from about 10 per cent in 1974-1976 to about 6 per cent in 1983-1985 and the number of pre-school children suffering from malnutrition from 1.3 million to 1.0 million. In South America and the Caribbean, the proportion of underweight children suffering from undernutrition is estimated to have stabilized at 9 per cent since 1979-1981. In West Asia and North Africa, there were marked improvements in the diet, with increased consumption of wheat, rice, poultry, milk, vegetable oils, fruits and vegetables. The proportion of underweight children is also estimated to have fallen from 13 per cent in 1980 to 11 per cent in 1985. However, there were wide differences between such countries as Kuwait and the Yemen Arab Republic. In South Asia, the proportion of the population suffering from malnutrition fell from 18 per cent in 1979-1981 to 17 per cent in 1983-1985, the absolute number being 170 million in the mid-1980s. This amounted to almost 50 per cent of all the undernourished people in the world. Although the percentage of underweight children in South Asia also fell from 71 per cent in 1980 to 67 per cent in 1983-1985, the absolute number increased from 95 to 100 million. In South-East Asia, the comparable proportions were 34 per cent and 32 per cent.

Thirty-four developing countries have been identified as having serious vitamin A deficiencies in the mid-1980s.¹⁴ It is estimated that some 700,000 new cases of vitamin A deficiency occur among pre-school children each year world wide. Some 60 per cent die, and of the survivors, 25 per cent remain totally blind. This amounts to some 200,000 children going blind or partially blind every year. Vitamin A deficiency is the largest single cause of the total of 40 million people estimated world wide to be blind. Surveys indicate that about 15 per cent of children suffer from mild vitamin A deficiency in countries such as India, the Sudan and the Yemen Arab Republic. Vitamin A deficiency is also a major problem in Bangladesh and Indonesia.

Iron deficiency is widespread in developing countries. It is the most common cause of anaemia in women of reproductive age and in young children. It is estimated that almost

TABLE 14. DEVELOPING COUNTRIES DISTRIBUTED ACCORDING TO DEGREE OF DEFICIENCY IN DAILY PER CAPITA DIETARY ENERGY SUPPLIES (DES), 1983-1985

5 per cent	5-10 per cent	11-20 per cent	20 per cent
Gambia	Benin	Antigua and Barbuda	Ghana
Grenada	Botswana	Bangladesh	Mali
Honduras	Burundi	Bolivia	Mozambique
India	Central African Republic	Burkina Faso	Solomon Islands
Niger	Democratic Yemen	Cameroon	
Senegal	Kenya	Comoros	
Sierra Leone	Mauritania	Ecuador	
Togo	Nepal	Haiti	
Uganda	Pakistan	Nigeria	
United Republic of Tanzania	Peru	Rwanda	
Zaire	Yemen	Samoa	
	Zambia	Somalia	
		Sudan	
		Vanuatu	
		Zimbabwe	

Source: DIESA, based on FAO, *The State of Food and Agriculture, 1984 and Production Yearbook, 1986*, vol. 40.

NOTE: Degree of deficiency is based on requirements established by FAO and WHO.

50 per cent of women of reproductive age in developing countries, about 258 million, suffer from anaemia,¹⁵ which has adverse effects on health, reproduction and work performance.

Another micro-nutrient that is lacking in the diets of people in developing countries is iodine. Iodine deficiency causes goitre and leads to reduced mental functions, lethargy and an increased rate of stillbirths and infant mortality. Severe iodine deficiency can cause cretinism, a severe mental and neurological impairment. According to WHO surveys, about 800 million people are at risk of iodine deficiency world wide.¹⁶ Most of them are in Asia, with an estimated 300 million of them in China and 200 million in India. About 200 million people suffer from goitre and 3 million from cretinism. About 80 per cent of those affected by goitre and cretinism live in Asia. About 40 million people in South-East Asia suffer from mental and physical impairment due to iodine deficiency disorders. These disorders are also endemic in some localities in Bangladesh, the northern regions of Pakistan, Afghanistan and the Islamic Republic of Iran, the remote regions of the Himalayas, Papua New Guinea and other islands in Micronesia, the Andean region of South America and many countries in Africa.

Malnutrition, poverty and lack of knowledge are inextricably intertwined. In general, geographical location or habitat is also a determinant of nutritional adequacy. Studies in Latin America and the Caribbean revealed that: (a) the incidence of poverty and malnourishment was higher in rural than in urban areas; (b) in urban areas the incidence of food poverty was highest in families headed by manual workers, followed by those headed by workers in personal services; (c) the incidence of food poverty tended to be higher among large families than among small families; (d) the incidence of malnutrition was influenced by the size of a family's landholdings; families with small farms were more likely to suffer from malnutrition than were families with big farms; (e) families engaged in agricultural labour were more likely to be malnourished than were those in the urban labour force; and (f) the incidence of malnutrition among urban slum-dwellers and poor agricultural labourers was similar. Malnutrition among the urban poor was severe, especially in countries where the degree of urbanization was high, as in many South American countries.¹⁷

Governments in developing countries have adopted wide-ranging measures to counteract and correct the problems leading to malnutrition. The programmes established include the creation of nutrition rehabilitation centres and the distribution of food and pre-packaged nutrition supplements at community feeding centres and children's clinics. Budgetary constraints in the 1980s have narrowed the coverage of such programmes. To extend their health and nutrition budgets, Governments have tried to base their nutrition supplement programmes on food that is cheap and available locally.

In India, for example, supplementary nutrition programmes for pre-school children included the Integrated Child Development Services Scheme, the Applied Nutrition Programme and the Mid-day Meal Programme. Cooking demonstrations were also used to correct some aspects of the nutrition problem. Experiments conducted in four villages

in Punjab, involving children under 6 years of age who were suffering from malnutrition, showed that low body weight could be corrected when the children partook of meals cooked for the rest of the family.¹⁸

In Malawi, under the Maternal Child Health Service programme, the growth of children under 5 years of age is monitored and treated according to severity of malnutrition. Children weighing below 60 per cent of the Harvard Standard, that is, those with severe forms of malnutrition (marasmus and kwashiorkor), are treated at residential nutrition centres where much emphasis is placed on nutrition education.

In Kenya and Uganda, special nutrition treatment units of hospitals deal with cases involving children with severe protein-energy malnutrition, using both regular treatment and diet therapy, since malnutrition is often complicated by other childhood diseases. In Burma, nutrition rehabilitation and supplementary feeding programmes were carried out in hospital units for severely malnourished children. There were also nutrition education activities and growth monitoring programmes.

In Indonesia, as part of the Government's Decade for Children, the family nutrition improvement programme was expanded to reach about 60 per cent of children under 5 years of age on a regular basis in 1987.¹⁹ By 1987, growth monitoring of children under 5 years of age covered 13 million children and was being extended to cover 20 million, about 85 per cent of the children in the age group. Training in food and nutrition planning was also undertaken.

To reduce malnutrition in infants, some Asian countries, such as Bangladesh, China, Malaysia, the Philippines and Thailand, promoted the breast-feeding of infants. Some countries also adopted household food security strategies, encouraging families to supplement their food supplies by gardening. These included Bangladesh, Democratic Kampuchea, Fiji, Indonesia, the Marshall Islands, the Federated States of Micronesia, Palau, Papua New Guinea and Tuvalu.

Furthermore, many Asian countries had programmes to control iodine deficiency disorders through salt iodation.²⁰ Iodation plants were also built in Bangladesh, Indonesia, the Lao People's Democratic Republic and Thailand. Lipodol injections were used for high-risk groups in Bangladesh, Burma, Indonesia, Pakistan and Viet Nam and iodized oil capsules were used on a pilot scale in some of these countries. To control iodine disorders, the Government of Viet Nam launched a mass campaign of iodated oil injections to reach an annual target of 200,000 injections by the end of 1987. Salt iodation plants were also being built as part of its micro-nutrient deficiency prevention programme.²¹

Similar intervention programmes were established in some countries in Latin America.²² Salt iodization and iodized oil injections were used in Bolivia and Peru in endemic goitre control programmes. In Bolivia, nutrition education activities included maternal nutrition, breast-feeding, supplementary feeding and the preparation, storage and consumption of food. Iron sulphate was also distributed to pregnant women in Bolivia to minimize the incidence of anaemia among them. In Argentina, school and community vegetable gardens were part of the health and nutrition projects for deprived children and families. In Chile, the Ministry of

Health constituted surveillance systems that monitored child growth and the health of pregnant women in order to provide assistance to the most vulnerable groups.

In assessing the situation in Latin America and the Caribbean, the United Nations Children's Fund (UNICEF) noted that "an estimated 130 million people live in poverty, and their number increases each day. Unemployment and under-employment continue to rise, while the downward trend in infant mortality has stabilized in some countries and reversed itself in others. Poor families, primarily women and children, now eat less and not as well. Moreover, the large number of boys and girls forced onto the streets to beg or work for a living has become a reality in every Latin American city".²³

These examples of measures taken by countries are merely illustrative and are by no means exhaustive. They show that, in many developing countries, programmes to alleviate undernourishment and malnutrition were in place during the 1980s. However, economic difficulties due largely to recession, external debt burdens, balance-of-payments difficulties arising from low international prices for their imports, worsening terms of trade, reductions in essential imports and budgetary constraints forced many Governments to reduce expenditures on social services, including programmes to alleviate malnutrition. Adjustment measures since the mid-1980s worsened the social situation in several developing countries as subsidies for basic consumer goods, including food, were reduced or abolished. To solve the problem of food availability, access to food by vulnerable groups and the alleviation of undernutrition and malnutrition, many developing countries still need to put in place a wide range of policies affecting both production and distribution.

Developed countries

It is paradoxical that malnutrition is a problem in industrialized countries (both centrally planned and market economies), where food supplies are plentiful and available year round and where people earn enough to be able to afford food. Persistent problems of malnutrition have arisen because certain varieties of nutrients are consumed at levels beyond those considered safe for continued good health and well-being. Malnutrition in the centrally planned economies of Eastern Europe, the Soviet Union and the developed market economies is essentially a problem of over-consumption of foods rich in some nutrients, especially fat, which food scientists and epidemiologists have associated with certain illnesses, such as chronic heart disease, arteriosclerosis, diabetes, certain types of cancer, high blood pressure and stroke. Excess dietary fat results from the over-consumption of animal sources of protein, such as beef and pork, of saturated fat from such edible oils as palm oil, palm-kernel oil and coconut oil and of dairy products.

Many individuals in industrialized countries have taken their cue from studies linking diet to the diseases mentioned. They have reduced their daily intake of "red meat" and have begun to eat increased quantities of food with less cholesterol, such as fish, poultry, vegetables, peas and beans, lean meats, low-fat dairy products and polyunsaturated fats ob-

tained from such sources as soya-bean oil and ground-nut oil. Other foods being consumed in greater proportions by diet-conscious individuals include whole grain cereals and fruits to increase the amount of fibre and complex carbohydrates in the diet. Consumer advocates in some market-economy developed countries have campaigned for improved labelling of packaged foods, requiring that the amount and type of fat and the salt content be specified. They also advocate increasing the nutrition education of the public. To reduce obesity resulting from the over-consumption of some nutrients, many people have adopted a more active life-style, engaging in such physical exercise as swimming, jogging, walking, aerobic dancing and bicycling.

The United States Surgeon General's *Report on Nutrition and Health*, issued in July 1988, confirmed the wisdom of what the general public had been practising and consumer advocates had been emphasizing all along. It recommended, among other things, that:

(a) Dietary fat intake should be reduced from the current level of 37 per cent of the daily calorie intake to the 30 per cent recommended for Americans, and saturated fat should be reduced from about 13 per cent of caloric intake. Consumers should choose foods low in saturated fats, such as fish, poultry and lean meat, and should consume more whole-grain foods, cereals and fruits;

(b) Women of childbearing age, children and adolescent girls should eat more iron-rich food and low-fat dairy products to obtain adequate calcium;

(c) Adequate quantities of such nutrients as beta-carotene, vitamin C and zinc, which strengthen the body's immune system, should be consumed by the general public;

(d) Sugar and caffeine (coffee) should be consumed in moderation, since they have been associated with behavioural disorders in children and adults.

3. *Access to food*

The problems of hunger, famine and malnutrition cannot be adequately explained simply in terms of food supplies. Given a supply of food, the pattern of distribution is determined in part by who has the means of acquiring food and in part by the availability of a distribution network that channels food to those who need it most; hence the paradox of larger food stocks and hungry people.

Solutions to the problems of hunger, famine and malnutrition, therefore, are to be sought only partly in raising the output of food. Providing purchasing power to those who may otherwise go without food is a major part of the solution. Such income is created in the course of overall economic and social development and, obviously, not solely in the agricultural sector.

Governments have generally sought policies that would provide those with inadequate incomes with the purchasing power needed to secure food. Income transfers to those with inadequate purchasing power have been the principal means adopted by Governments to enable those in low-income groups to acquire food. Payments through social insurance schemes in developed market economies and the distribution

of either wholly or partly subsidized food in many developing countries have been the means most commonly adopted.

The development of a network of transport facilities has been a major means of increasing the availability of food throughout a country. In some countries, where private trade proved inadequate, Governments have established distribution points. Voluntary agencies have been a substantial source of strength in supplementing these facilities. Especially during periods of famine, the services of a functioning government administrative apparatus have been extremely helpful both in identifying problems and in formulating and implementing policies to reduce the severity of hardship. In many circumstances, a vigilant press has also been helpful.²⁴

A striking feature of the past few years has been the restraint on expanding or even continuing food-subsidy schemes in developing countries because of the need to cut down government expenditure in the process of changing policies and priorities. In several countries, including Bangladesh, Brazil, Mali, Mexico, Sri Lanka, the Sudan and the United Republic of Tanzania, food-subsidy schemes have been curtailed or modified with a view to reducing government expenditure. Along with these changes, attempts have been made to ensure that the subsidies would effectively reach the target groups. In Colombia, a pilot food-coupon scheme was introduced in households with pregnant women and small children. In Mexico, under the National Food Programme (PRONAL),²⁵ subsidies were made available to income receivers in the bottom 40 per cent and in the central, south and south-eastern parts of the country, where undernourishment was most severe. Among the population sectors at risk, priority was given to the most vulnerable groups—pre-school-age children, pregnant women and lactating mothers. In India, the weight and height of children were used to identify those who would benefit from a feeding programme. In Peru bread was subsidized in poor neighbourhoods. In Sri Lanka a long-standing food subsidy benefiting the entire population was changed to a food-stamp programme for those whose income was below the mean.²⁶

Some Governments have attempted to link the provision of purchasing power with the creation of assets useful to economic and social development. Under food-for-work schemes, payments are made in money or in kind to people employed in building physical infrastructure for transport, irrigation, drainage, flood control, soil conservation and slum clearance. In Maharashtra, India, assets built up under food-for-work programmes are reported to have helped raise long-term levels of output, employment, income and food consumption, as well as to reduce fluctuations in these variables.²⁷ In Morocco, food-for-work programmes were used to compensate the poor for the income that they lost when the Government carried out an adjustment programme. In Ghana, under the Programme of Action to Mitigate the Social Costs of Adjustment, initiated in late 1987, the building of rural infrastructural facilities (housing and hand-dug wells) and the provision of basic services, such as water supplies, health clinics, low-cost sanitation and schools for children, were undertaken under a food-for-work scheme.

4. *The precarious situation in Africa*

The food situation is especially precarious in Africa. The drought of 1982-1984 struck before the countries of the Sahel had recovered fully from the drought of 1969-1973. Three consecutive years of drought caused famine and starvation, decimated livestock and degraded the environment. In the decade ending in 1984, food production per capita in Africa declined by 1 per cent per year.²⁸ At the height of the crisis, 27 countries were seriously affected. At the end of 1984, 21 countries with more than 200 million people were affected by food shortages. In many cases, people had no seed for cultivation, as the seeds had been consumed. They had no means of support or of purchasing other agricultural input. Meat and milk production had declined, and the animals that survived the drought were too weak to plough the land. The famine cost thousands of human lives and put 30 million others at imminent risk of starvation.²⁹ Drought and encroaching desertification were not the only causes of the fall in food production in Africa. In 1983, pest infestation spread across the cassava belt. There was an outbreak of rinderpest and much damage was done by bush fires in West Africa. Matters were made worse by warfare in a number of countries, including Angola, Ethiopia and Mozambique.

Per capita food production in 1987/88 was likely to be less than it was between 1979 and 1981. Drought recurred in some areas and severe floods occurred in other areas. Civil strife and locust infestations continued to affect food production adversely in some countries. Some countries were facing the prospect of famine. It was estimated that total food aid in sub-Saharan Africa in 1987/88 would be 4.6 million tons; the exceptional (or emergency) portion would be at 1.9 million tons.³⁰ Total cereal import requirements were almost twice the total amount of food that would be imported. More emergency food aid would probably be needed during 1988/89 in southern Africa, where food supply difficulties continued unabated.

International organizations, including the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP), as well as such non-governmental organizations as OXFAM, War on Want and Save the Children, mounted relief efforts to make emergency food and other necessities available to those afflicted by famine and hunger. Individuals participated in several ways, including such programmes of assistance as Band Aid, Live Aid and Sports Aid. Their continued efforts would greatly ease both the short-term and long-term problems of food supply.

Long-standing causes of poor performance in food production in Africa include lack of vigorous commitment on the part of Governments to agricultural and rural development, inadequate incentives to farmers to increase production, inadequate infrastructure (transport and communications), poor distribution and marketing networks, heavy dependence on rain rather than irrigation facilities, infrequent use of fertilizers, insecticides and modern agricultural machinery and a shortage of credit facilities. The lack of skilled personnel to provide extension services and inadequate storage facilities also are obstacles to increased food production.

B. FOOD SUPPLIES

1. Domestic production

The availability of food, in the aggregate, is determined by domestic output, net imports and changes in stocks. The world output of food (crops and livestock) increased at the rate of 2.2 per cent per year between 1980 and 1987.³¹ During the crop year 1986/87, the total output fell by 0.2 per cent from that of the previous year. In 1987/88 it was likely to have fallen further. The output of cereals grew at the rate of 1.9 per cent per year between 1980 and 1987, declining by 3.5 per cent in 1987; in 1988, total cereal output was estimated to have fallen by 3.8 per cent from the previous year. The world production of roots and tubers increased at the rate of 1.7 per cent per year between 1980 and 1987. The output of pulses, oil-bearing food crops and livestock followed roughly similar patterns. These averages cover wide differences in the rates of growth of food production among countries and regions. In developing countries the annual rate of increase in food production between 1980 and 1987 was 3.1 per cent in the aggregate and only 1.4 per cent per capita; in the developed countries the corresponding figures were 1.2 per cent and 0.6 per cent. Table 15 shows growth in per capita terms by country.

In most countries of Africa total food production either stagnated or declined between 1980 and 1987, mainly owing to a severe drought. In Latin America, there was a slowdown in the rate of growth of food production from 3.4 per cent per year during 1970-1979 to 2.4 per cent per year during 1980-1987. The high rates of growth in 1985 and 1987 substantially compensated for much slower growth between 1980 and 1984. In South and East Asia, the rate of growth of food output was higher than the average for the world. The rate of growth of food production was consistently high in China.

In the developed market-economy countries, food output grew by 0.8 per cent per year between 1980 and 1987, compared to 2.1 per cent per year between 1970 and 1979. The comparable figures for Eastern Europe and the USSR are 2.4 per cent and 1.8 per cent for the two periods, respectively. If the two groups of countries are taken together, food output increased 1.2 per cent per year between 1980 and 1987.

Fluctuations in food production are still largely the result of changes in weather, the incidence of pests and the unsettled conditions preventing cultivation in some countries. Government policies, such as setting aside land from cultivation, have also restricted production. Poor monsoons in 1987 adversely affected food production in some Asian countries—India, Indonesia, Pakistan, Sri Lanka and Viet Nam. Civil strife reduced food production in Angola, Mozambique and Sri Lanka. Floods affected paddy production in Bangladesh in 1987 and 1988. In Africa, drought reduced food production in the sub-Saharan region in the early 1980s. In 1987/88, drought reduced food production in Djibouti, Ethiopia, the Sudan (the Darful and Kordofan areas), the northern part of Uganda and parts of Chad, Mali, Mauritania and Somalia. Desert locust infestations in North Africa were reported to have done some damage to crops in Algeria and Tunisia in late 1987 and early 1988.³²

In Eastern Europe and the Soviet Union, adverse weather often increased winter kill, which delayed spring planting. In 1988, the worst drought in over 50 years ravaged the Great Plains of the United States and the prairies of Canada. The grain crop in Canada was expected to fall by one third from 1987 levels, to about 33 million tons in 1988.³³ In the United States, the grain output was expected to be about 92 million tons lower in 1988 than in 1987. Some livestock were sent to premature slaughter for lack of feed.

Where appropriate agricultural policies have been consistently implemented, countries have been rewarded with success in food production. While much emphasis was placed on the application of new technologies in agricultural production and the provision of irrigation facilities during the 1970s, there has been a pronounced shift in attention to pricing and management policies in most developing countries. Furthermore, concern with agrarian reform has considerably lessened from a decade or so ago. The domestic production of food generally has been encouraged by policies of currency devaluation, which raise the domestic prices of imports and exports. Producers' prices have been brought closer to market prices by reducing taxes imposed by Governments and charges levied by marketing boards and similar bodies.

Perhaps the most striking success with pricing and management policies in raising food output has been in China.³⁴ In the late 1970s measures were taken to increase both food supplies and nutritional levels. Among these measures, rural economic reform was the most prominent. While maintaining the social ownership of land and some capital, households were made responsible for production, with their remuneration dependent on output rather than labour input. By 1983, 95 per cent of all peasant households had been brought under this agricultural production system. However, rising prices, which provide incentives to production, have conflicted with the need to maintain low and stable food prices. Rapid growth in incomes in the rest of the economy has caused grain prices to rise. Decontrol of the price of such commodities as vegetables and pork has resulted in large price increases. The Government has had to install some price controls and rationing, indicating that much yet remains to be done in the realm of agricultural pricing policy.

Over the long term, pricing policies by themselves have generally not been sufficient to raise food output. Incentives to greater output are soon likely to meet barriers imposed by physical, technological and financial factors. Irrigation and water management, high-yield and disease-resistant plant material, equipment for soil preparation, fertilizer to foster growth, the means of controlling weeds and pests, credit to finance the use of these multifarious inputs, and extension services to bring all this knowledge to cultivators comprise components of successful policies that have raised food and other agricultural output in many countries, especially in Asia, during the past two decades. High prices by themselves generally increase the income of those already in possession of the knowledge and resources needed to reap the fruits of the new technology. However, the extension of irrigation facilities, the provision of new credit and extension services help to raise the output and income of cultivators whose low physical output may not otherwise permit them to

TABLE 15. INDEX OF PER CAPITA FOOD PRODUCTION

Economic grouping, region and country or area	Indices				Percentage change			
	1980	1985	1986	1987	1980-1987 (annual average)	1985	1986	1987
Developing market economies	99.7	103.7	103.1	100.8	0.2	1.5	-0.6	-2.2
Africa	100.9	98.3	99.6	95.6	-0.8	8.0	1.3	-4.0
Algeria	107.4	103.7	102.0	103.5	-0.5	8.7	-1.0	1.5
Angola	101.0	89.8	88.3	87.3	-2.1	-2.3	-2.5	-1.1
Benin	98.1	113.5	115.7	111.8	1.9	2.3	1.4	-3.4
Botswana	88.3	73.9	75.5	76.6	-2.0	1.2	2.2	1.5
Burkina Faso	94.9	114.3	124.6	113.9	2.6	19.7	8.4	-8.6
Burundi	96.9	100.0	100.3	98.2	0.2	4.3	0.3	-2.1
Cameroon	98.9	95.4	94.3	91.6	-1.1	1.5	-1.2	-2.8
Central African Rep.	100.3	94.7	94.7	93.2	-1.1	-7.7	—	-1.6
Chad	102.1	106.3	105.7	100.1	0.3	20.5	-0.1	-5.3
Congo	100.2	93.4	92.5	91.5	-1.3	0.8	-0.8	-1.1
Egypt	99.2	104.8	106.2	108.3	1.3	4.2	1.3	2.0
Ethiopia	98.9	89.5	90.7	86.2	-2.0	6.8	0.4	-4.9
Gabon	102.3	97.0	97.3	97.0	-0.8	-3.4	0.3	-0.3
Gambia	91.7	122.9	135.7	118.6	3.7	5.9	10.4	-12.6
Ghana	100.6	103.9	107.5	105.5	0.7	-7.4	3.5	-1.9
Guinea	102.6	91.7	94.0	92.5	-1.5	-1.4	2.5	-1.6
Guinea-Bissau	93.3	123.4	132.0	132.1	5.0	3.2	7.1	0.1
Côte d'Ivoire	99.0	109.0	104.3	102.4	0.5	4.1	-4.4	-0.6
Kenya	98.4	92.7	97.0	88.3	-1.5	25.1	4.6	-9.0
Lesotho	97.9	87.9	79.3	81.1	-2.7	8.0	-10.3	2.3
Liberia	98.1	97.8	96.7	92.8	-0.8	-3.5	-1.1	-4.0
Libyan Arab Jamahiriya	99.4	143.9	112.4	115.4	2.1	20.0	-21.9	2.7
Madagascar	102.5	98.3	95.9	97.1	-0.3	-0.8	-2.7	1.3
Malawi	98.5	89.6	88.2	84.4	-2.2	-2.9	-2.2	4.3
Mali	97.1	100.5	103.2	99.2	0.3	-5.3	2.7	-3.9
Mauritania	99.4	85.2	93.2	90.8	-1.9	2.0	8.0	-2.6
Mauritius	86.8	101.0	104.6	104.1	2.6	7.7	3.6	-0.5
Morocco	106.4	104.8	125.1	98.0	-1.2	6.4	16.4	-21.7
Mozambique	100.0	85.0	84.9	83.2	-2.6	-1.0	-0.1	-2.0
Namibia	99.2	86.1	89.0	88.0	-1.7	0.4	3.4	-1.1
Niger	102.4	90.7	90.6	80.0	-3.5	21.9	-0.1	-11.7
Nigeria	103.9	104.7	106.0	103.1	-0.1	5.2	1.2	-2.7
Reunion	93.5	72.3	65.8	65.8	-5.0	-3.5	-9.0	—
Rwanda	97.9	86.4	86.2	85.2	-2.0	2.3	-0.2	-1.2
Senegal	85.9	108.2	104.3	101.5	2.4	14.4	-3.6	-2.7
Sierra Leone	100.7	92.7	100.6	99.4	-0.2	-5.3	8.0	-1.2
Somalia	100.7	99.5	100.1	93.1	-1.1	3.3	0.6	-7.0
Sudan	98.9	100.8	103.4	95.9	-0.4	20.3	2.6	-7.3
Swaziland	103.1	97.0	113.2	100.6	-0.4	-6.8	16.7	-11.1
Togo	99.4	89.7	89.2	89.1	-1.6	-3.9	-0.6	-0.1
Tunisia	105.9	120.9	105.6	116.9	1.4	21.4	-13.0	10.7
Uganda	98.6	124.1	124.7	119.0	2.7	52.4	0.1	-4.6
United Rep. of Tanzania	100.1	90.6	90.0	89.8	-1.6	-1.7	-0.9	-0.6
Zaire	100.4	100.2	98.1	97.6	-0.4	-0.4	-2.0	-0.5
Zambia	102.8	96.9	99.8	94.4	-1.2	5.6	3.0	-5.4
Zimbabwe	91.2	102.4	101.0	70.0	-3.8	36.9	-1.4	-30.7
Latin America and the Caribbean	99.4	101.3	98.0	100.4	0.1	1.1	-3.3	2.4
Argentina	95.6	97.6	98.1	97.2	0.2	-4.1	0.5	-0.9
Barbados	108.8	81.0	86.2	72.5	-5.9	-1.6	7.9	-15.9
Bolivia	99.5	97.5	88.9	96.0	-0.5	5.9	-8.8	8.0
Brazil	103.1	111.7	102.5	108.1	0.8	4.6	-8.2	5.5
Chile	97.7	100.3	104.8	105.8	1.1	0.6	4.3	1.0
Colombia	98.9	95.0	96.6	99.9	0.1	-1.0	1.9	3.4
Costa Rica	98.6	91.7	92.4	91.6	-1.1	1.0	0.8	-0.9
Cuba	93.8	107.5	107.1	107.6	2.0	-3.7	-0.2	0.5
Dominican Republic	98.5	99.3	97.0	100.6	0.3	-5.9	-1.6	3.7
Ecuador	101.1	101.4	105.1	96.2	-0.7	8.6	3.6	-8.5
El Salvador	99.9	88.6	88.7	88.6	-1.7	-0.9	0.1	-0.1
Guadeloupe	95.0	116.0	124.8	128.0	4.3	-2.9	7.6	2.6
Guatemala	99.5	97.3	93.3	90.4	-1.4	-1.4	-4.1	-3.1
Guyana	96.0	81.0	80.9	78.2	-2.9	-0.5	-0.1	-3.3
Haiti	99.0	96.6	95.4	95.8	-0.5	-2.3	-1.2	0.4
Honduras	101.6	84.9	88.4	89.8	-1.8	2.7	4.1	1.6

TABLE 15 (continued)

Economic grouping, region and country or area	Indices				Percentage change			
	1980	1985 (1979-1981 = 100 per cent)	1986	1987	1980-1987 (annual average)	1985	1986	1987
Jamaica	98.7	102.1	102.5	101.9	0.5	-6.8	0.4	-0.6
Martinique	77.3	125.2	135.1	135.9	8.1	-0.8	7.9	0.1
Mexico	100.1	95.6	95.0	100.1	—	-1.3	-0.9	5.4
Nicaragua	84.7	77.2	72.5	72.5	-2.2	-1.4	-4.2	—
Panama	98.0	100.4	94.9	91.2	-1.0	2.7	-6.0	-3.9
Paraguay	98.3	110.7	100.1	108.8	1.4	9.0	-8.8	8.7
Peru	93.6	99.8	96.4	96.7	0.5	-3.5	-3.4	0.3
Puerto Rico	97.9	83.6	83.2	82.7	-2.4	2.0	-0.4	-0.6
Suriname	98.4	116.6	101.6	101.5	0.4	-1.4	-12.9	-0.1
Trinidad and Tobago	99.2	96.9	95.3	92.5	-1.0	-0.4	-1.7	-2.9
Uruguay	95.5	102.9	97.3	101.2	0.8	0.5	-5.5	4.0
Venezuela	99.7	89.0	98.0	92.9	-1.0	2.1	10.1	-5.2
Asia, developing market								
Afghanistan	99.6	100.2	96.0	91.9	-1.1	-1.3	-4.2	-4.3
Bangladesh	101.7	98.5	96.5	89.2	-1.9	1.2	-2.1	-7.6
Bhutan	100.3	106.2	108.2	121.7	2.8	0.2	1.9	12.5
Burma	99.5	124.5	126.3	130.6	3.9	5.9	1.4	3.4
Fiji	93.4	86.0	102.4	85.3	-1.3	-18.9	23.8	-16.7
Hong Kong	97.9	125.5	78.5	90.8	-1.1	-1.6	-27.5	15.7
India	98.2	111.9	110.9	103.7	0.8	0.3	-0.8	-6.5
Indonesia	101.0	115.7	118.3	118.2	2.2	—	2.2	-0.1
Korea, Republic of	89.1	103.2	99.7	96.8	1.2	1.6	-3.4	-2.9
Iran (Islamic Rep. of)	97.6	98.9	99.4	98.4	0.1	0.9	0.5	-1.0
Iraq	98.2	108.8	103.9	103.5	0.8	15.0	-4.5	-0.4
Jordan	112.0	112.8	102.6	108.1	-0.5	-1.9	-9.0	5.4
Lebanon	112.6	119.3	109.8	117.2	0.3	9.6	-8.0	6.7
Malaysia	101.0	124.7	125.8	127.9	3.4	4.5	0.9	1.7
Nepal	101.5	103.5	97.2	97.3	-0.6	-0.4	-6.3	0.1
Pakistan	99.0	102.2	106.2	105.5	0.9	0.5	3.9	-0.7
Papua New Guinea	99.4	99.5	98.0	97.3	-0.3	-0.4	-1.1	-0.7
Philippines	100.1	94.3	95.6	90.3	-1.5	0.4	2.0	-5.5
Saudi Arabia	100.2	190.0	231.3	205.7	10.3	17.5	21.7	-11.0
Singapore	92.3	93.2	93.3	94.8	0.4	-7.8	0.1	1.6
Solomon Islands	95.1	99.3	85.0	90.6	-0.7	3.0	-14.4	6.6
Sri Lanka	107.4	86.8	85.8	77.5	-4.7	3.9	-1.2	-9.7
Syrian Arab Republic	108.0	91.3	108.8	95.1	-1.8	1.4	12.6	-7.5
Thailand	98.8	111.2	106.5	101.9	0.4	1.6	-5.2	-4.3
Tonga	101.0	86.1	88.7	89.0	-1.8	9.2	3.0	0.3
Vanuatu	85.5	82.3	84.2	80.6	-0.8	-7.6	3.5	-4.3
Yemen Arab Republic	99.7	106.3	120.8	118.7	2.5	5.0	18.6	-1.7
Yemen Democratic Republic	98.4	88.3	88.0	84.9	-2.1	-2.9	-0.3	-3.5
Near East	100.3	99.2	101.2	99.3	0.1	3.6	2.0	-1.8
Far East	99.4	108.6	108.3	103.4	0.6	0.8	-0.3	4.5
Asia, centrally planned	99.4	119.5	123.5	125.5	3.3	-0.4	2.7	1.6
China	98.8	120.7	125.2	127.2	3.6	-1.1	2.8	1.6
Democratic Kampuchea	114.7	148.3	145.1	136.0	2.4	4.6	-3.4	-6.3
Korea, Dem. Rep. of	99.8	106.9	108.4	109.9	1.4	2.4	0.7	1.4
Lao People's Dem. Rep.	101.5	123.6	127.9	118.4	2.2	6.7	3.5	-7.4
Mongolia	97.1	96.4	98.5	101.2	0.6	-0.9	1.7	2.7
Viet Nam	101.8	112.6	115.7	112.2	1.4	3.4	2.8	-3.0
All developing countries	99.7	108.3	109.0	107.9	1.1	1.1	0.6	-1.0
Developed market economies	98.4	103.8	101.7	99.3	0.1	1.3	-1.1	-2.4
Australia	90.9	99.4	98.5	93.0	0.3	-4.7	-0.9	-5.6
Austria	103.5	108.7	108.0	109.1	0.8	-1.4	-0.6	1.0
Belgium-Luxembourg	98.0	104.1	107.4	112.1	1.9	1.4	-0.3	4.4
Canada	99.1	106.2	114.3	109.5	1.4	5.1	7.6	-4.8
Denmark	99.4	123.0	119.9	121.1	2.9	-2.5	2.4	1.0
Finland	103.5	110.1	107.3	97.5	-0.9	-1.0	-8.6	-9.1
France	100.8	107.1	105.0	106.5	0.8	-0.8	-1.5	1.4
Germany, Fed. Rep. of	101.0	109.0	115.6	110.4	1.3	-1.3	5.2	-4.5
Greece	104.2	108.2	103.7	98.5	-0.8	-5.6	-4.2	-5.0
Iceland	101.9	91.2	89.8	89.3	-1.9	-0.1	-1.5	-0.6
Ireland	109.1	104.5	97.4	92.5	-2.4	-1.5	-6.7	-5.0
Israel	96.7	113.6	97.5	99.4	0.4	-1.6	-14.2	1.9
Cyprus	104.6	90.2	84.5	87.5	-2.6	-4.6	-6.3	3.6
Italy	102.4	100.1	99.1	103.6	0.2	0.4	-0.9	4.5

TABLE 15 (continued)

Economic grouping, region and country or area	Indices				Percentage change			
	1980	1985	1986	1987	1980-1987			
	(1979-1981 = 100 per cent)				(annual average)	1985	1986	1987
Japan	95.8	106.6	111.5	110.2	2.0	0.6	4.6	-1.2
Malta	106.6	108.4	115.2	119.1	1.9	2.1	6.3	3.4
Netherlands	96.3	105.6	112.4	110.8	2.0	-0.3	6.4	-1.4
New Zealand	99.3	111.2	106.8	111.0	1.6	9.5	-5.1	3.9
Norway	100.2	105.6	109.3	109.9	1.3	-2.2	3.5	0.5
Portugal	97.9	103.8	102.1	103.2	0.8	-1.8	-1.6	1.1
South Africa	96.4	83.2	84.3	84.4	-1.9	3.3	1.3	1.1
Spain	106.0	103.4	101.6	107.0	0.1	-2.8	-1.7	0.1
Sweden	99.3	107.3	104.5	98.5	-0.1	-7.4	-2.6	5.3
Switzerland	100.5	105.8	106.9	105.8	0.7	-1.1	1.0	-1.0
Turkey	99.5	99.6	102.1	101.3	0.3	1.9	2.9	-0.8
United Kingdom	103.4	108.2	111.1	106.0	0.4	-5.1	1.8	-4.6
United States	95.8	102.7	96.8	92.2	-0.5	4.0	-5.7	-4.7
North America	95.7	103.4	98.2	93.3	-0.4	4.6	-1.0	-5.0
Western Europe	101.7	105.3	105.6	105.3	0.5	-1.9	0.3	-0.3
Oceania	94.4	100.5	99.5	97.4	0.4	-0.4	-2.1	-2.1
Other	98.2	98.7	100.6	101.1	0.4	2.0	1.9	0.7
Eastern Europe and USSR	100.0	105.9	113.1	111.7	1.6	-1.0	5.0	-1.2
Albania	100.1	97.6	95.0	95.0	-0.7	-2.8	-2.7	—
Bulgaria	96.5	93.4	101.4	103.5	1.0	-13.1	11.2	2.1
Czechoslovakia	102.3	118.8	116.9	118.6	2.1	-1.9	-1.6	1.5
German Democratic Rep.	98.2	112.2	113.4	114.2	2.2	4.1	1.1	0.1
Hungary	102.6	108.3	110.3	110.9	1.1	-6.0	1.8	0.5
Poland	95.4	104.6	111.9	108.6	1.9	-0.2	7.1	-3.0
Romania	100.0	108.5	114.3	112.4	1.7	-3.0	5.3	-1.7
Soviet Union	99.8	105.3	112.6	112.2	1.7	-1.1	6.9	-0.4
Yugoslavia	99.5	95.8	98.8	96.6	-0.4	-8.9	3.1	-2.2
All developed countries	98.3	104.4	104.8	102.7	0.6	0.6	0.4	-2.0
World	99.2	104.7	104.9	103.1	0.6	0.6	0.4	-1.8

Source: Department of International Economic and Social Affairs, based on FAO, *Production Yearbook, 1986 and Monthly Bulletin of Statistics* (various issues); and UNCTAD, *Handbook of International Trade and Development Statistics, 1987: Supplement*.

compound the effects of higher prices and higher productivity. In general, policy measures of that type are likely to ensure a more egalitarian distribution of the gains than will pricing policies alone. In instances where current patterns of landownership and usufruct both hold down productivity and concentrate incomes in the hands of a few landowners, even more equitable would be land reform policies and increased help to the rural poor, in particular small farmers and the landless, as is currently provided by the International Fund for Agricultural Development (IFAD).

Other essential components of policies to increase the domestic food supply in developing countries are the provision of storage facilities, transport networks and equipment and trading opportunities. The increase in carry-over stocks of food products in several developing countries heightens the need for adequate storage, without which much of the food stored will spoil or be attacked by pests. In 1988, in several African countries, including Burkina Faso, Chad, Mali, Niger and the Sudan, there were food surpluses in some areas but hunger in others, mainly because poor transport facilities did not permit the transfer of food from one area to the other. The problem is not limited to Africa, however, and requires attention in many developing countries.

The disposal of increased output in some developing countries also became a problem in the 1980s. In Malawi

and Zimbabwe, the lack of outlets for exportable grain surpluses in the mid-1980s placed a strain on finances and storage capacity. Consequently, in 1987 Zimbabwe took steps to reduce grain production. Export markets were created, in some degree, by means of triangular transactions, where international agencies or countries bought food supplies from one developing country and delivered them to another. The World Food Programme (WFP) undertook this activity, although on a modest scale. During 1985 and 1986, the United States of America bought food from Malawi and Zimbabwe for delivery to Mozambique. Policies regarding international trade in agricultural products will therefore be of great significance to developing countries in similar positions.

2. Food imports

For some countries, the net import (import minus export) of food is a major determinant of total supply. The proportion of the total food supply that is imported is determined not only by the need for such imports but also by a country's capacity to import. How much needs to be imported is determined by changes in domestic food output, given total demand. Capacity to import is determined by the availability of foreign exchange from exports and net transfers from abroad of various kinds, as well as the price of food imports.

The availability of exportable surpluses has also become significant in certain years. The ratio of cereal imports to total supplies is shown in table 16. The volume of world food imports declined in the mid-1980s and rose in 1988.³⁵

There was a large rise in food imports in 1984 in the Soviet Union and in most sub-Saharan African countries, where crops had failed due to widespread drought in 1983. There was also a relaxation of controls on food imports in several countries in Latin America, including Brazil, Mexico and Venezuela. Higher food production in China, on the other hand, helped to keep world imports in check. In 1985 and 1986, food imports in several developing countries, including Ghana, Haiti, Liberia, Mexico and Mozambique, were reduced without any rise in domestic production because of compressed import capacity. The increase in imports during 1987 and 1988 is mainly attributable to the rise in imports of wheat, primarily, into the Soviet Union, China and Pakistan and of rice into Bangladesh, India and Viet Nam.

3. Food aid

Food aid now contributes significantly to food imports, amounting to \$2.6 billion annually in recent years, or about 10 per cent of total official development assistance (ODA) and over 20 per cent of the ODA received by the least developed countries in sub-Saharan Africa. Although the quantity of food aid has often been based largely on the availability of supplies in donor countries, it has been used to good advantage in some recipient countries for carefully selected development projects to increase food security, ease structural adjustment and secure human and physical capital formation.

TABLE 16. WORLD RATIO OF CEREAL IMPORTS TO TOTAL CEREAL SUPPLY (Percentage)

Economic grouping and region	1980	1984	1985	1986
Developing market economies	14	18	13	12
Africa	22	25	27	20
Latin America	23	21	19	16
Near East	24	36	29	27
Far East	6	6	3	5
Developed market economies	13	10	8	10
North America	0.5	0.4	0.4	0.5
Western Europe	21	16	19	17
Oceania	2	1	1	1
Others	41	45	30	27
Centrally planned economies	10	8	8	6
Asia	5	3	3	0.3
Eastern Europe and USSR	14	16	15	10
All developed countries	14	12	12	10
All developing countries	10	10	9	9
World	12	11	10	9

Source: Department of International Economic and Social Affairs, based on FAO, *Trade Yearbook* (various issues), *Production Yearbook* (various issues) and *Monthly Bulletin of Statistics* (various issues).

NOTE: Total cereal supply includes amount produced each year, beginning stocks and net trade in cereals.

In recent years WFP has been the most important source of food aid. During the most severe period of drought and famine in sub-Saharan Africa (1982-1984), 38 per cent of the value of all food aid from WFP went to those countries. More recently, a greater part of its emergency aid has been delivered to refugees, "returnees" and other displaced persons in Democratic Kampuchea, Mozambique, Pakistan, Somalia, the Sudan and Thailand (see table 17).

It has sometimes been argued that developing countries receiving food aid may become increasingly dependent on such imports and fail to implement structural changes and policies that would raise food production. Food aid might also be used simply to solve the problem of urban food supply, and proceeds from the sale of food aid might make available to Governments financial resources that would be used in low-productivity investments. Furthermore, in certain countries food aid in the form of rice, maize and vegetable oil could depress domestic prices and be a disincentive to domestic production. It could also change consumption patterns, habituating people to imported foods (especially wheat) rather than indigenous staples.

However, experience does not bear out these arguments. Some South Asian countries that were massive recipients of food aid in the 1960s and early 1970s achieved self-sufficiency in cereals in the 1980s (with stocks to meet emergencies) and exportable surpluses, after they revamped their food production sectors.³⁶ Far from regarding food aid as harmful to food production in low-income, food-deficit countries, Governments meeting in international forums during the 1980s have requested the expansion of food aid. For instance, at the International Conference on the Human Dimension of Africa's Economic Recovery and Development (sponsored by the Economic Commission for Africa) held in Khartoum in 1988, the usefulness of food aid to these countries was confirmed. They asked that it be used in direct support of food security, particularly to ensure access to food by vulnerable groups in times of structural adjustment.³⁷ The World Food Council (WFC), at its thirteenth session, held in Beijing in 1987, endorsed the use of food aid surpluses as technical and financial assistance to accelerate the economic development of developing countries. At a world food meeting in Brussels in April 1988, rather than focusing on the negative side-effects of food aid, a proposal for a world food bank for managing food surpluses was put forward, whereby world food surpluses would be used as capital and a source of food security in the development process in food-deficit developing countries. The proposal essentially entails the expansion of the food-aid-for-development activities currently undertaken by WFP on an *ad hoc* basis.³⁸

4. Stocks of cereals

Substantial reserves of staple food materials are an essential feature of a programme for food security. FAO has recommended that these reserves should comprise at least 17-18 per cent of total consumption.

Carry-over stocks of cereals, which stood at 272 million tons in 1980 (comprising 18.7 per cent of consumption), rose to 448 million tons in 1986/87 (26.4 per cent of world con-

TABLE 17. SHIPMENTS OF FOOD AID, 1980-1987

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87
Cereals (millions of tons)							
Low-income food-deficit countries	8.9	9.1	9.2	9.8	12.5	10.8	11.9
Sub-Saharan Africa	7.0	7.3	7.6	8.6	10.8	9.4	10.2
Least developed countries	2.3	2.3	2.5	2.6	4.8	3.7	..
Proportion of cereals shipped to low-income food-deficit countries (percentage)	79	80	83	88	86	87	86
Proportion of cereals shipped to sub-Saharan Africa (percentage)	26	25	27	27	38	34	..
Percentage of cereal imports of low-income food-deficit countries covered by food aid	15	15	14	18	23	23	22
Other foodstuffs ^a							
Shipment (thousands of tons) ^b	583	757	703	55	987	1 022	1 066
WFP operation (thousands of tons) ^b							
Cereal shipments	990	951	1 372	1 286	1 012	1 437	1 574
Other foodstuffs	284	282	274	266	298	404	307
Value of total food aid at current prices ^b (billions of \$US)	2.6	2.9	2.5	2.5	3.0	..	..

Source: FAO, *Food Aid in Figures*, No. 5 (Rome, 1987).

^a Edible oils, dairy products, meat, fish, pulses and sugar.

^b Calendar years starting from 1980.

sumption). World production of cereals in 1987 and 1988 was well below the level used, and stocks were drawn upon to raise supply. The FAO forecast of global carry-over stocks at the end of the 1987/88 season was 400 million tons, about 24 per cent of projected world consumption in 1988/89. World cereal stocks were expected to fall further in 1988/89, to 283 million tons, about 16 per cent of global consumption. The most recent decline largely reflects the reduced harvest in North America, which resulted from the severe drought. Rice stocks, in particular in 1988, were expected to fall to the levels that existed at the time of the world food crisis in the 1970s—below the minimum level FAO considers necessary to safeguard world food security. The reduced rice stocks are likely to raise world market prices and adversely affect the availability of rice for food aid in 1989 and 1990. FAO estimates that global cereal output would need to increase in 1989 by at least 20 million tons, or 13 per cent, in order to meet consumption requirements in 1989/90 and replenish stocks.³⁹

About 70 per cent of cereal stocks were held in the developed countries. The United States of America alone accounted for about 45 per cent of the stocks in 1986 and 1987, but its share was expected to fall drastically to about 24 per cent in 1989 because of the drought in 1988. A few developing countries, including Argentina, Brazil, China, India, Indonesia, Mexico, Pakistan and Thailand, also held sizeable stocks of cereals (see figure IV). By the mid-1980s, 70 per cent of all developing countries had reserve stocks that were in conformity with international recommendations on food

security. Yet this group did not include the low-income, food-deficit countries. Cereal stocks held in developing countries in Africa in 1985 were about 6 per cent of the amount consumed, compared to 19 per cent in all developing countries.

5. Food prices

Although high food prices are an incentive to production, they limit consumption by those whose purchasing power is low and does not rise to compensate for increases in the price of food. As low-income recipients spend a larger proportion of their income on food than do high-income recipients, a rise in food prices disproportionately reduces their capacity to buy food and other necessities. High food prices have contributed to social unrest in several developing countries.

Between 1980 and 1986 food prices rose in many developing countries (see table 18). Of the 81 countries for which there were data, in 30 the rate of food-price inflation was higher than the general price increases. Many of the countries in which the food-inflation rate was less than the general price increases were either sub-Saharan African countries that were massive recipients of food aid (for example, Burkina Faso, Liberia and Senegal in the early 1980s), countries that drew heavily on stocks (Burma, India, Indonesia, Pakistan and Thailand) or countries that could afford commercial food imports (Kuwait and Saudi Arabia).

In the developed market economies, the problem of adjusting to less subsidized agricultural production, while giving due recognition to the difficulties faced by some farmers

TABLE 18. DISTRIBUTION OF DEVELOPING COUNTRIES OR AREAS BY THE RATIO OF
FOOD PRICE INCREASES TO GENERAL PRICE INCREASES, 1980-1986
(Based on consumer price indices)

Food price increases were less than general price increases	Food price increases were more than general price increases by:		
	1-5 per cent	5-10 per cent	over 10 per cent
Barbados	Argentina	Bahamas	Botswana
Bermuda	Bolivia	Bangladesh	Ecuador
Burkina Faso	Brazil	Egypt	Mauritius
Burma	Colombia	Guatemala	Panama
Cameroon	Costa Rica	Morocco	Solomon Islands
Cape Verde	Ethiopia	Puerto Rico	Trinidad and Tobago
Central African Republic	Jamaica	Tonga	Venezuela
Chile	Madagascar	Tunisia	
Côte d'Ivoire	Nepal		
Dominican Republic	New Caledonia		
El Salvador	Nigeria		
French Guiana	Saint Lucia		
French Polynesia	Syrian Arab Republic		
Gambia	Uruguay		
Ghana	Zimbabwe		
Guadeloupe			
Haiti			
Honduras			
Hong Kong			
India			
Indonesia			
Jordan			
Kenya			
Korea (Republic of)			
Kuwait			
Lesotho			
Liberia			
Malawi			
Malaysia			
Martinique			
Mexico			
Netherlands Antilles			
Niue			
Pakistan			
Peru			
Philippines			
Reunion			
Samoa			
Saudi Arabia			
Senegal			
Seychelles			
Sierra Leone			
Singapore			
Somalia			
Sri Lanka			
Suriname			
Swaziland			
Thailand			
Togo			
Vanuatu			
Zambia			

Source: Department of International Economic and Social Affairs, based on Statistical Office of the United Nations Secretariat, *Monthly Bulletin of Statistics* (various issues).

as a result of the accelerated decline in the number of small farms, bedevilled attempts to negotiate the liberalization of trade in agricultural products. Subsidies and related protectionist measures not only raise costs for consumers in developed countries, but also greatly reduce the ability of developing countries to market their crops, even though they may have much lower production costs. If the United States, the

European Economic Community (EEC) and Japanese farm policies were to become more market-oriented, the consequences would be felt not just domestically—in reducing rural incomes and incurring substantial costs for relocating and training displaced farmers—but also internationally, as excess domestic production would no longer have to be dumped on world markets.

C. CONCLUSIONS

Advances in technology, the spread of knowledge and the adoption of effective policies have raised food production to a level sufficient to feed all people on earth. Yet 10 to 15 per cent of the world population suffers from undernourishment. Consequently, contradictions between incentives to produce and capacity to acquire food have come to the fore. Providing storage facilities for increasing grain surpluses has become a problem in some developing countries. Food production and distribution policies need a thorough re-examination.

An over-emphasis on price incentives to production may leave the extremely important questions concerning the capacity to acquire and consume food unattended and ultimately defeat the purposes of greater production. Policies regarding infrastructure for the agricultural sector, the distribution of increasing output, facilities for transport and trade and the diffusion of knowledge are all important components of these policy packages.

In 1989, few problems in the food sector are likely to pre-occupy policy makers in a large number of developing countries more than that of food security. The severity of the problem makes it imperative to establish policies to stabilize production from one year to another, to maintain adequate supplies in storage, to supply food in emergency situations and to seek long-term solutions to the endemic food problems of some countries in Africa.

In the developed countries, malnutrition is mainly a function of inadequate knowledge regarding healthy diets. The further spread of information is likely to remedy this problem.

Internationally, much can be done to raise food production and improve food distribution. Less protectionism in trade in food would both reduce prices and lead to a more rational allocation of production capacity among countries. Food aid continues to be a source of supply in both chronically food-deficit countries and in emergency situations. The maintenance of early warning systems is a major instrument for avoiding disastrous famine conditions. The transfer of knowledge and technology among countries remains a source of benefit to those countries that have not yet modernized their food production and distribution sectors. Resource transfers to raise food production, especially by those segments of the population that lack resources, constitute a means of securing a more egalitarian distribution of gains from economic growth.

NOTES

¹ See Paul Streeten, *What Price Food?* (Ithaca, New York, Cornell University Press, 1987), pp. 96-97.

² These figures are derived from calculations based on data from FAO, *The State of Food and Agriculture, 1987, Global Information and Early Warning System on Food and Agriculture: Food Outlook*, No. 8 (September 1988) and *Food Balance Sheets, 1979-1981 Average*.

³ As evidence of the inequities in the distribution of food within the family, it was indicated in studies conducted in rural Bangladesh in 1978 that, in every age group, female members consumed fewer calories and protein than did males, with an overall shortfall of 17 per cent in each nutrient. Children also consumed less of both nutrients than did adults and the sex bias permeated each age group. Another study conducted in rural West Bengal, India, after floods in 1978, found a greater incidence of un-

der-nutrition among females than males and among children under six years of age. See Amartya Sen, *Resources, Values and Development* (Oxford, Blackwell, 1984), pp. 346-365.

⁴ FAO, *Agriculture: Toward 2000* (Rome, July 1987), table 4, pp. A24-A27.

⁵ FAO, *The State of Food and Agriculture, 1986* (Rome, September 1986), p. 14.

⁶ World Food Council, *The Global State of Hunger and Malnutrition: 1988 Report* (WFC/1988/4, 24 March 1988), p. 4, table I.

⁷ World Food Council, *The Global State of Hunger and Malnutrition and the Impact of Economic Adjustment on Food and Hunger Problems* (WFC/1987/2, 8 April 1987), p. 3.

⁸ World Bank, *Poverty and Hunger: Issues and Options for Food Security in Developing Countries*, World Bank Policy Study (Washington, D.C., 1986), p. 1.

⁹ *Ibid.*, p. 3.

¹⁰ Administrative Committee on Co-ordination, Sub-Committee on Nutrition, "First report on the world nutrition situation" (July 1987).

¹¹ UNICEF/WFP, *Food Aid and the Well-being of Children in Developing Countries* (Report of the UNICEF/WFP Workshop held in New York, 25-26 November 1985), p. 5.

¹² United Nations University, *Food and Nutrition Bulletin*, vol. 6, No. 4 (December 1985), p. 49.

¹³ See Administrative Committee on Co-ordination, Sub-Committee on Nutrition, "First report on the world nutrition situation" (July 1987), pp. 29-39.

¹⁴ *Ibid.*, p. 33.

¹⁵ *Ibid.*

¹⁶ *Ibid.*, p. 37.

¹⁷ S. M. R. Kanbur, *Malnutrition and Poverty in Latin America* (Helsinki, WIDER), pp. 30-33.

¹⁸ B. N. S. Walia and others, "Feeding from the family pot for prevention of malnutrition", *Food and Nutrition Bulletin*, vol. 7, No. 4 (Tokyo, United Nations University, December 1985), p. 44.

¹⁹ UNICEF, "Programme development in the East Asia and the Pakistan region" (E/ICEF/1988/8), pp. 11 and 12.

²⁰ *Ibid.*, p. 12.

²¹ UNICEF, "Country programme recommendation: Viet Nam" (E/ICEF/1988/P/L.25).

²² UNICEF, "Programme development in the Americas and the Caribbean region" (E/ICEF/1988/7), p. 11.

²³ *Ibid.*, p. 4.

²⁴ See Amartya Sen, *Hunger and Entitlements* (Helsinki, WIDER, 1988).

²⁵ J. Spalding, *Structural Barriers to Food Programming: An Analysis of the Mexican Food System in World Development*, vol. 13, No. 12, pp. 1251-1259.

²⁶ FAO, *Agricultural Price Policies: Issues and Proposals*, Economic and Social Development Series, No. 42 (Rome, 1987), p. 87.

²⁷ World Food Programme, *Roles of Food Aid in Structural and Sector Adjustments* (WFP/CFA: 23/5/Add.1), p. 16.

²⁸ FAO, *World Food Report* (Rome, 1986), p. 15.

²⁹ United States of America, Agency for International Development, *Highlights*, vol. 4, No. 3 (Summer 1987), p. 1.

³⁰ FAO, *Global Information and Early Warning System on Food and Agriculture: Food Outlook*, No. 4 (May 1988), p. 5.

³¹ FAO, *The State of Food and Agriculture, 1987* (Rome, October 1987).

³² FAO, *Global Information and Early Warning System...*, No. 8 (September 1988), p. 6.

³³ *The New York Times*, 3 August 1988, p. A3.

³⁴ See Elizabeth Croll, *Food Supply in China and the Nutritional Status of Children*, UNRISD and UNICEF Food Systems and Society Series, Report No. 86.1 (Geneva), p. 53.

³⁵ FAO, *Global Information and Early Warning System...*, No. 8 (September 1988), p. 6 and tables A5 and A6.

³⁶ International Food Policy Research Institute, *Annual Report, 1987*, p. 9.

³⁷ Khartoum Declaration: Towards a Human-focused Approach to Socio-economic Recovery and Development in Africa, adopted at the International Conference on the Human Dimension of Africa's Economic Recov-

ery and Development, Khartoum, 5-8 March 1988 (A/43/430, annex I), p. 10.

³⁸ World Farmers' Times Foundation: *World Farmers' Times*, No. 5 (May 1988), p. 5.

³⁹ FAO, *Global Information and Early Warning Systems . . .*, No. 8 (September 1988), p. 5.

Chapter IV

INEQUALITY AND POVERTY

The distribution of household and personal income in developing countries has always been a major concern of policy makers in developing countries and of the international community at large, partly for humanitarian and political reasons and partly because of the significance of a more even distribution of income in the dynamics of the development process. Many changes in the world economy in the 1980s, including the prolonged fall in commodity prices, natural disasters and rising burdens of interest and debt repayment on the one hand and the domestic policies adopted by Governments on the other, are likely to have had a profound impact on the distribution of income both within and among nations. This chapter examines the nature of the impact and the policies adopted to mitigate the more serious consequences.

In recent years many developing countries have had to undertake both short-term stabilization measures and medium- to long-term adjustment measures. Stabilization measures were necessary primarily to bring down the rate of inflation and arrest a rapid deterioration in the balance of payments. Adjustment policies were directed at removing the distortions holding back rapid economic growth and the efficient use of resources and at promoting policies that would ensure further growth with balance, in both the do-

mestic economy and the external account in the long term. The combination of policies and instruments to achieve stabilization and adjustment were perceived to be so unfair to lower-income groups that the United Nations Children's Fund (UNICEF), among others, began urging adjustment policies with a "human face". The distribution of income and welfare that prevails in developing countries is the result of both trends and fluctuations in the international economy and domestic economic and social policies. The precise links between the slide in commodity prices and the rise in the burden of debt, on the one hand, and the distribution of income in a nation, on the other, cannot be established on the basis of current research. However, the influence of these factors can be seen in the overall distribution of world income among nations. Section A of this chapter is devoted to that theme. Section B contains a discussion of changes in the distribution within countries and the factors accounting for these changes.

A. INEQUALITY IN INCOME AMONG COUNTRIES

1. *The extent of inequality*

Table 19 shows the distribution of world gross domestic product (GDP) in 1980 and 1987 among 110 developing

TABLE 19. DISTRIBUTION OF WORLD GROSS DOMESTIC PRODUCT AND POPULATION, 1980 AND 1987

Decile of countries ^a (1)	GDP per capita ^b 1980 (US dollars) (2)	GDP ^b (billions of US dollars)		Share of world GDP ^b (percentage)		Share of world population	
		1980 (3)	1987 (4)	1980 (5)	1987 (6)	1980 (7)	1987 (8)
1	217	198	264	1.76	1.99	21.36	22.01
2	258	309	508	2.75	3.84	27.95	27.72
3	572	182	226	1.62	1.71	7.44	7.70
4	956	151	143	1.35	1.08	3.69	4.08
5	1 388	226	316	2.01	2.39	3.80	3.97
6	2 042	464	535	4.14	4.04	5.31	5.41
7	2 730	1 278	1 499	11.39	11.33	10.91	10.81
8	5 212	747	858	6.66	6.48	2.43	2.39
9	9 281	2 808	3 354	25.03	25.34	7.62	7.03
10	12 490	4 857	5 533	43.29	41.80	9.49	8.89
		11 220	13 236	100	100	100	100

Memorandum item:
Index of income inequality:

	1980	1987
Gini index	0.605	0.591

Source: Department of International Economic and Social Affairs of the United Nations Secretariat.

^a The total number of countries is 110.

^b At 1980 prices. For the centrally planned economies of Europe and China, net material product (NMP), rather than gross domestic product, has been used.

countries, developed market economies and centrally planned economies, arranged by decile in the ascending order of the per capita income in each group of countries.¹ A Gini index, a widely used measure of income inequality, was computed for each distribution.

The distribution of world GDP among countries is highly unequal. In 1980, countries in the lowest two deciles accounted for around 4.5 per cent of world GDP while they contained almost 50 per cent of world population. The top decile, on the other hand, containing 9 per cent of the world population, earned 43 per cent of world GDP. The average income of people in the top decile of countries was about 58 times the income of those in the bottom 10 per cent.²

The distribution of income within countries is rarely so unequal. The bottom 20 per cent of households typically account for 5 or 6 per cent of total income in developing countries and around 7 per cent in developed market economies, while the top 10 per cent of the households account for 30 per cent of the income, on the average, in the former and around 25 per cent in the latter.³ The Gini index of income inequality of individual countries is also generally much lower than the value of the index calculated here for the distribution of world GDP, which indicates that there is a much higher degree of inequality among countries than within countries.⁴

2. *Changes in distribution among countries in the 1980s*

There is some evidence that the world distribution of income is becoming more unequal over the long term. A number of measures of inequality, combining inter-country and intra-country distributions, show a worsening trend between 1950 and 1986, with some fluctuations around the trend.⁵ However, contrary to the impression that might be conveyed by certain features of recent world developments, the distribution of GDP among countries (ignoring intra-country distribution) has become slightly less unequal during the 1980s. This is seen in the Gini coefficient of income inequality calculated from the grouped data in table 19, which declined from 0.605 in 1980 to 0.591 in 1987. Figure V, which is based on data in table 19, gives the Lorenz curves for the two years.⁶ A movement of the Lorenz curve towards the diagonal without crossing the original curve represents an overall improvement in the distribution of income. The curve for 1987 shows such a movement. Though quite small, the movement is clear.⁷

There are basically three major factors explaining changes in the distribution of income among countries: rates of GDP growth of individual countries, transfer of resources among countries and rates of population growth. Over a relatively short period of time, the first and second factors are more important than the third, which has complex but longer-term consequences for the growth and distribution of income. During the period 1980-1987, there have been both a large divergence in GDP growth rates among countries and a substantial transfer of resources from the poor countries to the rich.

Behind the slight improvement in the distribution lay significant differences in the rates of growth of GDP among countries and high rates of growth in some of the largest

countries. The bottom two deciles increased their share of world GDP (from 4.5 per cent to 5.8 per cent) largely because of comparatively high rate of economic growth in India in the first decile and China in the second. The Chinese economy grew at an annual rate of 9.1 per cent during 1980-1987 and increased its share of world GDP from 2.2 to 3.2 per cent. India's GDP, though growing more slowly, grew faster than the average for the world, and the country increased its share of world GDP.

Among the other large countries in the bottom two deciles, Pakistan's GDP also grew faster than the world average. Together, China, India and Pakistan account for 40 per cent of the population of countries covered in the present analysis. The improvement in their levels of income, which although still very low, contributed to the perceptible improvement in income distribution among countries between the years 1980 and 1987. Countries in the fifth decile also increased their share, largely because of high rates of growth in the Republic of Korea and Turkey.

The 11 countries in the top decile of income receivers earned a lower proportion of world income in 1987 than in 1980, contributing to the slight reduction in the concentration of world income. These include some of the high-income energy-exporting developing countries. The decline in oil prices since the beginning of the 1980s was accompanied by a fall in the output of oil and GDP in many of these countries. Their share of world GDP declined. Of greater consequence for changes in the top decile was the slow growth of two large developed countries, France and the Federal Republic of Germany. These changes brought about a 1.5 percentage point reduction in the share of the top 10 per cent of countries in world GDP.

The improvement in the distribution is not, however, completely unambiguous. A large number of low- and middle-income developing countries in Africa and Latin America slipped in position between 1980 and 1987. The share of the fourth decile actually declined. This was largely because of the decline in Nigeria's share. There was no improvement in the position of Brazil in the sixth and Mexico in the seventh decile. The severe economic difficulties of the 1980s have adversely affected the relative position of a large number of low- and middle-income countries in a way not reflected in the overall change in world distribution of GDP.

The relative position of the main groups of countries also changed (see table 20). The developed market economies' share declined slightly, while that of the European centrally planned economies increased. During the 1980s GDP in developing countries, on the average, grew at a slower rate than in the developed market economies, reversing the trend for the 1960s and 1970s, when developing countries grew faster than the developed. The share of world GDP accruing to developing countries as a whole declined slightly, from 18.6 per cent in 1980 to 17.7 per cent in 1987.

Large changes took place among the developing countries themselves as they grew at quite disparate rates. From the point of view of the distribution of world GDP, these changes are more significant than those between the major country groups. Some of these changes have already been noted. Changes in the relative position of the different regions of the developing world are shown in table 21. Stag-

nant output or slow growth in almost all West Asian countries and many African countries led to a large fall in their share of total developing country GDP. The share of developing countries in the Western hemisphere also declined, though less drastically than in the other two groups. Most countries in South and East Asia, on the other hand, grew fast. Their share increased by more than 5 percentage points over the seven years.

TABLE 20. SHARE OF COUNTRY GROUP IN WORLD GDP AND POPULATION^a
(Percentage)

	Share of GDP		Share of population	
	1980	1987	1980	1987
Developed market economies	69.7	69.1	17.9	16.6
Developing countries	18.6	17.7 (16.8)	50.1	52.5
Western hemisphere	7.1	6.6 (6.4)	8.1	8.5
Africa	2.8	2.3 (2.1)	9.8	10.7
Western Asia	3.2	2.6 (2.2)	1.9	2.1
South and East Asia	4.3	5.1 (5.0)	28.8	29.6
Mediterranean	1.1	1.2 (1.1)	1.6	1.6
China	2.2	3.2	23.3	22.6
Developing countries and China	20.8	20.9	73.4	75.1
Centrally planned economies ^d of Europe	9.6	10.0	8.8	8.3
	100	100	100	100

Source: Department of International Economic and Social Affairs of the United Nations.

NOTE: Figures in parentheses are approximate shares of developing countries when account is taken of transfer of resources through changes in the terms of trade and net factor payment *vis-à-vis* the rest of the world.

^a Based on 113 countries.

TABLE 21. REGIONAL DISTRIBUTION OF GDP OF DEVELOPING COUNTRIES
(Percentage)

	1980	1987
Western hemisphere	38.49	37.23
Africa	15.15	12.88
Western Asia	17.41	14.52
South and East Asia	23.02	28.76
Mediterranean	5.98	6.55
	100	100

Source: Department of International Economic and Social Affairs of the United Nations Secretariat.

Differences in the rates of economic growth between countries have been the main determinant of changes in the distribution of world income. There have, however, also been large transfers of resources between countries during the period. Rough estimates show that changes in terms of trade and net factor payments abroad resulted in the transfer of \$125 billion in real resources from developing countries to the rest of the world over the period 1980-1987, or about \$18 billion annually. These transfers were small in comparison with the changes in the value of world output over the period and would not make a significant difference in any overall measure of changes in the distribution of world income among countries. But for the developing countries, the transfers represent a fall in their share of world income.⁸ As

shown in table 20, the share of these countries in 1987 was further reduced, by around 0.9 percentage point, when account is taken of such transfers. Once again, there are substantial differences among the developing regions. While these transfers were relatively small for South and East Asia, they were quite large for Western Asia, Africa and the Western hemisphere. For individual countries, they were sometimes very large. The impact of transfer of resources has been more severe in regions whose share in world GDP fell, because of slow or negative growth, than in other regions.

Differences in per capita GDP among countries bring out even more dramatically the extent of the inequalities in the distribution of world income than does the distribution of world GDP among countries. In table 22, the per capita GDP of each decile of countries is expressed as a ratio of that of the top decile. In the bottom 20 per cent of countries, per capita income is less than 3 per cent of the per capita income in the top 10 per cent. Such differences in per capita income cannot of course change significantly in a short period of time. Among the countries with the lowest per capita incomes, only those in the bottom two deciles, particularly the second, improved their relative position between 1980 and 1987. This improvement was largely due to high growth in some of the most populous countries, as noted earlier.

TABLE 22. RELATIVE LEVELS OF PER CAPITA GDP^a

Decile of countries	1980	1987
1	0.017	0.018
2	0.021	0.028
3	0.046	0.045
4	0.076	0.054
5	0.111	0.122
6	0.203	0.203
7	0.218	0.213
8	0.417	0.406
9	0.953	0.934
10	1.000	1.000

Source: Department of International Economic and Social Affairs of the United Nations Secretariat.

^a Ratio of average per capita GDP of the decile to average per capita income of the top decile (1980 prices).

In some countries in the lower income deciles there was an absolute fall in per capita income and of course a decline in its ratio to per capita income in the top deciles. Of the 81 developing countries covered in table 22, per capita GDP in real terms declined in 54 countries during 1980-1987. Over 70 per cent of the countries whose per capita income declined belong in the third and fourth deciles.

B. THE DISTRIBUTION OF INCOME WITHIN COUNTRIES

1. Changes in the distribution of income

Table 23 contains information on the distribution of household income in 14 developing countries in one year in the 1970s and another in the 1980s. As an indicator of changes in the distribution of income in developing countries during the first half of the 1980s, this information is of only limited value.

TABLE 23. INCOME DISTRIBUTION IN THE 1970s AND 1980s

	Year	Top 20%	Middle 40%	Bottom 40%	Year	Top 20%	Middle 40%	Bottom 40%
Argentina ^a	1975	43	39	18	1985	49	36	15
Bangladesh	1973/74	42	40	18	1981/82	45	38	17
Botswana	1975	60	28	12	1982	58	30	12
Brazil	1979	63	28	9	1984	63	28	9
Chile	1978	51	34	15	1985	61	29	10
Colombia	1973	59	30	11	1985	53	29	18
Côte d'Ivoire	1973/74	50	30	20	1985/86	44	47	9
Dominican Rep.	1977	57	30	13	1984	50	35	15
Guatemala	1970	58	31	11	1981	56	30	14
Indonesia	1976	49	37	14	1984	42	37	21
Pakistan	1971	41	38	21	1985	57	25	18
Philippines	1970/71	54	32	14	1985	53	33	14
Rep. of Korea	1976	45	38	17	1981	39	40	21
Sri Lanka	1969	43	38	19	1980/81	50	34	16

Source: Department of International Economic and Social Affairs, based on survey data compiled by the Statistical Office, UNICEF, the World Bank and other sources.

^a Greater Buenos Aires only.

The distribution is among only three categories of households and there is no information on changes in distribution within each group. The data are least reliable with respect to the upper levels, which may omit parts of income received in the form of profit, interest and capital gains, and the lower levels, where incomes received from subsistence agriculture and similar other activity may not be recorded. In general, income is a less accurate index of welfare than is expenditure. Income data do not capture the distributional effects of taxes, user charges, income transfers or access to social services, among other things.

Within the limitations inherent in this information, there is no evidence that there was a general and massive worsening in the distribution of income within developing countries. In five of the 14 countries, there was, in fact, an increase in the proportion of income accruing to the bottom 40 per cent of households. In three, there was no change. In the other six (Argentina, Bangladesh, Chile, Côte d'Ivoire, Pakistan and Sri Lanka), the bottom 40 per cent received a lower proportion of the total in the 1980s than in the 1970s. In five of these six (excluding Côte d'Ivoire), the middle 40 per cent also earned a lower share of total income in the 1980s than in the 1970s and the top 20 per cent increased their share. In the other eight, the top 20 per cent earned a lower proportion in the 1980s than in the 1970s, and there was no change in the proportions earned by income groups in Brazil.

Among heavily indebted countries, in Argentina the bottom four deciles of households received a lower proportion of total income in 1985 than in 1975. In Brazil and the Philippines, there was no observable change in the share accruing to the bottom four deciles.⁹ In Côte d'Ivoire there was a drastic fall in the proportion accruing to the bottom 20 per cent in 1984. In the Republic of Korea, which evidently adjusted its economy well to the turbulence of 1979-1980, there was a marked improvement in the distribution of income between 1976 and 1981.

Information on the distribution of income is of major interest to policy makers because, among other things, it reveals the movement of poverty lines. A poverty line is typically drawn at an income level below which a nutritionally

TABLE 24. ESTIMATES OF TOTAL, RURAL AND URBAN POPULATION LIVING IN ABSOLUTE POVERTY

	Percentage of population		Millions		Percentage change
	1970	1985	1970	1985	1985 over 1970
Developing countries ^a					
Total	52	44	944	1 156	22
Rural	59	49	767	850	11
Urban	35	32	177	306	73
Africa					
Total	46	49	166	273	64
Rural	50	58	140	226	61
Urban	32	29	26	47	81
Asia ^a					
Total	56	43	662	737	11
Rural	61	47	552	567	3
Urban	42	34	110	170	55
Latin America					
Total	40	36	116	146	26
Rural	62	45	75	57	-24
Urban	25	32	41	89	117

Source: Department of International Economic and Social Affairs, based on data from the World Bank and ECLAC, as extrapolated from tables 13 and 22 of O. Altimir "The extent of poverty in Latin America", World Bank Staff Working Paper No. 522 (Washington, D.C., 1982); UNICEF, *Statistics on Children in UNICEF-Assisted Countries* (New York, April 1988); and United Nations, *World Population Prospects* (United Nations publication, Sales No. E.86.XIII.3).

^a Excluding China.

adequate diet and essential non-food items are not affordable. Some information on the proportion of the population living in poverty in developing countries is provided in table 24.

There was a significant drop in the proportion of people living below the poverty line between 1970 and 1985. However, the number of people living in poverty increased substantially during this period because the population itself grew rapidly. Except in Latin America, the poor are more numerous in rural than in urban areas.

The proportion of the poor fell in Asia as a result of economic growth, improved agricultural yields, rural-to-urban migration, income from work in other countries and proportionately less transfer of income as interest and debt repayment than in Latin America. In Latin America the shift in poverty from rural to urban areas reflects the effects of continued high rates of rural emigration and the impact of the fall in urban incomes in most countries of the region. In Africa, the relatively rapid growth of rural poverty resulted from sluggish agricultural production, fast increases in population and the drop in the prices of most agricultural export products.

The capacity of the poor to cope, and indeed to survive, has been striking during the 1980s. In ways not captured by income data, the majority of the urban poor of Africa and Latin America have adopted survival strategies and buffer mechanisms that have proven successful in fending off absolute poverty. Short-run coping measures have included a reduced propensity to save and the reallocation of household expenditures to meet the most fundamental needs; heads of household working increasingly long hours at one or more jobs for meagre pay, and other members of the family finding subsistence or other work in the informal sector; and many households growing food in their own backyards. Coping mechanisms, however, can wear down with time, particularly if nutrition is inadequate, and the repercussions of economic decline may not be indefinitely deferred.

2. *Effects of adjustment policies on income distribution*

There has been much debate on the impact of "adjustment policies" in developing countries on the distribution of income and welfare. Adjustment policies include both short- and long-term measures to bring about price stability and a sustainable balance in the current account in international transactions, reduce rigidities in the economy, increase efficiency in resource use and raise the rate of growth of GDP. A variety of policy instruments and means, including instruments of monetary, tax and fiscal policy, exchange rates, deregulation and freeing of markets, have been used to secure these objectives. Due to the complex nature of the combined effects of these policies on the distribution of income and welfare and because the effects do not manifest themselves immediately, there is not yet sufficient research to

support firm conclusions on these issues. Some of the forces at work are discussed below.

In five of the six countries shown in table 25, open urban unemployment was higher in 1985 than in 1980; the exception was Brazil. In two of them (Chile and Venezuela), the proportion of those employed in the public sector among all employed persons fell in 1985. In contrast, the proportion employed in the informal sector increased in all six countries. Real minimum wages fell in five countries but not in Argentina. In Peru, they were nearly halved. The rise in unemployment, the rise in the proportion employed in the informal sector (where wages are a fraction of those in the public and formal sectors) and the fall in the real minimum wage, in combination, probably reduced incomes at the lower end of the distribution and contributed to a rise in the number of persons living in poverty.

Stabilization and currency devaluation policies have had a particularly direct and severe impact on most countries' urban labour force, with varying degrees of secondary effects on the rural labour force. By reducing supplies of intermediate goods and capital equipment, import restrictions—in some cases import strangulation—affected in a major way output and employment in the manufacturing sectors. Fiscal constraints, on the other hand, reduced in real terms public sector wages and salaries. Restraints imposed on the growth in money supply further dampened demand, output, employment, and real wages and incomes. Moreover, the combination of devaluations and continued budget deficits produced surges in prices in some countries that eroded the purchasing power of persons lacking indexed incomes or assets that maintain their real value in times of inflation. When food prices grew disproportionately, the poor were more severely affected than other income groups (see chap. III above). Selective measures to reduce non-essential imports and protect the basic consumption needs of the poor, current government consumption and the public sector wage bill have been helpful in cushioning at least temporarily the more severe effects of adjustment-induced austerity. Increased producer prices in many instances appear to have had only a limited effect on rural incomes and production.

The public sector has a major influence on wage and salary levels and structures in most developing countries. This is especially true in sub-Saharan Africa, where the public sector employs on average over 40 per cent of the modern

TABLE 25. EMPLOYMENT AND WAGES IN SIX HEAVILY INDEBTED LATIN AMERICAN COUNTRIES

	Open urban unemployment		Percentage of employment in:						1985 real minimum wages ^a (1980=100)
			Public sector		Private sector		Informal sector		
	1980	1985	1980	1985	1980	1985	1980	1985	
Argentina	2.6	6.1	18.8	18.9	54.9	52.1	26.3	28.9	113
Brazil	6.2	5.3	10.8	11.1	65.0	58.2	24.1	30.1	84
Chile	11.7	17.0	12.2	9.5	51.7	52.5	36.1	37.2	64
Mexico	4.5	4.8	21.8	26.1	54.0	44.4	24.2	29.5	71
Peru	10.9	17.6	18.7	21.7	47.1	44.0	34.2	34.9	55
Venezuela	6.6	14.3	25.5	24.5	48.4	48.5	25.6	26.2	91

Source: Various tables in ILO, "Overview of the employment situation in the world" (Geneva, Nov. 1987), *World Labour Report 3* (Geneva, 1987) and *Yearbook of Labour Statistics* (Geneva, 1987).

^a Corrected for price changes using the GDP deflator.

TABLE 26. EMPLOYMENT AND WAGES IN SELECTED AFRICAN COUNTRIES

	Distribution of employment in urban formal sector						Index of real wages in manufacturing ^a (1980=100)	Annual rate of growth of real wages in agriculture 1970-1985
	Public sector		Construction		Manufacturing			
	1980	1985	1980	1985	1980	1985		
Kenya	52.1	56.1	8.2	5.4	18.3	17.1	98	-1.3
Malawi	30.9	30.3	17.5	11.3	21.3	21.1	65	-1.8
Niger	12.3	23.0	42.3	25.2	14.4	14.0	..	..
Sierra Leone	45.9	45.7	13.8	16.0	13.1	14.3	29	..
Swaziland	36.9	36.8	14.3	7.7	21.7	22.4	..	+5.7
United Republic of Tanzania	56.8	59.6	16.3	8.7	13.1	14.0	..	-4.7
Zambia	40.2	43.2	15.4	10.9	16.8	18.0	..	-2.3
Zimbabwe	46.5	50.7	6.8	6.2	25.9	23.4	119	+5.7
Average	40.2	43.2	16.8	11.4	18.1	18.0	..	..

Source: ILO, *World Labour Report 3* (Geneva, 1987) and *Yearbook of Labour Statistics* (Geneva, 1987).

^a Adjusted for price changes using the GDP deflator.

sector urban labour force (see table 26). Statutory minimum wages and public sector pay scales have traditionally also had an indicative effect on wage and salary setting in the private sector, although as discussed further on, this effect declined in importance in the 1980s. On balance, therefore, income policies consisting of delayed wage increases in an inflationary setting have been one of the principal means available to public authorities to reduce aggregate demand.

Governments, in practice, continued to make use of the public sector as a means of absorbing some of the growth in the labour force during the 1980s. In both sub-Saharan Africa and the heavily indebted countries of Latin America, public sector employment managed to grow at rates that closely paralleled those of the urban labour force (see tables 25 and 26). In some countries, however, the lowest wages were reduced in real terms by a lower percentage than were the highest wages, which helped equalize incomes but had questionable outcomes in terms of allocative efficiency.¹⁰

In the eight African countries shown in table 26, the proportion of persons in formal sector employment, working in the public sector, generally increased between 1980 and 1985; in Niger, the proportion nearly doubled. In contrast, the proportion in construction and manufacturing sectors fell. Real wages in manufacturing fell in three countries—

Sierra Leone drastically—and rose in Zimbabwe. Real wages in agriculture fell in four countries between 1970 and 1985, and rose in Swaziland and Zimbabwe. On average, there probably was a reduction in real wages in several developing countries in Africa.

Some indicators of the patterns of change in the distribution of income between compensation of employees (wages) and operating surplus (profits) are shown in table 27. In 23 developing countries for which there were data, wages increased further than profits between 1970 and 1985. However, the movement was in the opposite direction and the divergence wider in the six countries in Latin America included in table 26.

In general in private and public sector and industrial and manufacturing enterprises, labour cost reductions were obtained more by way of staff retrenchment and dismissals than by deep cuts in real wages. Indeed, private firms in 1985 paid their core workers wages about a third higher than those in the public sector for comparable work.¹¹ They did so in the belief that the relatively better pay would result in improved employee commitment and motivation, more effective work discipline, lower labour turnover and reduced industrial conflict. Lay-offs, however, were very high in some instances, including public enterprises in some cases.¹²

Perhaps the worst affected sector in many countries has been construction. Unemployment and underutilization of capacity rose sharply as public and private investment fell. In Mexico, for example, 70 per cent of the jobs in the construction industry were lost between 1981 and 1984, of which three quarters were due to reductions in public sector investment. Up to 50 per cent of construction jobs were likewise lost in Brazil during 1981-1984 and in Chile in 1982. In sub-Saharan Africa, employment in construction as a share of formal urban employment was about a third lower in 1985 than in 1980 (see table 26). Thus, semi-skilled and unskilled labourers have been among the workers most severely affected by adjustment policies.

During the 1980s, lower wages and reduced opportunities for employment in the modern sector necessarily swelled the supply of labour to the informal sector.¹³ In Latin America, employment in that sector grew more rapidly than in the

TABLE 27. REAL GROWTH IN FACTOR PAYMENTS^a (1975=100)

	1975	1980	1985
Heavily indebted Latin American countries			
Wages	100	121	108
Profits	100	124	129
All developing countries			
Wages	100	130	139
Profits	100	129	132

Source: Calculated from the most recent data available to the Statistical Office, Department of International Economic and Social Affairs. The data correspond to the following cost components of GDP: "compensation of employees paid by resident producers" and "operating surplus" of all types of establishments, public and private, in accordance with criteria established in national accounts statistics.

^a Adjusted using GDP deflators.

formal sector during the first half of the 1980s (see table 25), reversing the trend of the previous two decades.¹⁴ Furthermore, with growing insecurity and instability in formal sector employment, the distinction between formal and informal sector work became somewhat blurred. For example, formal enterprises are increasingly subcontracting self-employed workers in order to reduce fixed costs and payroll taxes.¹⁵ There are also signs that the informal sector may be playing a larger role in producing import substitutes and otherwise increasing its market share *vis-à-vis* the formal sector.¹⁶ Such job creation, however, has probably not been commensurate enough to prevent a drop in real wages in the sector.

In addition to the growing integration of formal and informal urban labour markets, there have been clear indications in the 1980s of a further integration of urban and rural labour markets in most of Latin America. With the urban sector increasingly unable to provide secure and viable employment opportunities for new migrants to cities, an urban-based reserve labour force estimated at between 10 and 13 million workers has emerged. These workers undertake seasonal and temporary work in both the urban and rural sectors. Among other things, the contracting of such temporary workers by big estates has led to the dismissal of large numbers of "permanent" agricultural labourers who used to enjoy secure minimum wages supplemented by non-wage benefits in health care, housing and social security.¹⁷ Thus, as in the case of urban employment, labour market flexibility and insecurity spread to much of Latin America's agricultural sector during the 1980s. Agricultural wages have been more sensitive to overall economic conditions, including inflation, underemployment and the fall in urban wages, than to growth in the agricultural sector.¹⁸ Although agricultural production in Latin America in the aggregate responded fairly well to credit, price and exchange rate policies, labour absorption has been minimal and real wages fell drastically.

In sub-Saharan Africa, on the other hand, differences in income between urban and rural groups narrowed, more because of the negative impact on urban incomes and employment than because of growth in rural incomes.¹⁹ In the United Republic of Tanzania, for example, real farm incomes are estimated to have risen by 5 per cent during 1980-1984, while urban wages declined by 50 per cent.²⁰ In Ghana, urban incomes fell by 40 per cent in real terms over the first half of the decade, while farm incomes stagnated.²¹ Judging from table 26, it would appear that a similar movement may have occurred in Sierra Leone. Likewise, in Côte d'Ivoire, urban wages fell more than rural incomes rose: by 1985 the ratio of urban to rural incomes was down to about 2 to 1, as opposed to 3.5 to 1 in 1980.²²

Unlike Latin America, the agricultural sector in sub-Saharan Africa is characterized by small farms, a large proportion of which operate on a subsistence basis. The incomplete integration of such households in the economy helped cushion them against the fall in living standards experienced in the urban wage economy. With per capita food production 5.3 per cent lower in 1987 than in 1980 (see chap. III, table 15), adjustment policies notwithstanding, it is likely that incomes even from subsistence agriculture fell.

With respect to export commodities, structural adjustment programmes are only beginning to evince signs of success in sub-Saharan Africa as a whole. In 1986, for example, production of cocoa in Ghana began to recover consequent upon progress in rehabilitation programmes combined with an upward revision of producer prices.²³ Mali, Senegal and the United Republic of Tanzania have also initiated steps to increase commodity exports. Most of the expansion in exports, however, has been from countries such as Côte d'Ivoire, Kenya and Zimbabwe, which already had relatively strong agricultural sectors. The direct benefits of the growth in exports have accrued probably more to the large, progressive farmers than to small holders and agricultural wage labour, thus accentuating income differentiation in the rural areas of those countries.

The effects of adjustment policies on high-income groups have been somewhat ambiguous. On the one hand, reductions in government spending, credit and imports are likely to have reduced their earnings. On the other hand, non-wage earners, at least in Latin America, seem to have gained at the expense of wage earners (see table 27). Those who held their assets in the form of land and other real assets whose prices rose relative to others in the course of inflation, formally and informally indexed savings, and foreign currency gained during the process of adjustment.

TABLE 28. ESTIMATES OF CAPITAL FLIGHT FROM AFRICA, ASIA AND LATIN AMERICA

	Annual average 1975-1978		Annual average 1979-1982		Annual average 1983-1985	
	US dollars (billions)	Percentage of total exports	US dollars (billions)	Percentage of total exports	US dollars (billions)	Percentage of total exports
Africa	1.7	3.3	4.1	4.6	1.8	2.3
Asia	-0.8	-0.9	7.0	3.7	-2.2	-0.9
Latin America	3.7	6.2	14.7	12.2	11.0	8.8

Source: M. Deppler and M. Williamson, "Capital flight: concepts, measurements and issues", in *Staff Studies for the World Economic Outlook* (Washington, D.C., IMF, August 1987), table 2.

NOTE: A negative sign indicates capital inflow.

As may be seen from table 28, capital was in flight well before full-fledged adjustment measures began to be adopted. During the period leading up to each country's adjustment, private direct investment typically declined sharply as domestic inflation, devaluation expectations and the fear of increased taxes encouraged the acquisition of foreign-currency denominated assets. Domestic currency devaluations in the process of adjustment benefited individuals possessing such assets. More realistic exchange rates and the tightening of exchange controls by some Governments may have helped reduce the outflows evident from table 27.²⁴ Where, as in Chile, a debt conversion scheme has allowed citizens to buy debt owing to foreign banks at a discount with money held in their foreign accounts and convert the proceeds into domestic currency at current rates to pay off mortgage loans, greater economic advantages have been conferred on some groups than others.

3. Government expenditure on social services

Governments attempt to alleviate the severity of problems of inequality in the distribution of income by changing tax and expenditure policies. In respect of developing countries, the evidence so far is that their schemes of taxation have little impact in changing pre-tax distribution of income.²⁵ The use of seignorage revenue (the increase in currency as a percentage of GDP), substantial in several countries in both Africa and Latin America during the first half of the decade, has probably been regressive in nature.²⁶

Government expenditure has been under severe strain in most developing countries during the decade. As shown in table 29, the ratio of total central government expenditure to GDP fell from 21 per cent in 1980 to 18 per cent in 1985. The drop was most marked in Latin America and the heavily indebted countries. In fact, in Africa and the low-income countries, the ratio rose substantially. Expenditure on education, health and housing as a proportion of total expenditure was lower in 1985 than in 1980, except in Asia. Expenditure in real terms on education per capita declined by 14 per cent in Latin America from 1980 to 1985. Per capita real expenditure on health declined by 2 per cent in Africa and 8 per cent in Latin America. In Latin America, per capita real expenditure on housing fell by 2 per cent during the same period. The one category of expenditure that has grown substantially is interest on public debt. Capital expenditure as a proportion of total government expenditure fell on the average in the developing countries shown in table 29.

The redistribution effects of the fall in expenditure on education, health and housing depend very much on patterns of expenditure: primary, secondary or tertiary education; primary health care or curative medicine; rural and low-income or urban middle-income housing. There is little information yet as to the specific changes in patterns of expenditure during this period of severe restraint. It is at least arguable that slow growth in the provision of these services would have prevented the extension of these services to poorer income groups and areas, which in general receive them later than those that are better off and better organized. In general, subsidies received implicitly through state-financed education, health services and housing tend to be progressive in incidence, so that subsidies form a higher proportion of the income of those in low-income groups than in the higher groups (see table 30). Slow growth and reductions in government expenditure on these items between 1980 and 1985 in all probability resulted in lower subsidies to those in poorer groups.

In some countries, steps were taken to target assistance to the neediest and the most vulnerable groups under a variety of programmes. The targetted assistance was launched to offset the potentially adverse effects of lower incomes and of higher food prices on nutrition levels and infant mortality rates. As explained in chapter III, under some of these programmes nutritional supplements were delivered through primary health care centres and school feeding programmes. Their costs were met largely through budgetary resources drawn from other functional areas, as in Chile, or

TABLE 29. SELECTED CATEGORIES OF CENTRAL GOVERNMENT EXPENDITURE AS A PROPORTION OF TOTAL EXPENDITURE

Functions	Year	All develop- ing countries (43)	Africa (15)	Asia (15)	Latin America (13)	Low- income (14)	Heavily indebted (12)
1. Total central gov't. expenditure as a ratio of GDP	1980	21.32	15.57	21.73	18.89	16.00	17.68
	1985	18.22	21.51	20.35	13.83	18.00	15.82
2. Education percentage of total expenditure	1980	14.51	15.40	12.12	16.24	11.88	16.52
	1985	14.04	14.95	13.37	13.76	11.23	14.64
3. Health percentage of total expenditure	1980	6.21	5.50	4.69	8.76	5.00	6.75
	1985	6.13	5.27	5.25	8.13	4.79	6.02
4. Housing percentage of total expenditure	1980	2.66	2.16	2.96	2.91	1.58	2.00
	1985	2.41	1.71	2.81	2.79	1.79	1.94
5. Interest expenditure percentage of total expenditure	1980	7.14	6.96	6.32	8.18	7.62	7.98
	1985	12.62	13.29	10.16	14.30	12.25	15.94
6. Capital expenditure percentage of total expenditure	1980	22.99	25.11	25.45	19.05	24.65	18.55
	1985	18.76	29.81	21.65	13.46	21.13	13.33

Source: Department of International Economic and Social Affairs, based on IMF, *Government Finance Statistics Yearbook*, vol. XI (Washington, D.C., 1987), and *World Population Prospects* (United Nations publication, Sales No. E.86.XIII.3).

NOTE: Numbers in parentheses show the number of countries in each group.

through the adoption of a special excise tax, as in Brazil. In Indonesia, such assistance was funded by shifting resources from investment, which the State encouraged the private sector to undertake. A number of Governments in both Latin America and Africa adopted compensatory employment or income-maintenance programmes, as well as small credit and advisory assistance programmes for the self-employed, to raise the incomes of poor households possessing few productive assets other than their own labour. Some of the programmes were directed primarily at public sector workers who had lost employment. Retrenched employees in Gambia, for example, were provided training and credit to assist them in launching viable enterprises and becoming self-employed in the private sector. Likewise in Ghana, job training and small-business loans were offered to the 50,000 government workers who were laid off. Similarly in Guinea-Bissau, many redundant workers of state trading corporations received governmental assistance in starting up small businesses, while others who so requested were resettled in rural co-operative farms producing food in fertile but hitherto uncultivated areas.

In a number of other countries, public authorities focused primarily on short-term, public works programmes, employing those groups that in one way or another were most adversely affected by the stabilization adjustment policies.

TABLE 30. IMPLICIT SUBSIDIES IN EDUCATION, HEALTH, SHELTER AND INFRASTRUCTURE AS A PERCENTAGE OF AVERAGE INCOME IN EACH INCOME QUIN-TILE

Income quintile ^a		Argentina	Costa Rica	Chile	Dominican	Uruguay
		1980	1982	1982	Republic 1980	1982
1 (low-income)	E	28.5	30.8	77.0	7.0	17.3
	H	15.6	42.1	31.5	23.8	16.5
	S	2.8	1.5	21.3	0.7	1.6
	I	1.2	2.9	1.9	1.9	0.8
2	E	12.9	18.2	31.4	5.1	7.1
	H	3.4	14.0	19.1	5.3	8.8
	S	0.6	1.8	7.9	0.0	3.3
	I	0.9	1.7	1.1	1.4	0.5
3	E	8.4	10.6	17.5	4.5	4.8
	H	2.7	12.0	9.7	4.4	3.8
	S	0.1	2.0	2.3	0.0	1.9
	I	0.8	1.1	0.8	1.5	0.4
4	E	5.7	9.3	8.2	4.3	3.3
	H	0.8	6.8	4.1	2.0	1.5
	S	0.0	1.3	0.7	0.1	1.5
	I	0.5	1.1	0.5	1.4	0.4
5	E	3.0	3.9	2.9	2.1	1.2
	H	0.2	2.3	0.9	0.5	0.9
	S	0.0	1.7	0.0	0.2	1.2
	I	0.2	0.5	0.2	0.7	0.1
TOTAL						
Education		7.6	9.2	9.9	3.4	4.0
Health		2.3	8.4	4.7	3.0	3.5
Shelter		0.3	1.6	1.6	0.1	1.6
Infrastructure		0.6	1.0	0.4	1.1	0.3

Source: A. Humberto Petrel, *El Gasto Público Social y sus Efectos Distributivos: Un Exámen Comparativo de Cinco Países de América Latina*, Document Series ECIEL 7 (Rio de Janeiro, 1987), tables 5.3.2, 5.3.3, 5.3.5 and 5.3.6.

^a E = Education; H = Health; S = Shelter; I = Infrastructure (water lines and sewers).

In the Dominican Republic, for example, the funds saved by eliminating about 35,000 government jobs were put to use in paying for public works projects that created employment for nearly 100,000 people.²⁷ In 1986, Chile likewise provided emergency work to 240,000 unskilled labourers in infrastructure and construction projects,²⁸ as did Peru in 1985 with respect to 50,000 workers.²⁹ Such infrastructure programmes have had valuable multiplier effects by inducing urban residents living in informal settlements to improve their dwellings, thus creating additional jobs in construction and in the building materials sector and by opening up remote rural areas to marketable food production. In some instances, infrastructure programmes were not as labour-intensive as desired. In Mexico, for example, the aim of providing 400,000 new jobs through public works programmes was not achieved because many of the undertakings were highly capital intensive and imposed exacting physical standards. Instead, about 100,000 jobs were created from the funds allocated for that purpose.

Small credit and advisory assistance have also been directed to rural and urban areas. Rural-oriented programmes have generally focused on the production and transport of commodities and on the promotion of off-farm, small-scale enterprises. In the case of the latter, the aim has been to create labour specialization and earning opportunities, often with links to urban buyers, that would add to the income of the communities. Several Governments have begun to tap in a systematic way urban informal-sector entrepreneurship and other hitherto underutilized resources to create jobs and productive capital. For these purposes, registration procedures and other legal requirements have been simplified and credit and other assistance directed to the sector. In Peru, in fact, legislation has been enacted to allow urban squatters to record possession (rather than ownership) of the land that they live on, assign these rights to their dwelling to an insurance company in exchange for guarantees that loans made to them will be repaid, to create collateral on which banks can lend to start up small enterprises.³⁰ In Colombia, special programmes of training and credit for informal sector enterprises have been funded and implemented with the support of 18 private foundations.³¹

C. CONCLUSIONS

Inequalities of income distribution among countries remain extremely large. During the 1980s, however, there has been a slight but perceptible shift towards a less unequal distribution. This is unexpected in a period of stagnation or economic decline in many developing countries but is mainly the result of high rates of economic growth in a number of very low-income countries accounting for a large proportion of world population. There has also been a slight decline in the share of countries in the top decile. These changes account for the improved distribution of income among countries despite the fall in income, sometimes in absolute terms, in many low- and middle-income developing countries. Transfer of resources from the developing countries in the 1980s has perceptibly affected income distribution.

Trends in inequality, employment and poverty diverged markedly among the developing regions during the 1980s.

In Asia as a whole, there was continued progress in providing employment and reducing poverty. In sub-Saharan Africa, on the other hand, there was a significant setback in these areas, and in Latin America, the situation sharply deteriorated and eventually stabilized at a new, lower level. Income distribution does not appear to have changed markedly in Asia, whereas it worsened in the heavily indebted countries of Latin America. The difference between the relative income shares of urban and rural populations narrowed in the poorer countries of sub-Saharan Africa.

The social impact of stabilization policies, however, would probably have been even more painful had it not been that most Governments undertook measures to protect the public wage bill and social expenditure at the expense of capital investment, as well as measures to help sustain nutritional levels and primary incomes and raise productive capacity. It has become evident that as adjustment programmes have become longer in duration, they would clearly benefit from the design and incorporation of explicit social targets and objectives to be monitored and evaluated on a systematic basis. It is in the heavily indebted countries of Latin America where the effects of stabilization and adjustment measures have been most unambiguous, sharply felt and broadly diffused. The income share of earners at the top end continued to grow because of their earnings from capital assets, including foreign-currency denominated assets, while the wages and salaries fell markedly in real terms and open unemployment grew. Because of both the weight of the urban formal sector in those countries' economies and the close linkages between formal, informal and rural markets, the negative repercussions of stabilization and adjustment policies on formal sector employment, wages and salaries were broadly transmitted to the low-income population as a whole, thus contributing significantly to the growth of poverty and inequality in the region.

The effects of stabilization and adjustment policies in sub-Saharan Africa have been more muted and difficult to separate from adverse long-term secular trends, the effects of climatic factors and other variables. Stabilization programmes, nevertheless, certainly contributed to the continuing decline in urban incomes and employment opportunities in many countries. As for the rural areas, to the extent that conditions have improved at all, it has been due more to the increased recent rainfall than to price and exchange rate reforms. Any reduction in the general inequality of income distribution in sub-Saharan Africa has thus been due more to the diminished incomes of the urban labour force than to any reduction in rural poverty. Unabated rural-to-urban migration in that context exercised a further moderating influence on the remaining degree of inequality between the urban and rural sectors, without substantially increasing the dispersion of urban incomes.

NOTES

¹ For the centrally planned economies of Europe and China, net material product (NMP), rather than GDP, has been used. Since the GDP equivalent is larger than NMP, the shares of these countries in world GDP is understated in the data used.

² The dollar GDP data on which the present analysis is based generally use official exchange rates of national currencies and do not take into account their relative purchasing power. The results of the International Comparison Project published by the United Nations (see *World Comparison of*

Purchasing Power and Real Product for 1980, United Nations publication, Sales No. E.86.XVII.9) shows, however, that the nominal value of GDP substantially understates its real purchasing power. To correct for this, the nominal values need to be adjusted by purchasing power parity (PPP) factors, which averaged 1.70 for the developing countries for 1980, with a substantial variation among countries. Ideally, such adjustments should be made in an examination of distribution of world GDP among countries, but that has not been undertaken here for a number of reasons. First, adjustment factors are available for only about half the countries covered here. Secondly, even adjusted by a factor of 1.7, the bottom two deciles in table 1 would still account for about 7 per cent of world GDP at the most. Thirdly, the ranking of countries after adjustment for PPP is, remarkably, the same as that without adjustment. The coefficient of correlation between the two rankings for the countries for which the adjustment factor was available turned out to be 0.97. The use of corrected data should not therefore make a great deal of difference to some measures of inequality. Finally, the focus of attention in the present analysis is the change over the period 1980-1987, and this should not depend materially on whether the absolute level is accurately measured.

³ Computed from data in World Bank, *World Development Report 1988* (Washington, D.C., 1988).

⁴ Nanak C. Kakwani, in *Income Inequality and Poverty* (Oxford and New York, Oxford University Press, 1980), provides estimates of the Gini index for developing and developed countries. The average was 0.40 for the Asian developing countries, 0.487 for Africa and 0.515 for Latin America. For the developed market economies, the Gini averaged 0.380. By comparison, the Gini computed from the 110 countries here was 0.605 for 1980. It is, however, true that the top 1 per cent of income recipients in some developing countries account for a larger proportion of national income than the top 1 per cent of countries in world income.

⁵ A. Berry, F. Bourguignon and C. Morrison, *The World Distribution of Income: Evolution Over the Recent Periods and Effects of Population Growth*, Report of the United Nations Expert Group on Consequences of Rapid Population Growth in Developing Countries (IESA/P/AC.26/6, 3 August 1988). The study excludes China and the centrally planned economies of Europe. The inequality measure in this study includes both inter-country and intra-country inequality, with the former accounting for the greater part of the deterioration between 1950 and 1970.

⁶ The somewhat unusual kink in the curve at the seventh decile is due to the presence of a large country (USSR) in the group.

⁷ The broad trends in distribution of world income among countries do not alter significantly if gross national product (GNP), rather than gross domestic product (GDP), is used as the measure of income. Using mostly World Bank data on GNP (and net material product for the centrally planned economies of Europe and China) for a larger sample of 120 countries, the Gini was found to be 0.667 for 1980 and 0.657 for 1987. The shift of the Lorenz curve is almost exactly the same as that of the curve based on GDP data.

⁸ Measured as GNP, which takes into account net factor income from abroad.

⁹ In Brazil, the Gini coefficient worsened in the period 1981-1983, from 0.565 to 0.584 in the lower limit and from 0.576 to 0.595 in the upper limit. In the Philippines, the Gini coefficients of 0.5294 and 0.4930 in the third and fourth quarters of 1980 deteriorated to 0.5370 and 0.5124 in the third and fourth quarters of 1983, respectively. See G. A. Cornia, R. Jolly and F. Stewart, *Adjustment with a Human Face*, vol. II, *Country Case Studies* (Oxford, Clarendon, 1988), pp. 38 and 201.

¹⁰ The trends in some countries to compress too much the pay of persons in positions of authority has undoubtedly had a negative impact on public sector performance in general. For example, many first-rate professionals in such instances have left the civil service. Underpaid supervisors have found it necessary in many cases to engage in questionable practices to make ends meet, thus eroding discipline in the work-place and the performance of staff.

¹¹ As calculated from sample table 5.2 of ILO, *World Labour Report 3* (Geneva, 1987), typists and office clerks were paid in the private sector 54 per cent, 45 per cent and 6 per cent more than their public-sector counterparts in Latin America, Africa and Asia, respectively.

¹² In Bolivia, as an extreme example, one parastatal enterprise reduced its staff from 30,000 workers in 1985 to 7,000 as of 1987, and another from 9,000 to 5,000 workers during the same period. See J. A. Morales and J. Sachs, "Bolivia's economic crisis", National Bureau of Economic Research Working Paper No. 2620 (Cambridge, Mass., June 1988), p. 35.

¹³ In Senegal, for example, 12 per cent of the retrenched workers of state enterprises found new work in the informal sector, while the rest took on transitional jobs of a semi-informal nature. See J. P. Lachaud, "Restructuration des entreprises publiques et ajustement sur le marché du travail au Sénégal: des possibilités à la mesure des espérances" (Geneva, Institut International d'Etudes Sociales, 1987).

¹⁴ A. de Januray, E. Sadoulet and L. Wilcox, "Rural labour in Latin America", World Employment Programme Research Working Paper WEP 10-6, WP 79 (1986).

¹⁵ See, for example, A. Marshall, "Non-standard employment practices in Latin America", International Institute for Labour Studies Discussion Paper No. 6 (Geneva, 1987); and J. Jatoba, "Urban poverty, labour markets and regional development: the case of Brazil", in *Trends in Urban Poverty and Labour Market Access*, G. Rodgers, ed. (Geneva, ILO, 1988).

¹⁶ M. Blejer and I. Guerrero, "Stabilization policies and income distribution in the Philippines", *Finance and Development* (Washington, D.C., December 1988), p. 8.

¹⁷ ILO, *Temporary Labour in Latin America* (Geneva, 1986).

¹⁸ A. de Januray, E. Sadoulet and L. Wilcox, *op. cit.*, p. 54.

¹⁹ V. Jamal and J. Weeks, "The vanishing rural-urban gap in sub-Saharan Africa", *International Labour Review*, vol. 123, No. 3 (1988).

²⁰ A. L. Demery and T. Addison, "Food insecurity and adjustment policies in sub-Saharan Africa: a review of the evidence", *Development Policy Review*, vol. 5, No. 2 (June 1987), p. 181.

²¹ World Bank, "Financing adjustment with growth in sub-Saharan Africa, 1986-90" (Washington, D.C., 1986), p. 19. Since 1986 economic conditions have improved in Ghana, in part due to the structural adjustment measures that have been adopted, but the positive effects of the economic

recovery reportedly have not been reflected in a significant way in improvements in human welfare. See G. A. Cornia, R. Jolly and F. Stewart, *op. cit.*, p. 113.

²² L. Demery and T. Addison, "The alleviation of poverty under structural adjustment" (Washington, D.C., World Bank, 1987), p. 12.

²³ FAO, *Commodity Review and Outlook, 1987-88* (Rome, 1988), p. 29.

²⁴ See *World Economic Survey 1986* (United Nations publication, Sales No. E.86.II.C.1).

²⁵ See, for example, J. Lecaillon and others, *Income Distribution and Economic Development* (Geneva, ILO, 1984), table 31; Philippines, National Census and Statistical Office, "Survey of family income and expenditures" (Manila, 1987); F. Gildiaz, "Some lessons from Mexico's tax reforms", in *The Theory of Taxation for Developing Countries*, D. Newbery and N. Stern, eds. (Oxford University Press, 1987), table 12-6; and F. Herschell, *Incidencia Fiscal y Distribución del Ingreso en Costa Rica* (San José, ECLAC and Ministry of Finance, 1977).

²⁶ See World Bank, *World Development Report 1988*..., p. 61.

²⁷ J. Humberto Petrel, *El Gasto Público Social y sus Efectos Distributivos: Un Exámen Comparativo de Cinco Países de América Latina*, Document Series ECIEL 7 (Rio de Janeiro, 1987), p. 66.

²⁸ J. Martinex, "Efectos sociales de la crisis económica: Chile, 1980-1985" (LC/R.519, October 1986).

²⁹ C. Ferrari, "Desarrollo social y pobreza en Peru; factores estructurales y efectos de la crisis externa: las políticas adoptadas para lograr el desarrollo económico y social" (LC/R.519, October 1986).

³⁰ "Safe as houses", *The Economist*, 12-18 November 1988, p. 78.

³¹ C. Valledo, "Racesión, crisis y ajuste en Colombia, 1980-1985: costos y perspectivas" (LC/R.561 (SEM. 35/15), January 1987), pp. 29 and 30.

Chapter V

NEW TECHNOLOGIES AND THEIR SOCIAL IMPACT

Advanced technologies have wrought substantial changes in economic and social life in the past two or three decades. In new equipment and processes, a computer or a microchip is often the core. Computers have become vital pieces of equipment not only in manufacturing, but also in management and other service industries, in addition to their use by people individually for purposes ranging from entertainment to research. While the introduction and dissemination of new technologies in developing countries have been fast in some cases but slow in others, in the more developed countries virtually all large-scale information flows have become computerized. The combined use of digital electronic switching equipment, optic-fibre cables, direct broadcasting satellites and, ultimately, integrated services digital networks has allowed the fusion of data, image, text and voice in a single broad-band communications system. The use of the computer and other new instruments and processes in diagnostic and therapeutic work has changed much of medical and surgical practice.

The development of new materials including new types of ceramics, plastics, composite materials and superconductors has affected engineering and design. Discoveries in the field of molecular and cell biology, particularly those involving the transfer of genes from one living organism to another, have laid the scientific basis for biotechnology. Enzyme technology and genetic engineering have expanded the potential range of biotechnological applications. Although large-scale commercial exploitation has barely begun, the purposeful alteration of living organisms to meet production requirements is likely to have major consequences for human health services, agriculture and the economy as a whole. Advances in harnessing new and renewable sources of energy have yet to make a distinct mark.

Recent advances in technology have obviously created new needs and demands and affected markets for goods and labour; they have enhanced productivity and intensified communication throughout the world. Yet the social changes that could be related to these advances seem so far relatively slight. In industrialized countries they are taking place within social structures with a long tradition of absorbing technological change. In countries where the process of industrialization has hardly begun, they might raise a certain threshold of transition, although this is not self-evident.

Institutional and cultural differences among societies influence the pace of development and dissemination of technology. Innovation in production processes or in the product mix in response to technological change have often become an issue for public policy. Science and technology policies have become part of both the socio-economic and political agenda in all countries. Technological change provides hope for solving crucial economic problems and enriching peo-

ple's lives, but Governments must try to anticipate and prevent adverse and possibly enduring effects of these changes. This chapter is devoted to a discussion of some of these changes and of the social responses to them.

A. MAIN ACTORS IN THE DEVELOPMENT AND USE OF NEW TECHNOLOGY

The widespread use of advanced technologies is confined to developed economies. The use of industrial robots may be taken as an example: in 1972, about 200 industrial robots were used in the United States of America but few outside it; in 1982, of the total 35,000 industrial robot population in the world, 18,000 were in Japan, 6,200 in the United States, 7,200 in Western Europe, 3,000 in the Union of Soviet Socialist Republics and 600 in Eastern Europe; of some 118,000 industrial robots estimated to be in existence in 1990, 70,000 units would be in Japan, 20,000 in the United States and 28,000 in Europe.¹ Only a few thousand would be in developing countries, which partly reflects the lower labour costs in those countries.

There are obviously vast differences between the expenditure on scientific research in developed and developing regions. Of the total of \$265 billion spent on research and development in the world in 1983, more than \$256 billion were spent in developed market economies and centrally planned economies of Eastern Europe (\$192 and \$64 billion, respectively).² From 1970 to 1983, the share of Japan increased from 7 per cent to 13 per cent, while the share of the United States dropped from 40 per cent to 33 per cent and the shares of the countries members of the European Economic Community (EEC) and the centrally planned economies of Eastern Europe remained stable. The share of the developing countries increased from 2.3 per cent to 3.1 per cent (see table 31).

Commercial success in using new technologies stems from differences in educational achievements and training, and differences in national policies. Intangible social and psychological factors have also been significant—a tradition of industriousness, for example. Even among developed countries, very few have been able to move rapidly and successfully on many technological fronts at once. The prevailing pattern has been a quest for specialized niches for particular goods in the world market. As the costs of research have escalated company managers and government planners have tried to reduce the risk or increase the rate of return by sharing the financing burden with partners and making use of licensing, joint research projects or other forms of technology transfer and sharing. Yet, major breakthroughs in advanced technology are often the result of the efforts of small

TABLE 31. DISTRIBUTION OF RESEARCH AND DEVELOPMENT EXPENDITURES
BY COUNTRY GROUP
(Percentage of world total)

Region/country	1970	1975	1980	1983
World	100.0	100.0	100.0	100.0
Developed market economies				
of which:	72.5	70.2	72.7	72.7
EEC	20.3	21.6	21.5	20.9
Japan	6.7	9.5	11.7	12.6
United States	39.9	33.3	33.7	33.4
European centrally planned economies of which:	25.2	27.1	24.4	24.2
USSR	19.4	20.9	17.6	18.0
Developing countries	2.3	2.7	2.9	3.1

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on OECD, *Selected Science and Technology Indicators: Recent Results, 1979-1986* (Paris, September 1986).

firms or individuals, which are made possible by the development and proliferation of personal computers.

The experience of the 1970s and 1980s has demonstrated that in the competitive environment of world markets, flexibility in technological policy pays off. The market shares of the flexibly adjusting countries with sound innovation policies have increased, as expected profits, anticipation of shifts in demand, and new knowledge generated by the scientific community and by experience have inspired new efforts in research and development and the design of novel products.³

In developed market economies innovations continue to be stimulated both by market forces and by government efforts such as funding for fundamental research and sponsoring of military-oriented research and development. One measure suggests that the total volume of innovations and their distribution among industries vary significantly among the developed market economies. By the mid-1980s domestic patent applications in per capita terms in Japan were three times as high as in other industrial countries.⁴ The "technological balance of payments", as measured by payments for the use of patents, licences, trademarks, designs, inventions, know-how and closely related technical services, was consistently positive in the 1980s for only the United Kingdom, the United States and Sweden,⁵ which benefited not only from their levels of technology but also from a proliferation of foreign subsidiaries of their transnational corporations, which paid royalties and fees for licences. Japan, which still had a negative technological balance of payments in 1985, has been able to reduce this deficit dramatically, owing to its rapidly growing receipts from abroad for its "disembodied" technology, as well as for the technology embodied in its physical exports.

The centrally planned economies of Eastern Europe and the Soviet Union were heavily engaged in research and development in the mid-1980s, devoting around 4 per cent of gross domestic product (GDP) to it in Czechoslovakia, the German Democratic Republic and the Soviet Union,⁶ more than 2 per cent in Bulgaria and Hungary and more than 1 per cent in Poland. The Soviet Union has been one of the leaders

in theoretical mechanics, high-energy physics, space exploration and biomedical science. Although scientific achievements have been high, there has been "an obvious lack of efficiency in using scientific achievements for economic needs".⁷ Economic reforms initiated in Bulgaria, Hungary, Poland and the Soviet Union have been directed towards significant acceleration of scientific and technical progress, as well as other socio-economic goals. The weakest link in technological development in this region has been insufficient assimilation by enterprises of new processes and products.

Among the developing countries, only a few have the physical and human resources to undertake significant industrial research on their own. However, a few of the largest developing countries, for example Brazil, China, India and Mexico, have been able to catch up in certain sectors of scientific research, and have a scientific and industrial infrastructure that is relatively advanced. Several of the newly industrializing economies, especially Hong Kong, the Republic of Korea, Singapore and Taiwan, Province of China, have assimilated micro-electronic-based technologies, applying them to new products and production processes. They export computers and communication equipment. Their striking commercial success vividly demonstrates the increasing heterogeneity of the developing countries.

The availability of communications and information technology in the developed countries has sometimes fundamentally changed the daily lives and expectations of their citizens. Radio receivers have reached virtually every village in developing countries. But for many of the inhabitants of rural villages in those countries, progress in communication and information technology has made little difference.

Governments and private enterprises, particularly in developed countries, are actively pursuing the spread of new information technologies. Large investments are being made in the expansion and improvement of telecommunication networks necessary for the "global information society", also called the "wired society". New investment in telecommunication networks in OECD member countries in 1985 amounted to \$49 billion, of which the United States accounted for 42 per cent and the European Economic Community (EEC) for 32 per cent. Revenues from telecommunications in OECD amounted to \$199 billion, with the United States accounting for 56 per cent, EEC for 23 per cent and Japan for 10 per cent.⁸ In the countries members of EEC, 6 per cent of GDP was accounted for by information technology industries in 1986, and 29 per cent of GDP was generated by industries that use high levels of information technology, such as telecommunications, office automation and consumer and military electronics. Some 5 million of the economically active population of countries members of EEC are engaged in the manufacturing of information technology products, and another 4 million jobs are based on the application of information technology.⁹

As the major agents of transborder information and communications flows are highly concentrated and most of them are corporations based in the United States and Japan, the fear of cultural domination is not limited to developing countries. Between 1973 and 1983, over one third of Western European television programming was imported, of which

44 per cent was from the United States, and United States programmes accounted for 10 per cent of total transmission time. By contrast, only 16 per cent of these imports originated from the United Kingdom and 5 per cent to 10 per cent from France and the Federal Republic of Germany. By 1982, Italy had become the world's largest importer of United States television programmes, as well as the world's largest importer of Japanese cartoons.¹⁰

The United States has become the world's principal source of data bases, particularly in terms of volume. It has been estimated that at the beginning of the 1980s there existed more than 55 million entries in bibliographic data bases, 80 per cent of which originated in the United States. The balance of trade in electronic information between the United States and Western Europe has been estimated at 10:1, to the former's advantage. Of the online data bases available in Western Europe, 75 per cent have their origin in the United States.¹¹ It has been observed that raw data predominantly flow from Europe to the United States while most of the data which flow from the United States to Europe are already analysed and interpreted. In the field of computers and related equipment, United States-based IBM holds about 55 per cent of the European market, though some of the products are produced by subsidiaries and affiliates in Western Europe.¹² There is concern in some European countries that the region may become "information-poor", dominated not only in the commercial sphere but also culturally, with respect to communications, data flows and data exchanges.¹³

However, the emergence of computerized data bases on a large scale is a very recent phenomenon. The use of such data bases is expanding vigorously everywhere: measured in time lags, European countries seem in some respects to be a few years behind North America, but in other respects, such as the French Minitel system, rather ahead of it.

For the types of communication technologies that are now ubiquitous in the developed countries—such as telephone, television and radio—great disparities related to income levels remain. In 1985, of about 400 million main telephone lines installed in the world, the OECD countries accounted for almost 80 per cent. More than 80 per cent of regular television transmitters and about 530 million, or 80 per cent, of more than 660 million television receivers were located in developed countries in 1985, as were more than 65 per cent of radio broadcasting transmitters and about 1.1 billion or almost 68 per cent of the world's 1.6 billion radio receivers. For each 1,000 inhabitants there were 447 television receivers and 911 radio receivers in the developed countries in 1985, as opposed to 36 and 142, respectively, in the developing countries.¹⁴

Radio and television have the capacity for bringing millions of people a rapid awareness of events outside their everyday experience. They require no printing or surface transportation and no literacy on the part of the audience. They can be used to upgrade the quality of school instruction, together with other audio-visual aids. They can be used to reach out-of-school children and adults in rural areas, especially by radio, to teach basic literacy, arithmetic, skills in health care, nutrition and agriculture. However, in many sparsely settled developing countries the costs of doing this are quite high.¹⁵

An issue of particular concern for developing countries is remote sensing of the world's surface by satellites, using passive microwave technology to obtain information about crop yields, and water and mineral resources. Computer analysis of this information—which can be purchased from satellite owners—permits advanced weather predictions, land-use planning, forest inventories, and monitoring of pollution and soil erosion. Many developing countries are prone to such natural disasters as cyclones, typhoons, tornadoes, tidal waves, floods, droughts and earthquakes. With the use of satellites, early indications of some of these disasters can now be obtained far enough ahead of the event to permit preventive measures to be taken, or at least better preparation of emergency responses.

On the other hand, satellite systems can collect data about a country's resources without that country knowing it. Information about oil deposits, crop yields, or mineral deposits is potentially valuable. Consequently, many developing countries view remote sensing of their territory without permission as a violation of their national sovereignty and an intrusion into their rights of resource management.

B. MEDICAL TECHNOLOGY AND RELATED ETHICAL ISSUES

Rapid advances in medical technology, including new equipment for diagnosis and curative procedures, transplants of a more complex nature, new types and applications of computer-designed drugs and other new materials have greatly expanded the capabilities of modern medicine. Discoveries in the field of genetics have permitted biotechnology firms to design micro-organisms for specific purposes and to augment the flow of complex biochemicals normally produced by the human body itself. The necessarily high technical standards of biotechnology, both in quality control and in organization of production, tend to restrict it to countries with well-developed scientific resources, especially for commercial use of recombinant deoxyribonucleic acid (DNA) techniques. However, the more widespread application of this research will eventually have a major impact on health and medical services in all countries.

Technological advances that have a bearing on human reproduction have given rise to much debate in both developed and developing countries, in part reflecting conflicts between religious and secular ethical frameworks.¹⁶ The central effect of these advances has been to broaden the range of choice in human reproduction. Yet such decisions have often a major psychological and social dimension. Artificial insemination, *in vitro* fertilization, genetic screening and other prenatal diagnoses, and advances in techniques of abortion, contraception and sterilization have all opened opportunities for individual and social choice which did not exist a generation earlier. Research into contraceptive methods has widened choices available to family planners. The long-acting injectable contraceptives which have been available for some time are the precursors of such other new methods as Norplant implants and biodegradable implants.

In many developed countries, human procreative choice has been considered in the context of a traditional emphasis on human rights. In a number of those countries, a general weakening of cultural constraints on sexual matters, reflect-

ing the emergence of new technologies and changes in peoples' attitudes and beliefs, has expanded the scope of individual reproductive rights. The advances have helped developing countries in the implementation of their more comprehensive population policies. The critics of these new techniques charge that they have commercialized human reproduction and put women's reproductive capacities "under a rigid and constant quality control".¹⁷

One of the most persistent issues in reproductive choice has been sterilization. Irreversible contraceptive methods provoke the most intense reactions, especially sterilization when it is conducted without the informed consent of the subject. Reversible sterilization has been emerging as a technical possibility (although still remote) that is less feared than the traditional permanent surgical techniques. Although most of the research has sought reversible methods for women, some efforts also are being made to make male sterilization simpler and reversible.

Other biomedical discoveries such as artificial insemination and *in vitro* fertilization have led to dramatic new ways of intervening in human reproductive processes. It has been estimated that artificial insemination is being used in ten thousand to twenty thousand conceptions annually in the United States,¹⁸ often in conjunction with other new biomedical technologies, such as cryopreservation or sperm banking. Since *in vitro* fertilization was first used successfully more than a decade ago, the numbers of successful implants and of children born have increased greatly. Together, artificial insemination and *in vitro* fertilization provide opportunities for people who cannot conceive a child to have one. However, at present chances are small that *in vitro* fertilization can be cheap enough or reliable enough to be an option for most people. These methods also impose new social problems, which cannot easily be addressed within traditional ethical and legal frameworks. The use of a surrogate mother, for example, has proved to be morally and legally controversial, with conflicting interests among the genetic mother and father and the surrogate mother and her husband, in addition to other children in either family, other relatives and the community at large.

Amniocentesis, in which a sample of fluid is drawn from the amniotic sac surrounding the fetus and cells in the fluid are examined for any genetic malformations or diseases, permits the detection of all chromosomal abnormalities in the fetus, as well as serious metabolic disorders and fetal neural tube defects. Other prenatal diagnostic tests include ultrasound scanning, fetoscopy and fluorescent staining.¹⁹ The findings based on these tests may indicate a need for fetal surgery, another recently developed technique. A by-product of these tests is information about the sex of the fetus. The information could be put to controversial uses, for example, aborting a fetus simply because it was not of the desired sex in societies where there still exists some bias in favour of male offspring.

Advances in computer technology have eased the lives of individuals with various types of disabilities, expanding their employment opportunities as well as social contacts. For example, wheelchairs controlled by microprocessors make the physically handicapped more mobile; the personal computer, coupled with a specially designed telephone, per-

mits communication between the deaf and people who can hear, through regular telephone lines or electronic mail services; the visually impaired, using new equipment, can hear a verbal text that would normally be displayed on a screen.²⁰

Advanced devices using ultrasound, radiation, lasers and magnetic fields have increased the effectiveness of preventive care, early diagnosis and subsequent uses. CAT (computer-axial tomography) scanners, for example, provide composite images with much sharper detail than conventional x-rays. The emergence of computerized (medical) expert systems helps doctors to make better diagnoses, based on a comprehensive list of symptoms, syndromes and diseases.

Advances in genetic research, especially the splitting and recombining of DNA molecules, have greatly increased the possible uses of biotechnology for human health. The full scope of these possibilities, and their social consequences, are still unknown, though a number of ethical issues have already emerged. The availability of detailed information on human genetic structure and related health risks creates new possibilities for prevention and cure of disease. Genetic screening has provided better insight into a considerable number of diseases and congenital malformations that have afflicted individuals since the origin of the species, as well as some that have appeared relatively recently. Research indicates that such screening may eventually uncover the causes of most debilitating diseases and disorders.²¹

Genetic engineering and other sophisticated techniques make it possible to design biological products with specific desired features, such as industrial enzymes which last longer, more effective versions of old drugs, and new drugs and vaccines for diseases for which at present there is little in the way of a remedy or no remedy at all. Since the first genetically engineered drug was marketed in 1982, biotechnology applications in pharmacology have grown rapidly. The first bio-drugs were limited to proteins that could be cloned inside bacteria. More recent technology, using animal cells, permits the production of larger proteins with wider applications. Drugs produced with this advanced technology include various hormones, blood proteins and monoclonal antibodies. Prior to the development of the recombinant DNA process human insulin was in short supply, dependent on the availability of supplies derived from animals. Another example is the human growth hormone, which previously was available only from human pituitary glands collected after death, in quantities insufficient to meet the demand. The isolation of the genetic codes for human insulin and the growth hormone, along with the use of certain single-cell bacteria, has permitted rapid production of these hormones, making their supply potentially unlimited, at reduced cost. The increased availability of the human growth hormone will reduce the problems faced by children who do not grow at a normal rate, but may lead to risk-taking on the part of adults and older children who seek to become superior athletes by using it along with steroids to augment the natural growth of their muscles.

Mass production of monoclonal antibodies through biotechnological means has greatly increased the feasibility of using them in diagnostic tests. These antibodies, which are natural weapons for defending the body against viruses and

bacteria, permit the purification of other human proteins and quicker, more precise blood typing. In cancer research, "they are exceedingly useful and will soon be indispensable in cancer diagnosis".²² Of about 200 types of monoclonal-antibody testing kits available, a significant portion now is accounted for by tests for acquired immunodeficiency syndrome (AIDS).

New types of medical equipment have led to new types of operations on the brain, eye and other vital organs, which were not possible 10 or 15 years ago.²³ New types of polymers and other products of organic chemistry have speeded the development and use of new types of artificial limbs, hearts and blood vessels. The wider use of organ and tissue transplants has increased the sophistication of surgical techniques, but has also raised some difficult ethical choices regarding the availability of potential donors and who among the receivers should have priority.

Genetic screening and other new forms of diagnostic testing, for AIDS, for example, also raise several issues of individual and social rights: the potential conflict between an individual's right to make decisions concerning his or her own health, versus society's right to prevent the spread of disease. Perhaps the most vexed question is the priority to be given to the development and use of these techniques in relation to other uses of resources in medicine and public health.

Few countries have been able to make regular use of sophisticated medical equipment and related treatment on a national scale, and in these few it remains concentrated in the larger cities and some towns that have major medical schools. As the costs of new medical equipment have increased, the technical feasibility of such equipment has not necessarily led to its rapid installation and use. The case of special equipment for people with handicaps is particularly vivid. For instance, it has been estimated that only 10 per cent of the seriously handicapped people in the United States can afford a computer specially designed for their disability. The cost of a special braille printer, for example, is around \$10,000.²⁴ Expensive procedures such as kidney dialysis are rationed out by committees of physicians and other hospital personnel, based partly on the age and general health of potential patients, as well as on their ability to pay.

In most developed countries, spending on health and medical services has increased substantially in the past two decades. The aging of the population and the development of new medical technology as well as higher remuneration to medical personnel have raised expenditure faster than in most other fields. To restrain spending, some Governments have drawn up a limited list of drugs eligible for reimbursement, as in the Federal Republic of Germany, where drug bills absorb 15 per cent of health-care spending, or twice as much as in most other OECD countries. Steps to reduce pharmaceutical prices have also been taken in France. In a number of OECD countries, wider use of generic drugs, which are less expensive than brand-name drugs, has been encouraged.²⁵

Yet, with the possibility of prolonging life through a variety of techniques, health expenditures continue to rise at a faster pace than national incomes.²⁶ This creates difficult choices for Governments, employers and families, particu-

larly at a time when budget constraints of Governments are a feature in many economies.

Genetic manipulation has led to more efficient vaccines for the immunization of children against several diseases. Widespread immunization against measles, tetanus, whooping cough, poliomyelitis, diphtheria and tuberculosis, which now take the lives of 3 1/2 million children each year and cripple hundreds of thousands more, remains a priority in the developing countries. Future developments in biotechnology may offer protection against 10 to 15 different diseases at once. It is expected that vaccines against herpes, leprosy and malaria and cheaper vaccines against hepatitis B will be developed in the near future making use of the new technology. Vaccines now being tested in laboratories may provide improved formulations against cholera, typhoid, Japanese encephalitis and yellow fever.

Research on and production of vaccines continue to take place mainly in developed countries. Some developing countries, however, are also involved in vaccine development and delivery. In many developing countries wider immunization of children does not require further technological breakthroughs, but rather greater use of simple, reliable devices that already exist. In the tropics, for example, vaccination has been greatly facilitated by the development of an insulated box which can largely replace standard refrigeration facilities.

Another technique that has proved highly beneficial for child survival is oral rehydration therapy (ORT), which can restore the body's critical fluid balance in cases of severe diarrhoea. It is estimated that in the developing regions, between one fourth and one third of deaths of children under the age of 5 have been attributed to this cause. Diarrhoeal diseases have been identified as the leading cause of infant and child death as well as being the most frequent type of childhood illness and a major contributor to childhood malnutrition. Most of the ingredients of the oral rehydration solution (table salt, sugar, baking soda, potassium salt and water) are inexpensive and available in the home. This simple but effective technique can be used in areas not serviced by hospitals or clinics, where the majority of children in the developing world live. Accumulated evidence appears to indicate that ORT is the most significant medical advance for child survival since the development of vaccines.²⁷

C. NEW COMMUNICATION TECHNOLOGIES AND EDUCATION

The introduction of computer science and computer-aided instruction into schools and universities, along with the increasing variety of video and audio equipment and programmes, provides many new opportunities in education; yet these devices are changing the socialization process during school years in unknown ways. Indeed, there is increasingly widespread use of computers for instruction and school administration. The use of these technologies in education has been facilitated by a widely shared perception that the computerization of every society is inevitable, sooner or later. The realization that computer literacy increases employment opportunities has become a stimulus for continuing emphasis on computer education in a large number of

countries; in others, the focus has broadened to deal with the role played by computers in society at large.

The introduction of microcomputers (commonly called personal computers) at all levels, from primary school to university, has become an immediate goal in a growing number of countries. Nation-wide computer-literacy policies have been adopted in France, Italy, Japan, the Soviet Union and the United Kingdom. In the United States, almost all secondary schools and five sixths of elementary schools had begun to use computers in their instructional programmes by the mid-1980s, and 90 per cent of school-age children attended schools that had at least one computer.²⁸ Argentina, Brazil and Cuba have formulated comprehensive national policies to integrate informatics in education; Mexico and Venezuela also have plans for informatics and education. Morocco has introduced microcomputers into its education system, and India has begun to train students and teachers in computer education.

The development of less expensive microcomputers has permitted the widespread individual use of computers. The increasing convenience and power of microcomputers, in terms of speed and storage space, can provide quick access to instructional material stored on portable devices such as disks or diskettes. Technological improvements have also been made in the "peripheral" hardware of computers, in particular the output devices that communicate between the computer and the student. Typewriter terminals, not long ago the predominant output device, have been supplemented by video displays, influencing the style and to some extent the content of educational programmes.

Some educational computer programmes are "tutorial"; others are designed to assess specific areas of knowledge or skill. Simulation programmes, including model-building, enable students to experience, interact with, or predict a simulated environment. But the effectiveness of these programmes has varied considerably.²⁹ Many schools, even those with adequate quantities of computers and software, have not fully achieved the potential of computerized education to overcome the boredom of routine classwork. This could be partly explained by a relative lack of high quality educational software. In an evaluation of such software in the United States, almost 50 per cent of the science instruction software used in secondary schools was rated inferior or unsatisfactory in its pedagogical, technical or interactive characteristics. Over 90 per cent of educational software in the world consists of rather simple programmes—mainly for drills and other types of routine practice.³⁰ If more software for simulations and so-called expert systems were produced, an improvement could be expected in student interest and consequent learning. Computer-assisted instruction has already proved to be effective for repetition or consolidation in the United Kingdom and the United States. These remedial programmes are of particular help for students who have fallen behind in their studies; computerized instruction can help to "embrace" them and thus retain them in the school system.

Projects have been undertaken in both developed and developing countries to increase the number and variety of students receiving computer-assisted instruction. In Brazil, for example, the Centre of Informatics for Special Education,

which is funded by private and government groups interested in education and the development of computer technology, has created special computer programmes for children with hearing impairment, mental retardation, and other handicaps, and has developed related educational methodologies suitable for these children. According to an appraisal by the teachers who participated in this project, the use of computers expanded the availability of special teaching aids and provided valuable assistance in teaching mathematics. The use of computer graphics facilitated the teaching of vocabulary, set theory, series and associations, and mapping, and has provided perceptual visual exercises for training in depth perception, visual discrimination and spatial relations.³¹

Several pilot projects related to computer use in education in developing countries have demonstrated both benefits and difficulties. The latter include lack of qualified human resources, and inadequate adaptation of software to the country's cultural environment. In India, where an estimated 2,000 computers have been introduced in about 1,000 schools, efforts are being made to introduce computer-based instruction into the curricula, and to make it relevant and cost-effective; it is still being debated, however, whether use of computers will improve a child's cognitive development and his or her performance in a given assessment system; it is not clear whether use of computers will be a partial substitute for teachers, or what needs for curriculum development for different levels of the country's school system could be met by information technology.³²

More effective use of the computer in the educational process generally has been linked with better teacher training. Teacher training has been a key item in national plans for computer education, usually involving problems of organization, support and evaluation. In Japan, the idea of in-service training of teachers in the schools in which they work is accepted, and local institutes are used for this purpose. Some Japanese teachers are sent to universities or research institutes for a year or more for intensive training; moreover, computer technology and information science have recently been introduced into the curriculum at public and private universities for prospective teachers in elementary, secondary and academic upper-secondary schools (pre-service training). France has adopted two types of teacher training—training of users (known as "light" training) and training of trainers (known as "heavy" training). In the latter case, after a year of practical training, the trainers spend half their time teaching and the other half training their colleagues. Training for users, which has been provided to a much larger circle of teachers, is intended to impart some notion of computer science, to explain how to use the hardware, to describe the software available and to encourage its use.³³

In developing countries the gradual introduction of microcomputers has led to an increase in the demand for personnel who can work with computers in schools. In-service courses prevail; typically they are rather short, and rely heavily on the help of invited university lecturers. Even in Brazil, which has been one of the pioneers in the developing world in adopting a national policy on informatics and whose producers are supplying a growing share of its home market for

computer hardware, there have been difficulties in the introduction of computers in teacher-training courses, despite their prior introduction in high schools.³⁴

D. NEW MATERIALS

Technological advances have made possible the discovery and commercial use of a variety of new materials and have reduced the production costs of many conventional materials. At the same time, there is a constant search for new uses for both old materials and new. Although new materials have been developed in the past, particularly over the past 30 years, the rates of discovery and application have accelerated in the 1980s because of the increasing use of computers and other sophisticated scientific equipment. Molecular engineering makes it possible to create new materials with specific properties. Ease of processing some of the new materials has facilitated their use in industry, but some products and processes have been redesigned to accommodate them. A wider range of expertise is required, as designers, engineers and assembly-line workers must work with materials scientists at various stages to ensure product reliability at minimum cost. The short-term impact of these developments on social conditions or on the organization of society appears to be negligible. The effects are felt gradually through changes in economic welfare—less expensive or more durable goods or the introduction of new products. In addition, the use of new materials requires higher levels of knowledge and training for the labour force involved in using them.

Among the important groups of new materials are metals and alloys with superior strength and resistance to corrosion, and structural ceramics with superior resistance to heat, wear or corrosion, which make them potentially important substitutes for metals. So-called engineering polymers are a new generation of polymeric plastic materials with exceptional strength and heat resistance. Advanced composite materials such as metal matrix, ceramic matrix and polymer matrix composites may have widespread applications in automotive and aircraft engineering.³⁵ Some of the composite materials are potential substitutes for steel or some non-ferrous metals. Carbon fibres encased in plastic could replace many metals.³⁶

Advanced ceramics fabrication, single crystal growth and chemical vapour deposition are used in the production of many electronic, optical and magnetic devices. Although some superconducting electronic devices, which lose all resistance to electricity below certain temperatures, have existed for a quarter of a century, recent discoveries of new types of superconducting materials may eventually revolutionize electronics, power transmission and transportation.

New manufacturing processes interact with the search for new materials. For example, precision casting and power metallurgical processing can avoid the time-consuming, material-wasting conventional shaping of parts and components. "Superplastic" forming and diffusion bonding can reduce several operations into a single process. Computer-aided manufacture (CAM), particularly when combined with robotics, requires materials with special properties. Protective coating technology has already reached advanced

stages in preventing corrosion and other harmful effects, and is expected to further improve surface treatment processes.³⁷

The emergence of new materials has been an important cause of the slack demand for a number of raw materials in world markets. Another important cause, based on new technologies, is the decline in material intensity of many products and production processes. Reduction in the intensity of use of metals as well as growing substitution by new materials partly explain the fact that consumption of metals did not increase during the period 1979-1986, despite a 13 per cent increase in manufacturing production in industrialized countries.³⁸

E. BIOTECHNOLOGY, AGRICULTURE AND RURAL DEVELOPMENT

Production of high-yielding crops based on expanded use of irrigation and improved fertilizers, pesticides and herbicides—the so-called "Green Revolution"—has been extremely beneficial in increasing supplies of food and other crops. It has considerably changed food availability in many countries, particularly in the 1980s in the Asian subcontinent and China. Biotechnology promises to transform agriculture and society at large even more dramatically. Although few biotechnological products have yet been brought to market, the anticipated benefits include improvement of specific characteristics of plants, livestock and fisheries. At the same time, concerns are being voiced about the ecological and ethical implications of agricultural biotechnology, including unpredictable effects of altered life forms.

The basis of agricultural biotechnology is genetic engineering, which involves manipulation of the genetic make-up of agriculturally important organisms by insertion of genetic material from one organism into the genetic code of another. Recombinant DNA technology can be used to produce monoclonal antibodies, which can also be used in veterinary diagnosis, and monoclonal therapeutics may be developed for certain animal diseases.

The use of recombinant DNA techniques may improve the quality of animal products through reduction or elimination of steroids, antibiotics and other additives widely used in commercial animal feeds. In certain cases, recombinant DNA vaccines can provide more effective treatment than conventional ones, since viruses have several distinct immunological forms and there have been examples of residual virulence. Plant-cell biotechnology is aimed at the development of high-yielding varieties and increased resistance to disease or pests. These characteristics, as well as improvement of the nutrient efficiency of food products, can be speeded up by using tissue culture and genetic manipulation to obtain new hybrid varieties. This may avoid many years of painstaking efforts in conventional breeding and selection. Moving specific genes from one species to another may enhance the resistance of crops to chemicals, diseases, cold temperatures and frost damage. Genetic manipulation of micro-organisms can produce safer, more effective insecticides and pesticides to control various plant diseases. Genetically engineered seeds may supply the needs of farmers according to their income and type of farming.

The use of new technology has rarely been socially neutral. By increasing genetic diversity in order to develop crops better suited to particular climates and soils, biotechnology may extend commercial agriculture to regions now used only for small-scale subsistence production, or none at all. In the end, rural societies may change considerably: new processes require the acquisition of skills and yields and real income may rise substantially.

The private undertaking of most biotechnological research contrasts with the research underlying the Green Revolution, which was spearheaded by public or quasi-public organizations under the auspices of the Consultative Group on International Agricultural Research. Although private agrochemical corporations benefited from increased sales of their products owing to the Green Revolution, they did not shape the research priorities or take responsibility for technology transfer. Now, however, private corporations might intend to shape the bio-revolution solely to their own needs and objectives.³⁹ Large and small companies in industrial countries have been actively pursuing research and development to use biotechnology in the development and manufacture of new agricultural products.

Biotechnological research is also done in universities and other research institutes, often supported with public funds. In the United States, where by far the largest number of biotechnological companies are based, much of the research is done by the private sector on its own and in joint efforts with universities, private research institutes and government agencies. The Government of the United States supports research and training in biotechnology in universities and finances government research institutes that license their discoveries to industry for commercial exploitation; it also provides tax incentives for private investment.⁴⁰ In the United Kingdom, the Department of Trade and Industry has announced major collaboration between private industry and government research institutions for genetic engineering of plants.⁴¹ In the Soviet Union, national research institutes have developed widely applicable techniques for the selection and establishment of cell-lines, the indexing of virus-free plants and the speeding up of other plant-breeding processes.⁴²

Among the developing countries, China has established research facilities dealing with agrobiological genetics, and India has committed itself to developing large-scale programmes for creating a biotechnology industry. Both countries, through joint ventures, have begun to seek working relationships with biotechnological firms in the developed market economy countries.⁴³ Biotechnology programmes have also been launched in Argentina, Brazil, Cuba, Mongolia, the Philippines, the Republic of Korea and Thailand.

F. EMPLOYMENT AND THE INTERNATIONAL DIVISION OF LABOUR

In developed countries, information technology has become one of the most important factors in continued development by increasing labour productivity, improving management efficiency and expanding GDP. It broadens the possibilities for locating production facilities far from their management headquarters and for increasing the geographical diversity of industry. It may make traditional industries

such as the steel, automobile, textile and garment industries capable of survival in countries where the labour costs are high. The interconnection of computers and the use of facsimile machines has increased the possibility of working at home, while maintaining instantaneous interaction with decision centres. Offices are gradually being reshaped and work at home might even lead in the long run to major changes in the urbanization process.

Advances in computer science, particularly in computer graphics, and reduced prices have enabled even small firms to use computer-aided design (CAD), enhancing creativity and profits in a wider variety of industries, such as footwear, clothing, lighting and telephones. The increased affordability of computerized data storage now allows wide access to libraries of CAD models that can be used directly or modified for particular design needs. In the combined CAD/CAM system, communication among computers allows the data assembled and used by the designer to be used directly for numerical control of machine tools that will form the desired product.⁴⁴

Flexible manufacturing systems (FMS), based on adaptive robot systems, constitute integrated manufacturing systems that have fail-safe procedures and alternative courses of action to ensure production continuity.⁴⁵ Despite these developments in automated production, which are based on increasingly sophisticated, reprogrammable software, there are as yet few fully automated factories in the world. While the technical problems of co-ordinating their complex interactions have not been fully solved, the broad thrust of industrial innovation in the industrialized countries has shifted towards the creation of fully automated manufacturing processes, integrated with design and managerial control.

As with all new labour-saving technology, there is much apprehension about the impact of computer-based technology on the structure and level of employment. That the adoption of the new technology will change the structure of employment seems not in doubt. Computers and robots will increasingly take over the more monotonous, repetitive and hazardous tasks in the work place. The services of unskilled workers and those whose skills are mainly manual will not be as highly demanded as earlier. There is the danger that displaced unskilled workers will become increasingly marginalized from economic and social life.

It has been estimated that the 45 million people in the United States who work in extractive or manufacturing industries, and in the parts of the service sector not tied to information technology will either have to be retrained or will face unemployment between now and the year 2000.⁴⁶ A further estimate is that in the United States, the pattern of output in 1985 in manufacturing, health and education, for example, could be produced in the year 2000 with 20 million fewer workers (a reduction of 11.7 per cent) than in 1985. At the same time, there will be a growing demand for workers with skills in the production and maintenance of new equipment, the creation of programs for computers and the myriad of associated tasks. As manual workers in industry and white collar workers comprise over 50 per cent of the labour force in developed countries, structural change can be expected to be massive.

The social costs of these changes are likely to be high. Workers who earn high wages in blue collar factory jobs will

require to be retrained, relocated, accept lower wages or remain long unemployed. The concern with the education and training of new entrants to the labour force in developed countries and their systems of education is partly predicated on perceived changes in the skill mix of employees in an economy with these new technologies.

What happens to total employment and therefore the level of involuntary unemployment will depend very much on the expansion of total output including leisure. Findings from a study of some 3,000 technical changes in six industries in the Federal Republic of Germany in the 1970s are instructive. Over half the changes involved new materials and production processes, and led to a 0.34 per cent increase in total employment in these industries. Twenty-three per cent involved various types of mechanization and cost-reducing rationalization, which reduced total employment by 0.26 per cent, less than the increase from innovation. Both effects, however, were smaller than the net effects from other sources of expansion (1.22 per cent) and contraction (minus 0.27 per cent).⁴⁷ Small and medium-sized firms in many industries were adept at using new technology to create new products and employment in the information industry (especially computers, peripheral equipment and software) and even in traditional, low-technology industry such as toy making. It has been estimated that were aggregate output to grow at 2 per cent per annum up to 1990 and at 0.8 per cent per annum between 1990 and 2000 in the United States of America, there would be full employment with the introduction of the new technology envisaged.⁴⁶ If recent experience is any guide, unemployment rates have fallen and remained lower in Japan and the United States, the two countries members of OECD which have introduced new technology the most rapidly.

The increasing use of information technology in developed countries may lead to a new international division of labour, as traditional production processes using cheap labour lose their advantage to new processes using computer technology, office automation and other innovations and as new capacities permitting a rapid response to changes in tastes and fashions increase productivity in high-wage countries to competitive levels. The application of advanced information technology will displace unskilled and semi-skilled labour in many industries and require a higher level of skills to operate and manage the new technology. These changes can reduce or even reverse the comparative advantage of the developing countries in producing simple manufactures. There will be less incentive for firms to locate their industrial operations in developing countries, and there may be a substantial "trade reversal", with the relocation of some industries now in developing countries back to the industrialized countries. On the other hand, to the extent that the new forms of global communication are cost effective, transnational firms may be able to introduce some of the new information-based processes in developing countries that have at least moderately skilled labour supplies, thus retaining the advantage of lower wages than in the developed countries. In the service sector there have been cases of firms shifting some work associated with computerized information, such as keyboard entry of data, using typing skills, from the United States to Ireland (credit card data) and the Dominican Republic (airline data).

G. CONCLUSIONS

Rapid advances in technology during the past two or three decades, while distinctly enlarging production frontiers and broadening choice, have raised several questions of major importance in economic and social policy. Innovations in technology tend to make existing technology obsolete and call for new investment and new skills. In developing countries, the absorption of new technologies has been varied. In some countries, advanced technology has permeated a wide array of activities while in other countries it remains confined to a few activities, usually concentrated in large urban centres. The latter countries are generally those in which even the absorption of less advanced technology is still lagging. In the more affluent societies, concern about the smooth absorption of advanced technology has been at the forefront of public discussions. Efforts towards improvements in the education system or educational reforms in recent decades to a large extent emerge from the perceived need to change the content and methods of instruction to take full advantage of new technologies. As in the past, government policy and producer responses to the demand for new skills, new equipment and new institutional forms will largely determine the pace of technological progress among countries. Yet individual and social attitudes with respect to changes in the product mix, organization of work and production processes will continue to influence that pace.

New developments in communications have enormously increased the flow of information inside countries and among countries. This has facilitated the mobility of capital and labour, but has posed new problems for countries that can hardly afford capital exports or the loss of professional or skilled workers. Persistent fears of cultural dominance have also taken on a new dimension. In some cases, the perception is that an overwhelming uni-directional flow of information would lead to cultural domination and gradual loss of identity; at a global level, the perceived threat is the submergence of valuable elements in the diversity of cultures among nations.

The new technology, which is, in general, labour saving and skill intensive, will demand change in the structure of the labour force and in conditions in the work place and faster growth in total output to maintain high levels of employment in the economy. It will also require enhanced efforts to prevent the increasing dualism between the educated and the unskilled, the effect of which is carried over into the international situation, where countries with a low level of education are doomed to be marginalized until skill levels are substantially improved. Because the introduction of new technology raises productivity, the labour force will gain longer periods of leisure time, the fruitful use of which will pose new challenges to the economy and society.

Innovations in biotechnology and medical equipment further complicate the choices before policy makers, especially in developing countries, where much morbidity and mortality can be avoided by reallocating resources to alternative uses with existing knowledge and techniques. In the developed economies, rising costs of medical care using the new equipment has put further pressure on the need to allocate further resources to that sector. Advances permitting further intervention in human reproduction processes, while widen-

ing choices available to women and to couples without children, have raised legal and ethical problems regarding parents and the rights of unborn children. In education, the major questions relate to finding the resources to take full advantage of the new technology, and the quality of the instruction that can be provided with the new equipment. Finding answers to these questions and solutions to these problems is a process in which societies have only begun to take the first measured steps.

NOTES

¹ E. Filemon, "Robots: their present-day use and prospects for the future", *Impact of Science on Society*, No. 146 (vol. 37, No. 2) (UNESCO and Taylor and Francis Ltd., 1987), p. 155.

² See *Trade and Development Report, 1987* (United Nations publication, Sales No. E.87.II.D.7), chap. I, sect. A.

³ P. J. J. Welfens, "Growth, innovation and international competitiveness", *Interconomics* (Hamburg), July/August 1987, p. 173.

⁴ *Trade and Development Report, 1987* ..., annex 7, table 5.

⁵ See OECD, *Main Science and Technology Indicators, 1981-1987* (Paris, 1988), pp. 6 and 34.

⁶ See *UNESCO Statistical Digest 1987* (Paris, 1987), pp. 263, 265, 279, 297 and 331.

⁷ M. S. Gorbachev, *Perestroika: New Thinking for Our Country and the World* (New York, Harper and Row, 1987), p. 21.

⁸ Dimitri Ypsilanti and Robin Mansell, "Reforming telecommunications policy in OECD countries", *The OECD Observer*, No. 148 (October/November 1987), p. 19.

⁹ Douglas Webber, Martin Rhodes, J. J. Richardson and Jeremy Moon, "Information technology and economic recovery in Western Europe", *Policy Sciences*, vol. 19, No. 3 (October 1986), p. 319.

¹⁰ Kenneth Dyson, "West European States and the communications revolution", *West European Politics*, vol. 9, No. 4 (October 1986), p. 22.

¹¹ *Ibid.*, p. 20.

¹² Klaus W. Greulich, "Les flux transfrontières de données—Plaidoyer pour un effort de connaissance et de coopération", *Revue économique et sociale*, vol. 41, No. 1 (Février 1983), p. 22.

¹³ The Minister of Industry of the Government of France has observed that "the international equilibrium in the area of information technology should not only be open but also pluralistic. Given that the information contained in transborder data flows constitutes a powerful factor of integration at a global scale, one has to pay particular attention to all the possible influences which may be able to destabilize the system. We have to particularly guard ourselves against the risk of monolithic use of information techniques and communications. Rather they should be used to enhance exchanges between people and not to make these exchanges the monopoly of one single people"; quoted in K. Greulich, *loc. cit.*

¹⁴ UNESCO, *Statistical Yearbook, 1987* (Paris, 1987), tables 6.8-6.11.

¹⁵ For example, in Africa, the average radio station broadcasts its signals over an area of 100,000 square miles; in the Sudan, there is an average of one station per million square miles. This compares with an area of 1,600 square miles for a typical transmitter in the United States. See William J. Stover, *Information Technology in the Third World: Can I.T. Lead to Humane National Development?* (Boulder, Colorado, Westview Press, 1984), p. 86.

¹⁶ R. Blank, "Human sterilization: emerging technologies and re-emerging social issues", *Science, Technology and Human Values*, vol. 9, issue 3 (New York, Summer 1984), p. 11.

¹⁷ M. Meis, "Sexist and racist implications of new reproductive technologies", *Alternative XII* (1987), p. 333.

¹⁸ A. L. Hiskes and R. P. Hiskes, *Science, Technology and Policy Decisions* (Boulder, Colorado, and London, Westview Press, 1984), p. 147.

¹⁹ *Ibid.*, p. 148.

²⁰ S. Kerr, "For people with handicaps, computers = independence", *Datamation*, 1 May 1988, pp. 39-40.

²¹ A. L. Hiskes and R. P. Hiskes, *op. cit.*, p. 146.

²² Deutsches Krebsforschungszentrum, *Current Cancer Research, 1986* (New York, Springer, 1986), p. 144.

²³ For example, according to the American Council on Transplantation, there were 1,182 liver transplants, 1,659 bone marrow transplants, 129 pancreas transplants and 43 heart/lung transplants in the United States in 1987 (*The Washington Post—National Weekly Edition*, 16-22 January 1989).

²⁴ Kerr, *loc. cit.*

²⁵ "Europeans seek the right treatment", *The Economist*, 16 July 1988, pp. 19-22.

²⁶ In the United States, for example, the medical consumer price index outstripped the rest of consumer prices by almost 100 per cent in the past 10 years. Health expenditures in 1987 were above \$500 billion. In the 1980s, the cost to employers for employee medical care has increased by more than 10 per cent a year, well above increases in overall sales or other costs (*The Washington Post—National Weekly Edition*, 16-22 January 1989).

²⁷ K. Galway, B. Wolff, R. Sturgis, *Child Survival: Risks and the Road to Health* (Columbia, Maryland, Institute for Resource Development/Westinghouse, March 1987), pp. 109-110.

²⁸ *Instructional Uses of School Computers*, reports from the 1985 National Survey, issue 1 (Baltimore, Maryland, The Johns Hopkins University Press, June 1986), p. 1.

²⁹ J. Friend, "Classroom uses of the computer: a retrospective view", *Prospects*, vol. XVII, No. 3 (63) (Paris, UNESCO, 1987), pp. 372-374.

³⁰ R. Lauterbach and K. Frey, "Educational software: review and outlook", *Prospects* ..., p. 392.

³¹ A. M. G. Inchaustegui, "Experiences in the introduction of computers in the education of hearing-impaired children", in *Microcomputer Applications in Education and Training for Developing Countries* (Boulder, Colorado, and London, Westview Press, 1987), pp. 237-238.

³² *Public response to introduction of new technologies in India*, a report on information technology: current problems and future strategy (New Delhi, National Institute of Science, Technology and Development Studies, 1987), p. 26.

³³ See H. Nishinosono, "Informatics in general education: the Japanese plan", and H. Dieuzeide, "Computers and education: the French experience", *Prospects*, vol. XVII, No. 4 (64) (Paris, UNESCO, 1987).

³⁴ S. P. P. Marinho, "The use of microcomputers in the training of science teachers", in *Microcomputer Applications* ..., pp. 100-102.

³⁵ C. A. Sorrel, "Bureau of Mines activities in advanced materials", *Minerals and Materials*, October/November 1987 (Bureau of Mines, United States Department of the Interior), p. 13.

³⁶ G. F. Ray, "Innovations in materials", in *Technology and Human Prospect*, Roy MacLeod, ed. (Wolfeboro, New Hampshire, Frances Pinter, 1986), p. 63.

³⁷ *Ibid.*, p. 65.

³⁸ "Market prospects of raw materials", paper prepared by the staff of the World Bank and the International Monetary Fund for the Development Committee (Washington, D.C., 1987), p. 12.

³⁹ F. Buttell, M. Kennedy, J. Kloppenburg, "From Green Revolution to biorevolution: some observations on the changing technological bases of economic transformation in the third world", *Economic Development and Cultural Change*, No. 3 (1985), p. 39.

⁴⁰ *Transnational Corporations in Biotechnology* (United Nations publication, Sales No. E.88.II.A.4), p. 49.

⁴¹ *Financial Times*, 18 March 1986.

⁴² *ATAS Bulletin*, No. 1: *Tissue Culture Technology and Development* (New York, United Nations, 1984), pp. 31-35.

⁴³ *Transnational Corporations in Biotechnology* ..., pp. 93-95.

⁴⁴ J. Sequeira, "Computer-aided design: a powerful tool at the disposal of the designer", *Impact of Science on Society*, No. 146 (vol. 37, No. 2) (UNESCO and Taylor and Francis Ltd., 1987), p. 134.

⁴⁵ E. Filemon, *loc. cit.*, p. 153.

⁴⁶ W. Leontief and F. Duchin, *The Future Impact of Automation on Workers* (Oxford, Oxford University Press, 1986).

⁴⁷ ILO, *World Labour Report, 1984*, vol. I (Geneva, 1984), pp. 180-181.

Chapter VI

THREATS TO THE ENVIRONMENT

Recent advances in science have made clear that the maintenance of life on this planet rests on a delicate balance of forces which is now threatened by the growth of the human population and its increasing exploitation of limited resources. The complacent belief that waste products of human activity can be disposed of in the limitless sinks of the atmosphere and the water systems of the world has been rudely shaken by the realization that these ecological systems have already been affected by rapid population increase and by the residues of the industrial technology which has so far been the foundation of economic growth.

A major challenge during the next decade and beyond is to combine economic development with environmental protection so as to sustain economic and social progress that is environmentally sound. However, too often the pressures to acquire short-term economic benefits have ignored the understanding that sustainable economic development is based on the condition of the environment and the availability of natural resources of sound quantity and quality. Resources which were considered "gifts of nature" have come to be less so. Nutrient-containing topsoil, fresh underground and surface water, unspoiled oceans and rivers and unpolluted air have become scarcer with abuse, overuse and toxification. Even global climate and the protecting layers of gases in the stratosphere have been adversely affected. Hence the conclusion that "if present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically and more vulnerable to disruption than the world we live in now".¹

The reduction of severe poverty is also a necessary condition for preventing damage to the environment. Those who are poor and hungry will often destroy their immediate environment in order to survive. Desertification, deforestation, soil erosion and salinization are in part the result of inappropriate agricultural practices used to meet the desperate need for food and fuel. The poor will also often build on land ill-suited for human habitation such as floodplains, on hills subject to landslides or next to polluting or hazardous industries. The lack of adequate shelter increases their vulnerability to natural disasters to a considerable extent. Policies and projects aimed at securing development have, in turn, sometimes caused harm to the environment. The destruction of forests and species, the despoliation of rivers and the exposure of large numbers of people to danger from natural and man-made disasters have been unwitting consequences of some of these policies and projects.

The present chapter is devoted to discussing some major aspects of these problems and policies adopted by societies in seeking solutions to them.

A. CHANGE IN PERCEPTIONS REGARDING ENVIRONMENTAL PROBLEMS

The first serious concern about environmental problems grew mainly out of the observation that non-renewable resources were being depleted at rates inconsistent with the longer-term viability of the world economy and the environment.² Deeper concern about deforestation, desertification, depletion of the ozone layer and global warming has drawn fresh attention to environmental problems related to renewable resources. Problems of poverty in developing countries made more severe during most of this decade have sharpened perceptions relating poverty to environmental degradation. "Those who are poor and hungry will often destroy their immediate environment in order to survive. They will cut down their forests. Their livestock will overgraze the grasslands . . . They will overuse marginal lands."³

The negation of the assumptions that the environment is a costless supplier of natural resources and recipient of waste has left society without adequate mechanisms either to prevent or repair the damage. Individuals, corporations and Governments pollute and destroy common property resources such as global climate, the ozone layer, oceans, rivers, forests, the soil and species because such destruction seems costless to them individually. However, for societies as a whole, whether villages, cities, States, continents or the planet itself, such injury can be fateful.⁴ Furthermore, resources are exploited to meet the needs of the present without adequate regard to the ability of future generations to meet their own needs.⁵

Yet communities, whether small or global in scale, have taken only the first steps to create regulations, laws and other institutions to meet these threats to the environment. Some indication of the capacity of Governments in three groups of countries to control environmental pollution as assessed by the World Health Organization (WHO) is shown in table 32.

TABLE 32. ABILITY OF NATIONAL PROGRAMMES TO CONTROL ENVIRONMENTAL POLLUTION

Assessment indicators	Number of countries		
	Highly industrialized	Moderately to rapidly industrializing	Low development activity
Most requirements met	31	10	—
Some requirements met	—	29	9
Few or no requirements met	—	20	67

Source: WHO, *Evaluation of the Strategy for Health for All by the Year 2000: Seventh Report on the World Health Situation*, vol. 1, *Global Review* (Geneva, 1987), p. 100.

TABLE 33. PERCENTAGE OF RESPONDENTS VERY CONCERNED ABOUT LOCAL ENVIRONMENTAL PROBLEMS

	Year	Lack of access to open space	Loss of good farmland	Deterioration of the landscape	Waste disposal	Drinking-water quality	Air pollution	Noise	Water pollution
United States	1984	6	12	15	a	11	9	8	a
Japan	1984	a	a	10	28	a	12	24	16
EEC	1986	7	8	12	9	8	9	8	a

Source: OECD, *Environmental Data Compendium, 1987* (Paris, 1987), p. 294.

^a Not asked.

TABLE 34. PUBLIC OPINION: PERCENTAGE OF RESPONDENTS VERY CONCERNED ABOUT NATIONAL ENVIRONMENTAL PROBLEMS

	Year	Accidental damage to marine environment	Nuclear waste disposal	Industrial waste disposal	Water pollution	Air pollution
United States	1984	54	69	64	52	46
Japan	1984	16	a	18	31	31
EEC	1986	45	a	47	43	41

Source: OECD, *Environmental Data Compendium, 1987* (Paris, 1987), p. 294.

^a Not asked.

TABLE 35. PUBLIC OPINION: PERCENTAGE OF RESPONDENTS VERY CONCERNED ABOUT INTERNATIONAL ENVIRONMENTAL PROBLEMS

	Year	Extinction of some plants or animal species in the world	Depletion of the world's forests and natural resources	Possible climate changes brought about by carbon dioxide
United States	1984	a	a	a
Japan	1984	11	33	16
EEC	1986	42	35	38

Source: OECD, *Environmental Data Compendium, 1987* (Paris, 1987), p. 296.

^a Not asked.

The willingness of Governments to adopt stringent environmental protection programmes is in no small measure a reflection of public opinion. For example, public opinion polls carried out in Japan, the United States and 11 European countries reveal a public willingness to support environmental protection programmes even at the expense of some economic growth. The respondents appeared to be more concerned about national and global environmental problems than about such problems in their immediate environment (see tables 33-35).

With regard to national environmental problems, respondents were concerned about the disposal of waste products generated by industrial production. As Governments adopt more stringent control policies, situations may arise in which industrial plants will become less competitive internationally or may actually have to close down. While such lowered competitiveness or closures appear acceptable, as

the respondents were willing to forgo some economic growth at the national level (see table 34), it is likely that those affected directly, that is both employers and employees, will oppose such action, as willingness to give up economic growth at the local level is much less apparent (see table 33).

Responses shown in table 35 indicate the potential for contention among countries. The environmental problems of extinction of species, tropical deforestation and depletion of natural resources arise for the most part in developing countries. Processes of economic growth in developing countries are likely to give rise to these and other problems of environmental degradation. Further, many of the environmental risks resulting from production and consumption activities spread across national boundaries. Global warming, ozone layer depletion, hazardous waste disposal, ocean dumping, tropical deforestation and acid rain are some examples of environmental degradation of global or, at least, regional significance. Co-operation among countries will become increasingly necessary both in combating and reversing environmental degradation in developing countries and in dealing with problems of an international nature.

An extremely important question in this context is whether taking environmental considerations into account will require the allocation of large sums for this purpose from other uses. Current indications are that the costs of environmental protection are relatively small (see tables 36 and 37). In fact, only moderately adverse consequences for overall prices and economic growth have been identified and there have even been some positive employment effects in several countries.⁶

Despite the relatively modest expenditures on environmental protection in the industrialized countries, there has been marked progress in dealing with many problems of environmental degradation. In Japan, gross domestic product (GDP) increased by 60 per cent from 1970 to 1985 while the emission of sulphur oxides decreased by 77 per cent over the same period. In the United States of America, comparable figures are 23 per cent and 39 per cent.⁷ These changes were partly due to a change in the structure of production. There have been shifts away from manufacturing industries, which are heavy sources of pollution, to service industries, which are generally light polluters. Within manufacture, there have been shifts from raw-material-intensive products to high technology and information-based products, with less

TABLE 36. INDICES OF ANNUAL INVESTMENT IN POLLUTION CONTROL,
SELECTED COUNTRIES, 1970-1986
(1980 = 100)

Year	France	Federal Republic of Germany	Japan	Netherlands ^a	United States
1970	..	..	..	..	..
1971	..	113	184	75	..
1972	..	121	193	67	80
1973	..	124	262	87	98
1974	85	125	388	88	94
1975	95	122	398	81	99
1976	103	112	307	82	101
1977	100	102	154	120	101
1978	93	94	120	94	101
1979	95	84	116	95	104
1980	100	100	100	100	100
1981	102	105	128	90	97
1982	89	124	142	118	94
1983	81	126	144	68	92
1984	82	117	112	81	107
1985	..	..	120	..	..
1986	..	..	95	..	..
Percentage of industry GDP					
1980	0.13	0.18	0.13	0.14	0.50

Source: OECD, *Environmental Data Compendium, 1987* (Paris, 1987), table 16.2.

^a Figure for 1984 based on preliminary data.

harmful effects on the environment. There have also been improvements in the design of products and materials to reduce environment pollution—for example, automobiles that are more fuel-efficient and the use of unleaded petrol. As a result, urban air pollution by sulphur dioxide, particulate matter and carbon dioxide has been reduced, water quality and the management of municipal waste have improved, and entry into the environment of pernicious chemicals such as DDT, PCB and mercury compounds has been reduced.

Yet the disposal of wastes remains a major threat to plant, animal and human life. Over 75 per cent of hazardous wastes generated by industries in OECD countries is disposed of on land, including landfills, deep-well injection and underground disposal.⁸ Recent estimates show that in the United States, there are 76,000 active industrial landfills, mostly unlined, from which contaminants may leak to groundwater. Abandoned landfill sites have been found in Denmark (3,200 sites, of which 500 contain chemical wastes) and in the Netherlands (4,000 sites, with 350 requiring immediate remedial action).⁹ Finally, large volumes of refuse are produced. In the industrialized countries, an estimated 0.6 to 1.0 kilograms of refuse is produced by each inhabitant every day¹⁰ and many municipal landfills have reached saturation point with the result that, in some instances, the search for such fills has moved to developing countries.

In the centrally planned economies of Eastern Europe and the Union of Soviet Socialist Republics much emphasis has recently been placed on adjustment of the overall social and economic planning to environmental quality needs. The economic plans in these countries, besides giving attention especially to environmental problems, address the need for environmental protection and the rational use of natural resources in general. In the USSR, some positive results have

already been recorded: air pollution in a number of major cities has diminished or stabilized and the water quality in a number of regions has improved.¹¹ However, much remains to be done as the air in a number of cities still contains large quantities of harmful substances and the water quality in many reservoirs does not meet minimum standards.¹²

In developing countries, the disposal of industrial and human waste in rivers has led to some serious health hazards. Though much has been achieved in recent years, 1.7 billion people still lack access to clean water and 1.2 billion to adequate sanitation.¹³ A growing number of the urban poor suffer from a high incidence of diseases which are environmentally based and could be prevented or dramatically reduced by appropriate investment. Acute respiratory diseases, tuberculosis, intestinal parasites, and diseases linked to poor sanitation and contaminated drinking water (diarrhoea, dysentery, hepatitis and typhoid) are often endemic. The death, debilitation and disease caused by contaminated water have been a severe brake on development; it has been estimated in one instance that the provision of clean rural water can recoup costs five to seven times over by raising the number of working days of a healthier labour force.¹⁴

Air pollution is also a major problem. In Asia, Africa and Latin America, the burning of wood, dung and agricultural wastes in open hearths causes dangerous gases to build up in houses. Estimates suggest that 1 per cent of the rural population in India and Nepal suffer from chronic heart and lung diseases, including chronic bronchitis and emphysema.¹⁵

Air pollution caused by automobile exhaust is increasing in developing countries, along with the increasing number of motor vehicles. Urban air pollution, which in many cities in developing countries already exceeds international norms, will be further aggravated. It is estimated that over half the 450,000 tons of lead expelled annually into the atmosphere is generated by automobiles. Lead levels in petrol in the developing countries were estimated in 1983 to be twice as high as those in the developed countries.¹⁶ In general, cities in developing countries are more polluted with sulphur dioxide and suspended particulate matter than most cities in developed countries¹⁷ and air pollution could become a major factor limiting industrial development in many cities.

B. MAJOR ASPECTS OF ENVIRONMENTAL PROBLEMS

1. Energy and the greenhouse effect

An outstanding example of the failure of societies to take account of the costs of individual action affecting the environment is the accumulation of carbon dioxide in the atmosphere trapping solar radiation near the surface of the Earth and raising its temperature. Recent studies show that present trends could by the year 2050 produce a global rise in temperature of 1.5° to 4.5°C, which might lead to a rise in the sea level of 25 to 140 centimetres. Such a rise would inundate low-lying coastal cities and agricultural areas, and many countries could expect their economic, social and political structures to be severely disrupted. For example, a study in the Netherlands estimated that a one metre rise in sea level would make it 10 times more likely that the present infrastructure for coastal defence would be inadequate. In

TABLE 37. PUBLIC RESEARCH AND DEVELOPMENT EXPENDITURES FOR ENVIRONMENTAL PROTECTION, SELECTED COUNTRIES, 1975-1986^a
(Millions of United States dollars at 1980 prices and exchange rate; percentage of total research and development expenditure^b)

Country	1975		1979		1980		1981		1982		1983		1984 ^c		1985 ^c		1986 ^c	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
Canada	88.4	5.4	18.4	1.1	25.0	1.5	21.7	1.3	26.1	1.4	30.1	1.5	34.0	1.5	35.6	1.6	..	..
United States	235.6	0.9	308.5	1.0	239.0	0.8	247.1	0.8	190.2	0.6	171.6	0.5	176.3	0.5	198.2	0.5	205.6	0.5
Australia	..	..	29.7	2.8	28.0	2.5	29.8	2.7	37.3	3.2	32.9	2.8	..	..	..	..	..	..
Japan	62.6	1.5	81.3	1.6	84.2	1.6	82.5	1.5	78.8	1.4	80.4	1.4	..	..	..	..	..	..
Belgium ^d	10.8	1.8	15.6	2.9	16.5	2.9	17.7	3.0	18.0	3.0	11.7	2.1	11.9	2.1	..	..	..	..
Denmark	..	..	5.1	1.9	5.1	2.1	4.9	1.8	4.5	1.7	3.4	1.2	4.8	1.5	5.0	1.5	5.2	1.6
Finland	2.3	1.2	1.9	0.9	2.0	0.8	2.1	0.9	2.3	0.9	2.7	1.0	3.0	1.0	4.9	1.5	5.5	1.6
France	44.0	0.8	64.7	1.1	65.3	1.1	38.1	0.5	40.6	0.6	26.3	0.3	30.3	0.4	39.0	0.5	..	..
Germany, Federal Republic of ^d	65.8	1.0	144.3	2.1	142.4	2.0	129.3	1.8	129.8	1.7	201.5	2.8	213.5	3.0	236.4	3.1	..	..
Greece	..	..	1.1	1.2	1.2	1.4	1.3	1.3	2.1	2.2	3.0	3.2	2.9	2.5	3.8	2.8	..	..
Iceland	..	..	..	..	..	..	..	..	..	..	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.6
Ireland	2.1	3.1	0.5	0.5	0.5	0.6	0.4	0.4	0.6	0.7	0.7	0.9	1.4	1.6	1.4	1.6	..	..
Italy ^e	7.4	0.6	19.0	1.1	19.4	1.0	50.9	1.8	80.5	2.8	64.1	2.1	29.3	0.8	33.9	1.0	..	..
Netherlands	..	..	..	..	..	..	..	..	..	..	..	..	41.8	3.2	40.8	3.1	42.0	3.1
Norway	..	..	13.2	3.4	11.0	3.0	12.6	3.6	12.8	3.4	10.1	2.7	9.5	2.4	10.0	2.4	6.7	1.5
Portugal ^f	1.5	2.3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Spain ^f	0.2	0.1	4.7	1.0	3.3	0.6	4.9	0.7	6.9	1.0	5.7	0.9	6.7	0.9	7.1	1.0	..	..
Sweden	12.2	1.3	18.8	1.6	19.4	1.7	20.4	1.8	20.6	1.7	20.4	1.6	16.2	1.2	19.6	1.5	21.0	1.6
Switzerland	5.8	2.8	8.9	3.4	..	..	6.2	2.7	..	..	..	..	..	..	..	..	..	..
United Kingdom	32.0	0.5	51.6	0.8	43.3	0.7	78.1	1.2	83.8	1.3	71.6	1.1	80.7	1.2	76.4	1.1	48.8	0.7

Source: OECD, *Environmental Data Compendium, 1987* (Paris, 1987), table 16.3.

^a Environmental protection includes research and development intended to protect the physical environment from degradation. It includes all research relating to pollution: study of origins and causes, diffusion and transformation and the effects on man and the environment. It includes research on "end-of-line" pollution controls and on changes in the production process (the development of clean technologies) relating to the activities causing the pollution.

^b The GDP price index is generally used as a deflator, except in certain countries where expected inflation rates are calculated in preparing their annual budgets.

^c Forecast or provisional estimates.

^d Break in time series in 1982/83.

^e Break in time series in 1983/84.

^f 1975 data refer to 1976.

addition, areas of agricultural and horticultural importance and densely populated urban and industrial zones would be threatened by erosion, salinization and increased vulnerability to storm surges. In Bangladesh, a rise in sea level of one to two metres would flood about 27 per cent of the total land area, displacing up to 25 million people; in the Maldives, a rise in sea level of two metres would virtually submerge the entire country and a one metre rise would mean that a storm surge would have catastrophic consequences.¹⁸ Similar consequences may befall many small island countries in the Caribbean and South Pacific seas.

Global warming may also drastically affect agricultural production and trading patterns. Global warming will influence rainfall patterns and crop and forest boundaries will move to higher latitudes: this can disrupt food production by reducing yields in currently fertile areas and increasing it in others. Pest populations may spread to new warmer areas and cause crop losses. In addition, certain diseases now endemic in tropical climates could spread farther north and south into areas that had never known them.

On the other hand, the direct effects of increased carbon dioxide (CO_2) concentration on crop yields can be beneficial. Given adequate solar radiation, soil nutrient availability and irrigation, increased atmospheric CO_2 should act as a fertilizer as it raises both photosynthetic production and the efficiency of water use. Greenhouse experiments have indicated that a doubling of CO_2 under good crop management can increase biomass yields by about 40 per cent.¹⁹

Among the various gases that contribute to bringing about the greenhouse effect are CO_2 , methane (CH_4), chlorofluorocarbons, nitrous oxide (NO_2), ozone and water vapour. CO_2 is currently the most important, accounting for at least 50 per cent of the damage. The release of CO_2 is caused primarily by fossil fuel combustion and, to a lesser extent, by deforestation. Current annual emissions of CO_2 due to the combustion of fossil fuels have been estimated at roughly 5 billion tons of carbon. Terrestrial biota, especially forests and their soils, are currently releasing between 1 billion and 2 billion tons of carbon annually, of which nearly 80 per cent is due to deforestation, especially in the tropics.²⁰

To bring developing countries' energy use up to industrialized country levels by the year 2025 would require increasing present global energy use by a factor of five. If this increase were based on non-renewable fossil fuels, global warming and its attendant problems would appear sooner. A move away from the current mix of mostly fossil fuels (oil, coal and gas) to renewable energy sources would reduce the risks of global warming, but these sources are not free from environmental effects either. For example, solar energy systems require large quantities of materials in relation to the amount of energy they generate and take up large areas of land. Other major problems with alternative energy systems are the disposal of often toxic fluids used in solar energy systems and the processing of brines discharged by geothermal plants. The combustion of biomass fuel releases various atmospheric pollutants resembling those produced by the burning of fossil fuels, and wind and geothermal energy systems create considerable noise pollution. Dams to impound water for the generation of power pose severe threats to ecosystems. Besides inundating thousands of hectares, they

may also create a propitious habitat for parasites that transmit dangerous diseases, including malaria and bilharziasis. Wood, often considered a clean fuel, emits, during combustion, particles, polycyclic organic matter, carbon monoxide and possibly nitrogen oxides at high rates per unit of energy than oil and gas. Still, even considering their negative environmental impact, renewable energy sources have a major advantage in that they are free from the pollution which arises from the use of fossil and nuclear fuels. Shifts to nuclear energy, as in OECD countries, have led to changes in the pollutants released, in the wastes generated (particularly nuclear waste), and in patterns of risk incurred by energy workers (coal mining), the public and the natural environment (nuclear accidents).

At the end of 1985, there were 374 nuclear power plants with a total capacity of about 250 GW in operation in the world. Including those under construction or planned, there will be 648 nuclear-power reactors operating in 40 countries.²¹ In 1985, nuclear power plants generated about 1,400 terawatt-hours of electricity and accounted for about 15 per cent of the world's electricity generation. This proportion varied very much among countries, from 65 per cent in France, 42 per cent in Sweden, 22 per cent in the Republic of Korea and 10 per cent in the USSR to 1 per cent in Pakistan.²² The growth rate of nuclear power over the past 20 years has been an impressive 15 per cent per year. However, earlier projections of estimated global nuclear capacity for the year 2000 have been revised downwards by a factor of seven.

Although there had been much concern about nuclear energy, the Chernobyl (USSR) nuclear accident in May 1986 raised these questions much more gravely. China, France, the Federal Republic of Germany, Japan, Poland, the USSR, the United Kingdom and the United States have reaffirmed their policy of turning to nuclear energy as an alternative to fossil fuels. Australia, Austria, Denmark, Greece, Ireland, Luxembourg, New Zealand, Norway, the Philippines and Sweden have decided not to install nuclear energy plants. Finland, Italy, the Netherlands, Switzerland and Yugoslavia are re-investigating nuclear safety or have introduced legislation tying any further growth of nuclear energy to a satisfactory solution of the problem of waste disposal.²³ In most developing countries, however, nuclear power is viewed as a reliable, inexhaustible and cost-effective energy source and as an attractive alternative to importing oil or using increasingly scarce fuelwood. Many developing countries, particularly in East and South-East Asia, plan to double their nuclear capacity before the year 2000.

A deadly by-product of the nuclear industry is its waste material. An adequate answer to the problem of disposing of high-level radioactive waste material produced by nuclear plants has not yet been found. Safe, long-term disposal continues to evade a satisfactory solution. Nuclear waste cannot be safely stored in drums above ground or in shallow wells. If buried underground, deadly toxic material can reach the surface through cracks in geological formations or through wells drilled in the future. It cannot be dumped in the oceans. The dumping of low-level radioactive waste in the Atlantic Ocean has been halted since 1983 and prohibited in the South Pacific Ocean under a convention signed in No-

vember 1983. However, there is increasing concern about recourse to the ocean for dumping nuclear waste in the future. Furthermore, there is the distinct possibility of disposing of radioactive waste in the territories of countries which lack the capacity or the will to impose strict safeguards. Compounding the nuclear waste problem is the process of decommissioning over 300 commercial nuclear reactors that will wear out during the next three decades. Radioactive wastes remain highly toxic for periods extending over centuries and will be a lethal legacy for future generations.

The greenhouse effect presents the world with a difficult dilemma regarding energy use. Almost all forms of energy involve costs both in terms of safety and environmental effects. Perhaps the most important source of reduced energy use is energy conservation and efficiency. It has been estimated that the energy consumption per unit of output from the most efficient processes and technologies is one third to less than one half that of typically available equipment.²⁴ Although new technologies in nuclear and renewable energy sources may contribute to arresting the global warming trend, at present much can be gained from energy conservation and greater efficiency.

2. Depletion of the ozone layer

A second source of danger lies in the destruction of the stratospheric ozone layer which protects the Earth from harmful ultraviolet radiation emanating from the sun. Ultraviolet radiation causes sunburn and skin cancer, damages the chemical composition of genes thereby causing cancer, is linked to cataracts and a weakening of the immune system, retards plant growth and damages plankton, which is an important link in the marine food chain. It has been estimated that a 1 per cent reduction in global stratospheric ozone would lead to an increase of approximately 2 per cent in ultraviolet radiation²⁵ and that each 1 per cent reduction in ozone would lead to a 3.5 per cent increase in skin cancer.

The ozone layer is the complex outcome of more than 50 chemical reactions. In its destruction it has been shown that chlorofluorocarbons are the major agents. Chlorofluorocarbons (CFCs) are man-made gases utilized as aerosol propellants (except in Canada, Scandinavia and the United States), blowing agents in foamed plastics, coolants in refrigeration and air-conditioning applications, and cleaning solvents for microelectronic circuitry. At current rates, nearly 1 million tons of CFCs escape into the atmosphere, where they can remain active for more than a century.²⁶ Of these 1 million tons, 29 per cent originate in the United States, 41 per cent in Australia, Canada, Japan, Western Europe and New Zealand, 14 per cent in Eastern Europe and the Soviet Union and 16 per cent in the developing countries.²⁷

Among the various chlorofluorocarbons, which are combinations of chlorine, fluorine and carbon, CFC-11 (CFCl₃) and CFC-12 (CF₂Cl₂) are the two most widely used as aerosol propellants and coolants. Production and release of both CFC-11 and CFC-12 peaked in 1974. There was a decline in aerosol use from 432,000 tons in 1976 to 219,000 tons in 1984. However, non-aerosol uses rose from 318,000 tons to 427,000 tons over the same period.²⁸ Despite the reduction in aerosol use, it is estimated that CFC-11 increased on aver-

age by 9.8 parts per trillion by volume (pptv) per year and CFC-12 by 17.0 pptv per year from 1977 to 1984.²⁸

Although the dangers of ozone layer depletion had been realized for a number of years and its causes linked to chlorofluorocarbons, it was the discovery in 1986 of a hole in the ozone layer above Antarctica which galvanized the world community into action, leading first to the adoption of the Vienna Convention for the Protection of the Ozone Layer on 22 March 1985 and to the Montreal Protocol on Substances that Deplete the Ozone Layer on 16 September 1987. The Montreal Protocol, which entered into force on 1 January 1989, calls on most signatories to reduce the production and use of the offending substances by 50 per cent by 1999. Developing countries may increase their use of CFCs for a decade in order to catch up with basic technologies such as refrigeration. The net effect, it is expected, will be a 35 per cent reduction in total CFC use by the turn of the century. Furthermore, it is believed that the regulations contained in the Montreal Protocol will slow the depletion of the ozone layer to 2 per cent over the next century.

Within a year of the entry into force of the Protocol, it is required that each party to it shall ban the import of controlled substances (see table 38) from any country which is not a party to it. Further, each party shall discourage the export to any country not a party to the Protocol of technology for producing and for using controlled substances.

TABLE 38. MONTREAL PROTOCOL: CONTROLLED SUBSTANCES AND OZONE DEPLETING POTENTIAL

<i>Controlled substances</i>	<i>Ozone depleting potential</i>
CFCl ₃ (CFC-11)	1.0
CF ₂ Cl ₂ (CFC-12)	1.0
C ₂ F ₃ Cl ₃ (CFC-113)	0.8
C ₂ F ₂ Cl ₂ (CFC-114)	1.0
C ₂ F ₃ Cl (CFC-115)	0.6
CF ₂ BrCl (Halon-1211)	3.0
CF ₃ Br (Halon-1301)	10.0
C ₂ F ₄ Br ₂ (Halon-2402)	To be determined

Source: UNEP, "Montreal Protocol on Substances that Deplete the Ozone Layer: Final Act", 1987, p. 15.

Implementing the Montreal Protocol's regulations is not without cost. An analysis made by the United States Environmental Protection Agency shows that by the year 2075 it would cost the United States alone at least \$27 billion to meet the CFC reduction requirements. However, these costs become insignificant in the light of the benefits, which the Agency projects to be \$6.5 trillion by the year 2075. These benefits are savings from avoiding the costs of cancer deaths, medical treatment, loss of crops, dwindling fish harvests, damage to materials and rising sea levels.

There has already been some noteworthy progress in reducing the production and use of these harmful substances. In February 1988, the Du Pont company of the United States, one of the biggest manufacturers of CFCs, announced that it would phase out its production of CFCs entirely. A month earlier, the Fort Howard Corporation of the United States, a manufacturer of paper and plastic products,

had announced that it was giving up the use of CFC-11 and CFC-12 in producing cups, plates and sandwich containers. About the same time two United States companies, ATT and Petrofoam, announced that they had discovered a safe and environmentally sound alternative to CFC-113, a compound used in cleaning electronic equipment. The new products could replace about 17 per cent of the 1 million tons of all CFCs used globally each year.

3. *Acid rain*

Another form of atmospheric pollution comes from sulphur and nitrogen oxides and volatile hydrocarbons which precipitate as "acid rain" hundreds of kilometres away from their places of origin. Acid rain damages vegetation, particularly forests, contributes to land and water pollution, and corrodes buildings, metallic structures and vehicles. Some of the most severe damage has been reported in Central Europe, which currently receives more than one gram of sulphur per square metre of ground each year, at least five times greater than the natural background.²⁹ In Czechoslovakia, between 20,000 and 300,000 hectares of forests have been damaged or destroyed, while in Hungary about 150,000 hectares of forests are reported to have been damaged to varying degrees.³⁰ In the Federal Republic of Germany, about 50 per cent of the total forest area (3.7 million hectares) has been damaged, with about 56,000 hectares severely damaged or dead.³⁰ There also is evidence of acidification of the environment in a number of newly industrializing countries in Asia and Latin America.

Fossil fuel combustion for the generation of electricity is the major source of sulphur oxide emissions. Automobile exhaust gases are chiefly responsible for the emission of nitrogen oxides and hydrocarbons. Measures taken in the 1970s in many industrialized countries to control air pollution did improve the air quality in many cities. However, these measures led unintentionally to sending increasing amounts of pollution across national boundaries in Europe and North America, contributing to acidification of distant environments and creating new pollution problems. Atmospheric pollution, once perceived only as a local urban-industrial problem involving people's health, is now also seen as a much more complex issue encompassing buildings, ecosystems and even public health over vast regions. Furthermore, it has given rise to controversy between countries, particularly in North America and Northern Europe. Disputes between Canada and the United States and between Scandinavian countries and the United Kingdom over responsibility for and clean-up costs of acid rain show the difficulties encountered in resolving transboundary pollution issues.

There are few studies on the costs of acid rain. It has been estimated that halving the sulphur dioxide emissions from existing sources in the eastern United States would cost \$5 billion a year, increasing present electricity rates by 2 per cent to 3 per cent. If nitrogen oxides are figured in, there would be an additional cost of \$6 billion a year. On the other hand, material corrosion damage alone is estimated to cost \$7 billion annually in 17 states in the eastern United States.³¹

Man-made hazardous waste now extends beyond the Earth's oceans, forests, land, water, its atmosphere and stratosphere to outer space. Since the launching of Sputnik I on 4 October 1957, about 18,000 man-made objects have been launched in space. Today, there are about 7,000 such objects, larger than 20 centimetres in size, of which only 350 are active satellites; about 50 objects contain radioactive materials. In addition to these larger objects, there are at least 2,000 fragments ranging in size from 10 to 20 centimetres and about 50,000 in the 1 to 10 centimetre range. Below this range, there are estimates of millions to billions of metal and paint chips in the millimetre and submillimetre range (a 0.5 millimetre metal chip with an average speed of 30,000 kilometres per hour can easily penetrate a space suit).³² The largest concentration of fragments and debris is in the altitude range of 550 to 1,250 kilometres, that is, the region in which most of the satellites, space stations and the space shuttle operate. In the geostationary orbit (36,000 kilometre altitude), the accumulation of objects is a serious problem, since this orbit is used for weather and telecommunication satellites.³³ It is feared that, with a constant launch frequency of about 100 per year, the Earth may become surrounded by a belt of space debris during the next century.

5. *Transboundary movements of hazardous waste*

The movement of hazardous wastes across national boundaries poses special problems. It takes place with high frequency on a large scale because some land-locked countries wish to dispose of waste at sea and because treatment, storage and disposal facilities are not available or are too costly in the country of origin. Compliance with national legislation on the treatment and disposal of wastes can be quite burdensome, thereby making it economically attractive despite transport costs to move wastes to countries with weak or no legislation at all regarding the handling of hazardous wastes. In 1983, international transport of wastes for disposal at sea amounted to about 1.8 million tons.

Developing countries are particularly vulnerable to the danger of becoming dumping grounds for toxic wastes from developed countries. Furthermore, developing countries often purchase industrial technologies at low prices, which, however, may pollute the air, have high energy and labour costs and produce excessive quantities of hazardous wastes. The costs of add-on pollution control technologies are usually prohibitive and do not resolve the basic deficiencies in the industrial processes. In addition, such facilities may be operated with little attention to health and safety hazards. There is also evidence of a trend for multinational enterprises to locate industrial activities in developing countries in order to take advantage of lower costs for meeting pollution abatement and environmental protection standards. Many heavily polluting industries such as steel, non-ferrous metals, asbestos and toxic chemicals have been relocated in developing countries during the past 10 years.

In addition, there is the sale of toxic chemical products in developing country markets—products which are banned or severely restricted in developed countries. In most develop-

ing countries laws governing the production and distribution of such chemicals are lax or poorly enforced. In 1986, there were more than 500 such chemicals.³⁴ Agencies in developed countries often share test results and other information on these products and act in concert to restrict their use. Dealers and users in many developing countries who do not have this information often import these products in ignorance. For example, because of improper storage, transport, use and disposal of pesticides, some 375,000 persons are contaminated by pesticides every year in developing countries with some 10,000 deaths.³⁵ Many pesticide users, particularly in developing countries, are being poisoned because producers and distributors fail to observe adequately the provisions of the International Code of Conduct on the Distribution and Use of Pesticides, adopted by the Food and Agriculture Organization of the United Nations in 1985. For example, in Indonesia, aldicarb (classified as extremely hazardous by WHO) and carbofuran (classified as moderately hazardous) were found to be repackaged and sold to farmers in small plastic bags which carried neither instruction labels nor warnings.³⁶

6. Soil erosion

Although soil erosion has increased in all parts of the world, it is particularly serious in developing countries. The main causes are deforestation, overgrazing and overworking of farmland, and inappropriate patterns of land use. One of the main reasons for the overuse and misuse of agricultural land is inadequate access to it. It has been estimated that with existing patterns of land distribution, the number of smallholders and landless households will increase by about 50 million, to nearly 220 million, by the year 2000.³⁷ These resource-poor households will be forced to overuse the resource base to survive, as in most of Latin America, where holdings of the rural poor tend to be exceedingly small. The search for more land carries the frontier to be extended to areas where exploitation contributes to soil erosion. Furthermore, in many countries of Latin America, proof of actual exploitation of a piece of land is necessary in order to obtain legal ownership. This is usually done through indiscriminate felling of trees with the attendant environmental consequences.³⁸

Erosion makes soils less able to retain water; it depletes soils of their nutrients and reduces the depth available for the roots to take hold. With declining land productivity and loss of cropland, farmers are encouraged to overuse the remaining land and to move into forests and rangelands. In India, soil erosion affects 25 per cent to 30 per cent of the total land area under cultivation³⁹ and removes the equivalent of \$6 billion worth of nutrients a year which would have to be replaced with chemical fertilizer.⁴⁰ In parts of Mexico, soil erosion has reduced maize yields from 3.8 tons per hectare to 0.6 tons and in parts of Nigeria, from 6.5 tons a hectare to one.⁴⁰ Under present conditions, the total area of rainfed cropland in developing countries in Asia, Africa and Latin America would shrink by 544 million hectares over the long term because of soil erosion and degradation.⁴¹

Eroded topsoil is carried to rivers, lakes and reservoirs, silting up ports and waterways, reducing reservoir storage capacity and increasing the incidence and severity of floods.

It has been estimated that the world's rivers may be carrying 24 billion tons of sediment to the seas annually.⁴² In India, flood-prone lands doubled from 20 million to 40 million hectares between 1970 and 1980, and in the Ganges valley alone, the annual cost of flood damage to crops and other property averages about \$1 billion.⁴³

7. Desertification

Desertification is increasingly becoming a world-wide threat which affects more than a hundred countries. About 850 million people live on 35 per cent of the Earth's surface (45 million square kilometres) which consists of arid, semi-arid and subhumid zones at risk of desertification. Three quarters of this area are already at least moderately desertified.⁴⁴ Desertification world wide is proceeding at 6 million hectares a year and, owing to soil erosion, an additional 20 million hectares of agricultural land have become barren. Two fifths of Africa's non-desert land risk being turned into desert, as does a third of Asia's and a fifth of Latin America's.⁴³ The people moderately affected by desertification total about 470 million, while 190 million are severely affected.⁴⁵ The consequences of desertification include not only increased hunger and death but also social instability and conflict as dryland degradation drives environmental refugees in their millions across national boundaries.

Desertification is caused by a complex mix of climatic and human factors. The latter include rapid growth of both human and animal populations, harmful land-use practices (especially deforestation) and civil strife. In Africa, the population in agriculture is estimated to have increased 2.5 per cent to 3.0 per cent per year and in pastoral activities 1.5 per cent to 2.5 per cent per year,⁴⁶ and the livestock population increased from 295 million in 1950 to 521 million in 1983.⁴⁷ The combined effect of human and animal pressure on land has been the acceleration of environmental degradation setting in train a process of decreased water infiltration, increased surface run-off, the drying up of surface-water resources and the loss of topsoil and soil nutrients. Some of this damage has been caused by the cultivation of cash crops on unsuitable rangelands, driving herders on to marginal lands. The herds themselves have been added to with cattle, sheep and goats, rather than the traditional camel, to satisfy the growing demand for beef in cities and industrial countries.

But while people are the main agents of desertification, they are also the victims of desertification, as was much exemplified by the 1984-1985 crisis in Africa. The drought during those years transformed the severely overexploited lands, particularly in the Sudano-Sahelian region, into virtual desert. Stripped of vegetation, shifting sand dunes were formed, further rendering useless the few remaining productive areas. Pastoralists were particularly hard hit. Many became environmental refugees, living in camps and in urban slums often on the brink of starvation. For most, a return to their nomadic way of life has been foreclosed.

8. Deforestation

Unsustainably high rates of deforestation cause enormous damage to the environment and society. Some 200 million

people are estimated to make a living directly from tropical forests. Slopes stripped of vegetation are subject to rapid runoff, thereby causing floods, soil erosion and landslides. In addition to loss of human life and property, the run-off silts rivers, harbours and lakes, disrupting economic activity. Tropical rain forests and their soils contain 20 per cent of the world's terrestrial carbon pool of 500 billion tons, 46 per cent of it in the living forest, and most of this is released as carbon dioxide when forests are destroyed,⁴⁸ contributing to global warming. These forests also contain about half the world's species of animals and plants. They are an enormously important source of materials for producing pharmaceuticals, with the value of many species still unknown.

The total global forest area is about 4,700 million hectares, about 32 per cent of the total area of land. The world's forests are disappearing at a rate of 15 million hectares per year, with most of the losses occurring in humid parts of Africa, Asia and Latin America.⁴⁹ Tropical forests occupy over 1,900 million hectares, of which 1,200 million hectares are closed forests, and the remainder open tree formations. Although the rate of tree plantations in the tropics has accelerated recently to about 1.1 million hectares annually, tropical deforestation continues at a rate of 11 million hectares per year.⁵⁰ On the other hand, forested areas in most temperate climate countries are currently stable or increasing.⁵¹

The most important cause of the destruction of tropical forests, especially in West Africa and South-East Asia, is commercial logging. Since concessions for logging are characteristically for short periods, say 20 years as in Indonesia, loggers cut trees as rapidly as possible with no incentive to replant for someone else's benefit.

A second important source of deforestation is the distribution of cleared land to people who are resettled. This is done in a number of countries, including Brazil and Indonesia. Land is given to the landless and unemployed but after a few harvests, the soil is depleted and the settlers move on. Much of this resettlement is a substitution for the redistribution of landownership elsewhere. In Brazil, 50 per cent of the farmers own 3 per cent of the land while 43 per cent of the farmland is owned by 1 per cent of the farmers. Similarly in Java, in Indonesia, 1 per cent of the farmers own 35 per cent of the agricultural land. About 50 per cent of the smallholders have less than half a hectare of land each, and half of all rural households own no land at all. Besides logging and slash-and-burn practices, the other important activity contributing to deforestation is ranching, especially in Central and Latin America. However, livestock rearing can have an extremely damaging effect on the environment because it is based on the removal of forest coverage by fire and has enormously high ecological costs of overgrazing (in this connection, it is worth noting that fish which breed in forests when they are flooded produce more protein per hectare than do cattle).

In moist tropical forests, cutting down trees for firewood is not a major cause of destruction but it is an important cause of loss of woody vegetation in dry areas. In this sense, the fuelwood crisis and deforestation, although related, are not the same problem. The people who face fuelwood shortages, mostly the rural poor, rarely chop down trees; they generally collect dead branches or cut them from trees. Most

of the rural poor live in low rainfall, poor soil, scrub and semi-desert areas of Africa, Asia and Latin America. About 1.3 billion people live in areas where fuelwood is consumed faster than trees can regrow. Of them, 70 million people are in North Africa and West Asia, 145 million in the dry parts of Latin America, 130 million in Africa south of the Sahara, mainly in savannah areas in the west, centre and south-east of the continent, and 710 million in the countryside and small towns of Asia, mainly in the great plains of the Indus and Ganges rivers and in South-East Asia.

9. Disasters

Natural disasters

Natural disasters, such as those caused by earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruption and wildfire, have claimed about 3 million lives world wide in the past two decades, affected the lives of at least 800 million more people and resulted in immediate damage exceeding \$23 billion.⁵²

It appears that owing to neglect of the environment the likelihood of disasters occurring more frequently has increased. The majority of natural disasters are closely linked to hazardous patterns of social and economic development and environmental degradation and usually strike those people who are least able to cope with them. Natural disasters claim most of their victims among the impoverished in poor countries, where subsistence farmers have made their land more liable to droughts and floods by clearing marginal areas, and where the poor make themselves more vulnerable to those disasters by living on steep slopes and unprotected shores.

Deforestation of watersheds has led to increases in the number and severity of floods. For example, during the summers of 1987 and 1988, Bangladesh suffered its worst ever floods. Unusually heavy monsoon rains breached the banks of the Ganges and Brahmaputra rivers, which had been silted consequent upon deforestation in the Himalayas. The results in 1987 were a loss of 3 million tons of food grain, \$1 billion worth of damage, and 24.5 million people left homeless and destitute.⁵³ The disaster of 1988 was even worse, with 20 to 30 million people rendered homeless and an estimated loss of 8 million tons of crops. In other parts of the world deforestation and overgrazing have caused landslides on slopes denuded of vegetation. An increasing number of people live in hazard-prone areas. They are often poorer, lower-income people, living in unorganized or squatter settlements, who have been forced into less safe urban development sites. For example, in February 1988, week-long rainstorms sent landslides of mud down hills around the shanty towns of Rio de Janeiro, killing 275 people and leaving 10,000 homeless.⁵⁴

Natural disasters have tended to become more destructive as they affect ever larger concentrations of populations. The earthquake which struck Mexico City in 1985 killed about 9,500 people; the earthquake which struck relatively sparsely-populated central Chile in the same year killed 177 people.⁵⁵ The mudslide following a volcanic eruption in Colombia in 1985 killed more than 20,000.⁵⁶ In contrast, the combined loss of lives associated with 41 significant natural

disasters in OECD countries in 1986 amounted to about 220.⁵⁷ In OECD countries, the level of risk associated with natural hazards is a major determinant of land use.

Man-made environmental disasters

While human exertion may contribute to natural disasters, there is a class of disasters which are entirely man-made. They are often referred to as industrial accidents, although their magnitude in a number of instances is far greater than that of natural disasters. On 2 February 1984, a leakage at a pesticide plant near Bhopal, India, killed 2,500 people, injured 50,000, and led to the evacuation of 200,000 persons. On 26 April 1986, a reactor explosion at Chernobyl, USSR, killed 29, injured 300, and led to the evacuation of 135,000 persons.

Industrial accidents are increasingly occurring in developing countries and the numbers of dead and injured are far greater than the corresponding figures in developed countries. Between 1970 and 1980, 32 industrial accidents occurred world wide in which there were more than 50 deaths, or more than 100 people injured, or more than 2,000 evacuated, or more than \$50 million in damages. Three of them occurred in developing countries. Between 1980 and 1987, 34 such accidents occurred, 14 of them in developing countries. The number of deaths related to those accidents amounted to 81 in developed countries and 3,942 in developing countries. The numbers of injured were 1,698 in developed countries and 58,113 in developing countries. However, the numbers of persons evacuated are much closer in the two groups of countries: 202,600 in developed countries and 270,000 in developing countries.⁵⁸

The impact of disasters has grown dramatically with urban population growth in developing countries. Many slums and shanty towns crowd close to hazardous industries as this is land on which no one else will build. Consequently, the number of people within the danger zone of an industrial accident has risen dramatically. At the same time, industrial processes have become more hazardous, endangering the inhabitants of a much larger area than before. On 19 November 1984, a tank explosion at a liquefied petroleum gas storage facility in a crowded neighbourhood of Mexico City killed 452 people, injured 4,258, and resulted in the evacuation of 31,000 persons. The disaster at Bhopal occurred in much the same circumstances. It is feared that hazards of industrial disasters in developing countries will increase with time not only because of the proliferation of new plants (some of which are located in developing countries so as to avoid environmental regulations existing in developed countries) but also because of a lack of vigorous control, rigorous maintenance and adequate expertise in operating such plants.

C. CONCLUSIONS

There will in the future be an imperative need for the countries of the world to take a concerted approach to the use of their common resources—the biosphere, the oceans, and space.

The environmental constraints closing in on the world community have already produced significant changes in the

policies of Governments and a new awareness of the limits within which world development can progress.

However, this lends an additional dimension to the problems of a world economy in the throes of adjusting to many radical changes. Such adjustments do not take place without great social friction. They undermine social stability by imposing sudden shifts of the labour force. In all countries, there is a movement of labour out of agriculture and into industry, and other movements among industries and firms, which take place without raising any problems as long as the market is not overloaded and new jobs are created at the same pace as old jobs are displaced. Even then, structural change is a source of much human hardship: the skills called for in new jobs are inevitably different from those in the old ones. There will be no easy match but much frictional unemployment.

Environmental adjustment involves structural change and so it is not surprising that it often meets opposition. It leads to the loss of jobs that were premised on an unacceptable deterioration of the quality of life. It also creates many new employment opportunities, but not for those who were displaced.

NOTES

¹ Gerald O. Barney, *The Global 2000 Report to the President: Entering the Twenty-first Century* (Washington, D.C., United States Government Printing Office, 1980), p. 1.

² See Donella H. and Denis L. Meadows and others, *The Limits to Growth* (Washington, Potomac Associates, 1972); E. F. Schumacher, *Small is Beautiful, Economics as if People Mattered* (New York, Harper, 1973); and Barney, *op. cit.*

³ Statement made on 19 October 1987 by Robert Mugabe, Prime Minister of Zimbabwe, at the forty-second session of the General Assembly; see *Official Records of the General Assembly, Forty-second Session, Plenary Meetings*, 41st meeting, pp. 34-35.

⁴ Garret Hardin, "The tragedy of the Commons", *Science* (1968), vol. 162, pp. 1243-1248.

⁵ Report of the World Commission on Environment and Development (A/42/427), annex, p. 54. For the report as published, see World Commission on Environment and Development, *Our Common Future* (Oxford and New York, Oxford University Press, 1987).

⁶ OECD, *Environmental Data Compendium, 1987* (Paris, 1987), p. 325.

⁷ *Ibid.*, p. 324.

⁸ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. 57.

⁹ *Ibid.*, p. 160.

¹⁰ WHO, *Evaluation of the Strategy for Health for All by the Year 2000: Seventh Report on the World Health Situation*, vol. 1, *Global Review* (Geneva, 1987), p. 105.

¹¹ G. Kukushkin, "Planning the rational utilization of natural resources", *Problems of Economics*, January 1986, pp. 59-60.

¹² *Ibid.*, p. 61.

¹³ A/42/427, annex, p. 113.

¹⁴ UNEP, *The State of the Environment, 1984* (Nairobi, 1984), p. 13.

¹⁵ UNEP, "The state of the environment, 1986: environment and health" (UNEP/GC.14/5), p. iii.

¹⁶ WHO, *Evaluation of the Strategy for Health for All by the Year 2000* . . . , p. 102.

¹⁷ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. iii.

¹⁸ *Official Records of the General Assembly, Forty-second Session, Plenary Meetings*, 41st meeting, pp. 23-25.

¹⁹ UNEP, "The state of the environment, 1985" (UNEP/GC.13/4), p. 15.

²⁰ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. 10.

- ²¹ UNEP, *Environmental Data Report* (Oxford, Basil Blackwell, 1987), p. 246.
- ²² *Ibid.*, table 6.4.
- ²³ A/42/427, annex, p. 188.
- ²⁴ *Ibid.*, p. 196.
- ²⁵ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. 14.
- ²⁶ "Major accord in ozone reached", *The Independent*, vol. 17, No. 5 (October/November 1987), p. 1.
- ²⁷ According to the United States Environmental Protection Agency.
- ²⁸ UNEP, *Environmental Data Report* (Oxford, Basil Blackwell, 1987), p. 6.
- ²⁹ A/42/427, annex, p. 180.
- ³⁰ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. 9.
- ³¹ A/42/427, annex, p. 182.
- ³² See the status report on space debris prepared by the Committee on Space Research of the International Council of Scientific Unions for submission to the Committee on the Peaceful Uses of Outer Space (A/AC.105/403), annex.
- ³³ *Ibid.*, p. 4.
- ³⁴ A/42/427, annex, p. 223.
- ³⁵ WHO, "Global estimates relating to the health situation and trends" (WHO/HST/87.3), Geneva, May 1987, p. 23.
- ³⁶ "Violating the FAO Code in Pesticides", IFDA Dossier, vol. 61 (September/October 1987), p. 63.
- ³⁷ A/42/427, annex, p. 144.
- ³⁸ ECLAC, "Report of the Regional Seminar on Environmental Systems and Strategies for Extending the Agricultural Frontier in Latin America, Santiago, Chile, 28-30 October 1986" (LC/L.407), p. 6.
- ³⁹ A/42/427, annex, p. 129.
- ⁴⁰ "Sound environmental management should be an integral part of economic policy-making", *World Bank News*, vol. VI, No. 15 (16 April 1987), p. 12.
- ⁴¹ A/42/427, annex, p. 129.
- ⁴² Environmental Perspective to the Year 2000 and Beyond (General Assembly resolution 42/186, annex), para. 12.
- ⁴³ World Bank, "Environment, growth and development", 16 March 1987, p. 3.
- ⁴⁴ UNEP, *The State of the Environment, 1984* (Nairobi, 1984), p. 29.
- ⁴⁵ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. 24.
- ⁴⁶ "Review of the situation with regard to the development of water resources in the drought-stricken countries of the African region: report of the Economic Commission for Africa" (E/C.7/1987/6), para. 12. The report was submitted to the Committee on Natural Resources at its tenth session, in April 1987.
- ⁴⁷ UNEP, "The state of the environment, 1986: environment and health" (UNEP/GC.14/5), p. 19.
- ⁴⁸ Nicholas Guppy, "Tropical deforestation: a global view", *Foreign Affairs*, vol. 62, No. 4 (Spring 1984), p. 931.
- ⁴⁹ UNEP, *The State of the World Environment, 1987* (Nairobi, April 1987), p. iv.
- ⁵⁰ Environmental Perspective to the Year 2000 and Beyond (General Assembly resolution 42/186, annex), para. 14.
- ⁵¹ UNEP, *Environmental Data Report* (Oxford, Basil Blackwell, 1987), p. 121.
- ⁵² By its resolution 42/169, the General Assembly designated the 1990s as an international decade for natural disaster reduction.
- ⁵³ *The Economist*, 19 September 1987, p. 45.
- ⁵⁴ *The New York Times*, 24 February 1988, p. A7.
- ⁵⁵ UNEP, *Environmental Data Report* (Oxford, Basil Blackwell, 1987), table 9.2.
- ⁵⁶ *Ibid.*, table 9.3.
- ⁵⁷ OECD, *Environmental Data Compendium, 1987* (Paris, 1987), tables 10.1, 10.2A and 10.2B.
- ⁵⁸ *Ibid.*, table 10.4.

Chapter VII

SOCIAL DEVELOPMENT, SECURITY AND DISARMAMENT

At the present time, the mounting social problems in the world community call for the strengthening of social services, which inevitably requires greater budgetary resources. At the same time, large expenditures on armies and armaments absorb substantial shares of these resources in many countries, and the destructive power of the arms already in the hands of Governments poses a massive threat to the survival of life on earth, which has added urgency to calls for disarmament, particularly nuclear disarmament. A reduction of tensions in the world economy may be conducive to a major reduction in armaments. A diversion of resources away from military activities towards other uses will facilitate the promotion of social progress. Economic and social policies may also contribute to security by helping to remove non-military threats to security. This chapter is devoted to examining these questions.

The concern about these questions is not new to the international community. The First Hague Peace Conference, held in 1899, concluded that "the restriction of military charges, which are at present a heavy burden on the world, is extremely desirable for the increase of the material and moral welfare of mankind", and the Second Hague Peace Conference, held in 1907, added that "inasmuch as military expenditure has considerably increased in almost every country since that time, it is eminently desirable that the Governments should resume the serious examination of the question".¹ The Charter of the United Nations has placed the prevention of war and the maintenance of conditions conducive to the peaceful resolution of conflicts at the top of the list of objectives of the Organization.

The first specific examination of the related questions of disarmament, security and development by the international community took place at the International Conference on the Relationship between Disarmament and Development in 1987. The action programme adopted by the Conference was drawn up with a view "to fostering an interrelated perspective on disarmament, development and security" and "to promoting multilateralism as providing the international framework for shaping the relationship between disarmament, development and security based on interdependence among nations and mutuality of interests".²

A. EXPENDITURE ON ARMIES AND ARMAMENTS

As can be seen from table 39, in both developed and developing countries, public expenditure as a percentage of gross domestic product (GDP) fell between 1980 and 1984, before rising again in 1985. In the developing countries, the share of defence spending in central government expenditure fell from 14.6 per cent in 1980 to 13.2 per cent in 1985, while in

TABLE 39. COMPOSITION OF CENTRAL GOVERNMENT EXPENDITURE, 1980-1985
(Percentage of total)

	1980	1983	1984	1985
Market economies ^a				
Defence	13.6	14.1	14.4	14.4
Social security and welfare	33.8	33.5	32.1	30.2
Education	6.1	5.4	5.4	5.2
Health	9.9	9.7	10.2	10.4
Developed market economies				
Defence	13.3	14.3	14.7	14.7
Social security and welfare	37.5	38.3	36.6	34.6
Education	4.8	4.2	4.1	4.0
Health	11.6	11.4	12.0	12.3
Developing countries				
Defence	14.6	13.5	13.6	13.2
Social security and welfare	15.2	15.4	15.2	13.3
Education	10.6	9.5	9.9	9.4
Health	4.1	4.0	4.2	4.1
Memorandum item				
Central government expenditure as percentage of GDP				
Market economies	28.5	31.2	30.7	31.1
Developed market economies	30.3	33.4	32.9	33.1
Developing countries	22.7	24.2	23.8	25.0

Source: International Monetary Fund, *Government Finance Statistics Yearbook 1987* (Washington, D.C., 1987).

^a The aggregate figures include Hungary and Romania. They do not include China.

the developed market economies the proportion rose from 13.3 per cent to 14.7 per cent. Although the proportion of expenditure on defence is roughly similar in the two groups of countries, that of the developed market economies is heavily weighted by expenditure in the United States of America, where defence expenditure is a larger percentage of central government expenditure than in the others. This proportion rose sharply between 1980 and 1985 from 21.2 per cent to 24.9 per cent. In the other developed market economies, defence spending was less than 15 per cent of central government expenditure. In the developing countries, which are a much larger and more heterogeneous group of countries, defence expenditure as a percentage of central government expenditure ranged from less than 1 per cent to over 50 per cent. There is no comparable information in respect of the centrally planned economies.

The cumulative distribution of countries according to their proportion of central government expenditure on defence is shown in figures VI-XII. In 1985, the distribution was such that more countries spent a somewhat lower proportion of central government resources on defence in 1985 than in 1980 (figure VI). In developed countries, the maximum proportion of government expenditure on defence was 25 per cent in both 1980 and 1985 and there was some increase in the proportion of countries where the percentage of central government expenditure on defence was at the lower end of

the range (figure VII). In contrast, in both years, there were developing countries in which the proportion of central government expenditure on defence exceeded 25 per cent. However, in parallel with developed countries the curve moved to the left generally in 1985 compared with 1980, indicating an increase in the proportion of countries allocating lower percentages of central government expenditure on defence in 1985 than in 1980 (figure VIII). Among countries in Latin America, the direction of change is not unambiguous (figure IX). On the one hand, a lower proportion of countries in 1985 allocated more than 15 per cent of total central government expenditure to defence compared with 1980. On the other hand, the proportion of those allocating less than 15 per cent of total central government expenditure was lower in 1985 than in 1980 and no country spent more than 20 per cent in 1985, whereas in 1980, the maximum proportion was 25 per cent. One of the most marked drops in the proportion of expenditure was in Argentina, from 11.9 per cent in 1980 to 5.2 per cent in 1985. In African countries, the curve moved to the left in 1985 consistently (figure X): more countries allocated a lower proportion of central government expenditure to defence in 1985 than in 1980. Among developing countries, those of West Asia allocate the highest proportion of central government expenditure to defence; however, the curve moved to the left in 1985 compared with 1980 (figure XI), indicating that this share fell in those countries. In Asia, the proportion of countries allocating more than 15 per cent of their central government expenditure to defence was lower in 1985 than in 1980 (figure XII).

Total expenditure on war and armaments in 1987 is estimated to be over \$900 billion a year; it amounted to about 5.7 per cent of world output in 1986 as opposed to 5.1 per cent in 1980.³ In the industrialized countries, military expenditure per capita in 1984 was estimated to amount to \$550, as against public expenditure on education of \$497 and on health of \$469. In the developing countries, per capita military expenditure of \$42 was greater than their combined public expenditure on education (\$28), and health (\$11).⁴ In the present period of fiscal constraints, increases in military expenditure even more directly imply reductions in other government programmes, and frequently in those directed towards development.⁵

Military expenditure in developing countries has resulted in the import of substantial quantities of weapons. The value of major imports in constant 1985 prices is shown in table 40. The figures for 1970, 1975, 1980 and 1985 are five-year moving averages and reflect long-term trends. There was a sharp increase of imports into all regions, except the Far East, between 1970 and 1975, and overall imports rose by over 50 per cent. In 1980, imports were 36 per cent above their level of 1975. Since 1980, however, the level has remained more stable.

The major exporters of armaments are developed market economy and centrally planned economy countries of Europe. The United States and the Soviet Union accounted for nearly 70 per cent in 1977-1981 and 60 per cent in 1982-1986. Two thirds of this fall of 10 per cent, was made up by increased exports from France, the Federal Republic of Germany, Italy, Spain and the United Kingdom, about one quarter by increased exports from China and slightly over 1 per cent from increased exports from developing countries.

B. THREATS TO SECURITY

1. *Conflicts and destruction*

A concept that was discussed by many delegations at the 1987 International Conference on the Relationship between Disarmament and Development was that of "overarmament": the present amount of armaments is far greater than that required to meet the real threats to security. In one sense, the growing expenditure on armaments has bought less security than was available earlier because the extra arms could destroy the world several times over. In another sense, also, security has proved elusive, as shown by the number of conflicts being waged in the world.

In 1987, 22 wars were being fought, which had already cost the lives of 2.2 million people. Eighty-four per cent of the victims were civilians and more than half the civilian casualties resulted from war-related famine.⁶ Over the 40 years from 1945 to 1985 nearly 20 million people are estimated to have lost their lives in warfare. This figure can be compared with the deaths in the First and Second World Wars and in the inter-war years, given by one source as 19, 38 and 5 million people, respectively. It has been estimated

TABLE 40. VALUE OF IMPORTS^a OF MAJOR WEAPONS INTO DEVELOPING COUNTRIES, BY REGION, 1970-1987
(Millions of United States dollars)

Region	1970 ^b	1975 ^b	1980 ^b	1985 ^b	1986	1987
Middle East	4 541	8 302	8 483	10 827	10 193	11 546
South Asia	1 085	1 112	1 942	3 442	3 974	6 152
Far East	3 069	1 700	3 328	2 612	2 954	2 477
South America	659	1 864	2 275	2 012	1 062	1 939
North Africa	258	1 580	3 507	1 233	1 363	479
Sub-Saharan Africa	260	1 074	1 649	1 563	1 392	1 807
Central America	138	320	467	600	594	316
TOTAL	10 010	15 952	21 651	22 289	21 532	24 716

Source: Stockholm International Peace Research Institute, *SIPRI Yearbook 1988* (Oxford, Oxford University Press, 1988), pp. 202-203.

^a 1985 constant prices.

^b Five-year moving average.

that the total numbers of deaths in warfare in the eighteenth and nineteenth centuries were 4.4 and 8.3 million people, respectively.⁷

The figure of 22 wars in 1987 relates to conflicts in which there were 1,000 or more deaths per year. When conflicts where casualties were less than 1,000 deaths per year were included, the number of conflicts in 1987 was estimated to be 36.⁸ Approximately 5 1/2 million soldiers from 41 countries were estimated to be directly involved in fighting and 3 to 5 million people to have died in the conflicts since they began, three times as many being wounded.

The large losses of life involved in these conflicts are themselves partly a result of their taking place in countries which do not have the infrastructure—hospitals, schools, food distribution systems or health delivery services—required to cope with normal requirements; they are overwhelmed by the strains of war. A war, particularly one in which the infrastructure is targeted, can be devastating. Moreover, in insurgent conflicts, “soft” targets—isolated farms and rural communities—tend to be attacked, causing a flight to urban areas and drastic reductions in food production. A recent example is Mozambique, where 42 per cent of health centres have been destroyed since 1982, depriving 2 million people of access to health care. In Angola, the delivery of health services is reported to have declined by 30 per cent throughout the country. In Angola, 600,000 of the most severely affected persons displaced by war were totally dependent on the Government for survival, and in Mozambique 3.8 million people were estimated to be at risk of famine.⁹

These considerations explain the conclusion that, although armed conflict is not new in this century, there are salient points to be noted about armed conflicts at the present time: (a) there probably have never been as many wars as there are today, nor so many combatants armed with such highly destructive weapons; (b) because of the nature of most of these wars, civilians are at greater risk and die in greater numbers than ever before; and (c) numerous local conflicts have the potential for escalating into regional wars or superpower confrontation.¹⁰

Modern conflicts rarely come to a definite or speedy conclusion. Of the 36 conflicts that continued into 1987, 4 started in the 1940s, 7 in the 1960s, 17 in the 1970s and 8 in the 1980s.¹¹ Warfare is becoming more destructive, but less likely to achieve the aims of its initiators.¹²

Conflicts usually arise for various and complex reasons. Two causes of conflict are frequently cited—religious and ethnic differences. These differences, however, are not a sufficient explanation. In many countries of the world where people of different religions live together, not only has there been no conflict, but national life has been enriched. Similarly, experience has shown that societies comprising many different ethnic groups can function effectively and that conflict is not inevitable.

But religious and ethnic differences, as well as other differences, can be sources of conflict when people are afraid of being dominated or of losing position or when they feel that the overall direction of society is at variance with their traditions and aspirations. Personal contacts, often acquired

through study, travel and sports, can help dispel these antagonisms.

Sometimes minority religious or ethnic groups wish to secede and set up a separate State and, to further this goal, resort to violence against the majority; or sometimes religious or ethnic groups who, through hard work and mutual support or encouragement by previous colonial rulers, enjoyed a prominence in society disproportionate to their numbers may resist, through force, attempts to provide opportunities for all.

In cases of open conflict, either within a country or between countries, the exploitation of religious and ethnic differences, the resuscitation of old fears and the constant reminder of past conflicts can make a negotiated settlement more difficult. Passions, once aroused, have proved very difficult to quell. The challenge for societies, and for the international community generally in the late 1980s, is not only to remove the immediate reasons for conflicts, but to reach durable solutions to any deep-seated differences.

2. *Military control of Government*

Military expenditure and large armed forces can themselves be threats to security if they jeopardize the rights and freedoms in a society. Advances towards greater enjoyment of human rights have often been accompanied by steps to exercise civilian control over the military. In 1948, the Government of Costa Rica abolished its army, feeling that the very existence of an army posed a threat to its long-standing democratic institutions. More recently, many countries, given a chance to do so, have for several reasons rejected military or military-dominated Governments in preference to parliamentary forums. On a general level, military rule makes it difficult to foster that spirit of participation which is increasingly seen as essential for development in all its aspects, including, particularly, social development.¹³ In addition, Governments under military control tend to be less respectful of human rights than civilian Governments. As noted in the *1985 Report on the World Social Situation*,¹⁴ military expenditures in countries with military Governments tend to be higher than in other countries, and their record in employing official violence against citizens and limiting their right to vote has been much worse. The situation in countries under military control has not changed markedly since then: it is estimated that of 59 such countries in 1987, only two did not employ official violence against their citizens, and only three did not impose limitations on the right to vote; 29 employed frequent violence against their citizens and 20 allowed no voting rights.¹⁵

3. *Non-military threats to security*

Threats to security do not come about through armed conflicts alone, whether internal or external. It is now recognized that many such threats are non-military. The International Conference on the Relationship between Disarmament and Development noted that underdevelopment and declining prospects for development, as well as mismanagement and waste of resources, constitute challenges to security. The degradation of the environment presents a threat to sustainable development. The world cannot be regarded as

secure so long as there is polarization of wealth and poverty at the national and international levels. Gross and systematic violations of human rights retard genuine socio-economic development and create tensions which contribute to instability. Mass poverty, illiteracy, disease, squalor and malnutrition afflicting a large proportion of the world's population often become the causes of social strain, tension and strife.¹⁶ Some of these threats, such as violations of human rights, are essentially within the purview of individual States to correct and the international community has a major role in ensuring that countries fulfil their obligations in this matter. Others, such as degradation of the environment, discussed in chapter VI above, require both national and international action. None of them can be addressed by increasing military expenditure.

Indeed, at the level of the individual country, greater military expenditure, resulting in the diversion of resources from other uses, can serve to increase non-military threats to security. The previous rapid build-up in arms in several developing countries in the 1970s and early 1980s, often financed partly by external borrowing, has been one of the factors responsible for their economic difficulties, which have, in turn, placed great strain on the social fabric.

A situation of declining prospects for raising levels of living is also a threat to security. Steady increases in living standards for all members of society is likely to foster social cohesion and national unity. A country in economic stagnation or decline faces the much more daunting task of reconciling the interests of different groups of society. Similarly, a combination of poverty and illiteracy provides a fertile breeding-ground for fanaticism and obscurantism, which can threaten social cohesion.

Degradation of the environment is another example of a threat to security. It can reduce the prospects for long-term growth and so weaken social cohesion. As a result of environmental degradation, particularly in Africa, large numbers of people have crossed international boundaries in search of better land. These movements can threaten the security of receiving States, as many of them simply do not have the resources to absorb large numbers of new immigrants (see chap. IX below).

The challenge for all societies is to adopt arrangements that will remove the possibility of the tensions and strains created by social and economic change leading to open conflict and violence. The design and implementation of social policy can play a crucial role in defusing such non-military threats to security.

C. MEASURES TO INCREASE SECURITY

1. *Disarmament*

One feature of the long peace since 1945 among the great Powers has been that global war has been deterred by the fear of mutual nuclear destruction. Nuclear deterrence has been maintained as each group has accumulated greater threats of destruction, with more destructive missiles and more reliable means of delivery. The consequences for the economy and society have been a diversion of resources for nuclear armaments from other activities and the accumulation of weapons sufficient to destroy the world several times

over. Less devastating in scale but equally gruesome in effect is the production and accumulation of chemical weapons for use in warfare. The build-up of conventional weapons of warfare, of an increasingly high level of technical sophistication, is also a feature of the arms build-up in recent decades.

There have been several agreements to control the spread and development of nuclear weapons. Prominent among these were the Partial Test-Ban Treaty of 1963, the Non-Proliferation Treaty of 1968, the SALT (Strategic Arms Limitation Talks) agreements, and the Intermediate-Range Nuclear Force agreement for the elimination of intermediate-range and shorter-range nuclear missiles, ratified in May 1988. It has been recognized that this treaty is only the beginning of a process for drastic reductions in nuclear armaments and one of the most significant developments in recent years has been the convergence of thinking by the two major alliances on the need to ensure security at greatly reduced levels of armaments and to build up confidence that their military doctrines and dispositions are seen to be defensive. Further negotiations are proceeding towards the achievement of a 50 per cent reduction in the nuclear arsenals of the United States of America and the Union of Soviet Socialist Republics.

In the movement for nuclear disarmament, advances in the technology of verification have increased confidence that it would be possible to monitor effectively compliance with any agreements to reduce or eliminate nuclear weapons. Far more important, however, has been the atmosphere of heightened co-operation extending to several spheres well beyond disarmament. One outcome was the Stockholm Agreement reached by the Conference on Disarmament in Europe, which came into effect in January 1987. The agreement included a package of measures on advance notification and observation of large-scale military exercises in Europe. At its third special session devoted to disarmament (May/June 1988), the General Assembly was unable to achieve consensus on a final declaration. There was, however, a noticeably increased sense of realism in the deliberations and a recognition that international efforts to achieve practical measures of disarmament must continue. A significant measure for reducing conventional arms and fostering mutual trust was the unilateral decision by the Government of the Union of Soviet Socialist Republics in December 1988 to reduce its armed forces by 500,000 within the next two years and troops in three of its Warsaw Treaty Organization allies—Czechoslovakia, the German Democratic Republic and Hungary—by 50,000 men and 5,000 tanks, as well as reorganizing the remaining divisions to make their role purely defensive.¹⁷

2. *Regional arrangements to preserve peace*

There have been several successful regional arrangements to reduce tensions and promote peace. These include the Antarctic Treaty, which both the Soviet Union and the United States have signed, the Treaty for the Prohibition of Nuclear Weapons in Latin America (Treaty of Tlatelolco), the Esquipulas arrangements between the States of Central America, the South Pacific Nuclear-Free Zone Treaty, and the Charter of the Organization of African Unity in which it

was specified that national boundaries at the time of independence should be respected. The Esquipulas arrangements among Central American countries are particularly noteworthy as they constitute an attempt by the countries themselves to resolve both their internal and external difficulties on a regional basis.

The arrangements for achieving peace in Afghanistan and the withdrawal of foreign troops were part of a series of instruments signed in April 1988 under the auspices of the United Nations, three between Afghanistan and Pakistan and one between the United States and the Soviet Union.¹⁸ There has also been progress in negotiations to bring about independence for Namibia in accordance with resolutions of the United Nations and international law. In the other area of conflict in southern Africa—Mozambique—the Soviet Union and the United Kingdom are separately helping to train sections of the Mozambique army to enable it to deal with the insurgency and subversion problem more effectively. Zimbabwe, a neighbouring country, has itself sent troops into Mozambique to guard the railway routes which are essential to both countries, thereby freeing units of the Mozambique army to help restore peace and security in the country.

Elsewhere in Africa, Morocco and Algeria, re-established diplomatic relations in May 1988 and, in August 1988, Morocco and the Polisario Front accepted the Secretary-General's proposals for ending the conflict in Western Sahara. Finally, the announcement by Viet Nam in January 1989 that it will withdraw its troops from Kampuchea by September 1989, if there is a political settlement, is expected to improve the chances for a peaceful solution of difficult problems in that area.

Some of these regional arrangements lend themselves to friendly support by outside parties, in particular through the provision of finance to help overcome economic difficulties. In some of the poorer regions, such as Africa, some tentative regional peace-keeping arrangements involving the use of third country African troops have had to be abandoned because of shortages of finance for the troops involved.

Within Europe, the present regional arrangement seeking to reduce tensions is the Conference on Security and Co-operation in Europe, in which 35 European and North American countries participate. In 1975, the Conference drew up the Helsinki Agreement, which validated the post-1945 border changes in Europe and therefore removed one possible source of tension. The Agreement also attempted to build confidence by, among other things, making provisions for greater mutual knowledge among people living in countries with different social systems. The signatories agreed that respect for human rights and fundamental freedoms was "an essential factor for the peace, justice and well-being necessary to ensure the development of friendly relations and co-operation among themselves as among all States".¹⁹ The signatories pledged to take into account the interest of all in the narrowing of differences in the levels of economic development, and in particular the interest of developing countries throughout the world. The Helsinki Agreement highlighted the linkages between international peace, security and justice, mutual understanding and confidence, and development.

3. *Redeployment of military resources to civilian uses*

A systematic reduction in existing stockpiles of armaments should foster mutual trust and security. The diversion of current and future resources to alternative productive uses will, however, present several challenges.

Reductions in expenditure on armaments would require the diversion of considerable proportions of personnel to other uses. To indicate the magnitude of the problem countries have been classified by the proportion of the labour force in the armed forces, as shown in table 41. The two developing countries in which the percentage was higher than 10 per cent are Iraq and the Syrian Arab Republic. Two other countries in West Asia, Israel and Jordan, maintain between 5 per cent and 10 per cent of their labour force in the armed forces. The Libyan Arab Jamahiriya and Nicaragua are also in this category. Greece is the only developed market economy country with more than 5 per cent of its labour force in the armed forces. The high percentages reflect perceptions of the military threat to security—whether from internal or external sources. In those economies where the scarcity of productive employment is already a serious problem, creating additional employment opportunities will require much attention in the formulation of economic and social development policies.

TABLE 41. PROPORTION OF THE LABOUR FORCE IN THE ARMED FORCES

Country group	Less than 1 per cent	1-5 per cent	5-10 per cent	More than 10 per cent	Total
(Number of countries)					
Developed market economies	7	15	1	-	23
Developing market economies	48	34	4	2	88
TOTAL	55	49	5	2	111

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on Ruth Leger Sivard, *World Military and Social Expenditures, 1987-88* (Washington, D.C., World Priorities, 1987).

Difficult problems also arise when communities and regions in arms-producing countries are highly dependent on arms manufacturing industries. This is particularly so if the armaments industry is located in economically depressed regions. However, given the high cost of modern and sophisticated weapons systems, the resources released and so potentially available for investment to provide capital for the civilian employment of workers released from the armed forces are likely to rise from the very process of disarmament. In the developed market economy countries where labour is scarce and in the centrally planned economies, the periods of adjustment are, then, likely to be much shorter than in the developing economies and the developed economies with high levels of chronic unemployment.

D. CONCLUSIONS

Recently there has been a marked change in prospects for reducing expenditure on armaments and maintaining peace. Some resources so released may be allocated to secure social

progress. The changes have come about under the pressure of falling government revenue, technological innovations enabling a more reliable verification of the development of weapons systems and new perceptions about relations between the two countries with the greatest military power. While there has been substantial relief from conflict in many regions, internal conflicts in several countries, including El Salvador, Ethiopia, India, Nicaragua, Northern Ireland, the Philippines, Sri Lanka and the Sudan, seem far from resolution. Such internal conflicts have roots in many factors—including religious, ethnic or ideological differences—and are inherently more difficult of resolution than struggles between States for territory or power. Economic and social development policies are an essential part of a process which can bring security to the people concerned.

NOTES

¹ Carnegie Endowment for International Peace, *The Hague Conventions and Declarations of 1899 and 1907* (New York, Oxford University Press, 1915).

² *International Conference on the Relationship between Disarmament and Development, New York, 24 August-11 September 1987: Final Document* (United Nations publication, Sales No. E.87.IX.8), para. 35. There were differences in approach between different delegations to the Conference; the Final Document was considered by some not to reflect their views adequately. The United States declined to participate, stating that it considered the questions of disarmament and development two distinct issues and that it was a mistake to presume there was an inherent relationship between the two.

³ Ruth Leger Sivard, *World Military and Social Expenditures 1987-88*, (Washington, D.C., World Priorities, 1987), pp. 8 and 42.

⁴ *Ibid.*, pp. 43 and 46-47.

⁵ "Study on the economic and social consequences of the arms race and military expenditures" (A/43/368), annex.

⁶ Sivard, *op. cit.*, p. 28.

⁷ The figures probably have a downward bias as wars which did not involve the major and colonial powers, such as internal conflicts in Africa in the eighteenth and nineteenth centuries, are not included here. See Ruth Leger Sivard, *World Military and Social Expenditures 1985, 1986, 1987-1988* (Washington, D.C., World Priorities).

⁸ Stockholm International Peace Research Institute, *SIPRI Yearbook 1987* (Oxford, Oxford University Press, 1987) p. 297; and *SIPRI Yearbook 1988*, p. 285.

⁹ United Nations Children's Fund, *Children on the Front Line: The Impact of Apartheid, Destabilization and Warfare on Children in Southern and South Africa*, (New York, 1987), pp. 11 and 19.

¹⁰ Stockholm International Peace Research Institute, *SIPRI Yearbook 1987...*, p. 299.

¹¹ *Ibid.*, p. 297.

¹² Sivard, *op. cit.*, p. 28.

¹³ See the Guiding Principles for Developmental Social Welfare Policies and Programmes in the Near Future, adopted by the Interregional Consultation on Developmental Social Welfare Policies and Programmes (Vienna, 7-15 September 1987): "A trend of special relevance to social welfare is the growing prominence of the concept of participation as both an aim and a means of social development" (E/CONF.80/10, para. 26).

¹⁴ United Nations publications, Sales No. E.85.IV.2.

¹⁵ Sivard, *op. cit.*, pp. 26-27.

¹⁶ *International Conference on the Relationship between Disarmament and Development ...*, para. 18.

¹⁷ Statement made on 7 December 1988 by Mikhail Gorbachev, General Secretary of the Central Committee of the Communist Party of the Soviet Union, at the forty-third session of the United Nations General Assembly (see A/43/PV.72).

¹⁸ See the remarks made by Mr. Gorbachev at a press conference on 1 June 1988, as reported in *The New York Times*, 2 June 1988, p. A18.

¹⁹ Declaration on principles guiding relations between participating States, Final Act of the Conference on Security and Co-operation in Europe, adopted at Helsinki on 1 August 1975; reproduced in *Relationship Between Disarmament and International Security*, Disarmament Study Series, No. 8 (United Nations publication, Sales No. E.82.IX.4), annex, sect. VII.

Chapter VIII

INTERNATIONAL CO-OPERATION AGAINST DRUG ABUSE, INTERNATIONAL TERRORISM AND AIDS

This chapter deals with three problems affecting the world social situation in which there has been successful international co-operation in recent years. The problems are drug abuse and trafficking, international terrorism and acquired immunodeficiency syndrome (AIDS). Each poses a threat to a large number of countries and to a significant proportion of the world population. The three problems are common to developed and developing countries, though in varying degrees. Their severity of and their potential for damage have been significantly increased by advances in technology and communication, which otherwise have brought great benefits to mankind. Highly destructive weapons which can be easily concealed and which have become obtainable at falling prices over the past few decades, fast and cheap international transport of passengers and goods, and cheap processes for refining substances have all contributed to spreading the prevalence and increasing the severity of these problems.

There is no inherent connection among these problems, however. AIDS is a pathological condition acquired in the course of human conduct and has, for the most part, little to do with pecuniary or political considerations. Drug production and trafficking are, in contrast, a source of large incomes for many people and an important source of foreign exchange earnings for a few countries. Terrorism is often an instrument of political significance. There are some links among the three, which for the purposes of this chapter are incidental. Terrorism has been used to protect the cultivation of and traffic in drugs, and syringes infected by drug users have been a carrier of the virus causing AIDS. They are treated together, however, because there has been some substantial progress in international co-operation, without which prospects for a solution to these problems would seem dim.

A. DRUG ABUSE AND ILLICIT TRAFFICKING

1. *Social costs of drug abuse*

The abuse of narcotic drugs and psychotropic substances has spread to such an extent throughout the world that it is now seen as posing a threat not only to the health but also to the security of nations. A particularly disturbing feature is that the drug-dependent population is getting younger, including even babies born to drug-dependent mothers. While the majority of drug abusers are men, the proportion of women abusers is increasing. Moreover, women abuse prescribed drugs more than men. Another particularly disturbing recent development is that the intravenous injection of drugs using unsterilized syringes has contributed to the

spread of a severe form of hepatitis and AIDS, which threatens the health and survival of the drug abusers themselves and leads to the spread of viral infection in the population.

The drugs that are currently most commonly abused (apart from tobacco and alcohol, which are not treated in this report) include cannabis, cocaine, heroin, opium and several psychotropic substances. Cocaine is by far the most subjectively rewarding illicit drug. It is the one drug that animals do not have to be trained to use, and which they consistently choose in preference to food and water, even to the point of death.¹ The abuse of prescription and over-the-counter drugs is causing growing concern among public health officials. It is estimated that 70 per cent of all cases of drug dependence and abuse result from the misuse of licit drugs such as sedatives and tranquillizers.

The extent of drug abuse and illicit trafficking defies precise measurement since the activities occur covertly. However, information obtained from Governments, United Nations organs and specialized agencies, and the International Criminal Police Organization (Interpol) is sufficient to conclude that drug abuse and illicit drug trafficking have risen sharply in recent years. Between 1980 and 1985, the amount of cocaine seized in the world increased by 476 per cent, that of heroin by 564 per cent and of cannabis resin (hashish) by 210 per cent (see table 42). Seizures of cannabis herb (marijuana) increased by 444 per cent between 1980 and 1984. These figures may be regarded as a barometer of the extent of illicit drug availability in the world, particularly in countries which offer lucrative markets and an ever-expanding drug demand, with drug addicts numbering in the millions. Illicit drug production and trafficking is a vast undertaking, financed and masterminded by criminal organizations.

Illicit drugs affect nations politically, economically and socially. Bribes, payoffs and donations to political campaigns are prime ways in which the illegal drug industry has sought to achieve political influence and protection from

TABLE 42. QUANTITIES OF DRUGS REPORTED SEIZED
WORLD WIDE, 1980-1985
(Tons)

Drug	1980	1981	1982	1983	1984	1985
Cannabis herb	5 806	5 300	7 295	11 719	25 804	6 484
Cannabis resin	172	291	222	2 782	309	360
Cannabis liquid	1	1	1	1	1	1
Cocaine	12	9	12	41	59	56
Heroin	2	6	6	12	11	14
Opium	52	54	46	83	59	41

Source: Division of Narcotic Drugs, United Nations Office at Vienna.

prosecution. In many producing countries, drug trafficking is closely linked with terrorism. The threat to law and order and the disruption of the normal institutions of society have made drug trafficking and terrorism a menace to civilized society. Moreover, the increasing use of violence by drug producers and traffickers against international drug control efforts, as well as the dealing in drugs for arms and the financing of terrorists through illicit drug trafficking, are now seen to pose severe threats to the national security of all nations and to the prospects for successful international narcotic drugs control.

Over the past two decades, the social consequences of drug abuse have become worse. Undesirable social behaviour and criminality have increased and a greater burden has been placed on education and health care services and law enforcement agencies. The abuse of drugs has adverse effects on all concerned: the worker himself, his co-workers, his employer, his family and society at large. For the worker it may mean the loss of employment and income, for his co-workers grievance and injuries, for the family anguish and despair, over and above the loss of income, and for society large additional expense.²

The cost to the economy in terms of opportunity cost is immense, and on a global scale, must be measured in billions of dollars. Drug users are one third less productive, over three times more likely to be involved in accidents on the job and twice as often absent from work compared with non-drug-using employees. The cost to industry and enterprise, as well as to the community in general, is not just that of a loss of productivity caused by individual inefficiency and the attempt to cover it up, but also increased rates of turnover, sickness and accident and injury to persons. The magnitude of accidental damage is most visible when persons operating vehicles or large pieces of equipment do so under the influence of drugs and fail to control their functioning at critical moments. Recent studies have shown the effects of legal and illegal drugs on babies born to mothers addicted to drugs. Unlike adults, these victims have no control over the behaviour—in this case of the mother—which places them at risk. Drug abuse during pregnancy is associated with shortened gestation, lower birth weights, abnormal reflexes, higher rates of spontaneous abortion and abnormal muscle tone. As these children approach school age, they show poor performances in tests.

2. *Efforts at limiting supply and curbing demand*

Drug control efforts for the most part have been aimed primarily at curtailing supply by halting illicit production and trade in narcotic drugs and psychotropic substances, and preventing their diversion into the illicit market, while ensuring availability for legitimate scientific uses. Expenditures on prevention, repression, treatment and rehabilitation after drug abuse take a high toll of resources. In 1986, the law enforcement agencies of the United States of America intensified the attack on drug production and illicit trafficking: the drug law enforcement budget of nearly \$1.9 billion in that year rose to \$2.5 billion in fiscal year 1988.

Attempts to reduce supply have not been very successful: as eradication and interdiction efforts have expanded, so has the world-wide capacity and geographical extension of the

narcotic drugs industry. The steady fall in the price of a gram of cocaine, as sold on the streets in major cities in the United States, from \$600 in 1983 to \$200 recently, even in the face of rising demand, is indicative of the rapid growth in supply. Massive operations in Bolivia, Colombia, Mexico and Peru to destroy the sources of drugs have left prices in consuming countries virtually unchanged, thereby indicating that there are vast quantities available in stock. In addition, attempts at reducing production have encountered many obstacles. A considerable number of persons are involved in narcotic drug cultivation, and profit from the sale of their crops for foreign consumption. The consumption of drugs is a long-standing tradition in some producing countries. Revenue from the sale of those crops constitutes an important source of foreign exchange in countries with few other profitable exportables and in those facing severe economic constraints. Accordingly, political leaders in many countries have reason to fear that a widespread eradication effort would destroy the livelihood of many, fuel discontent and perhaps provoke political unrest.

The drug problem is also a facet of the much broader problem of underdevelopment. Countries with high unemployment, severe debt problems, slow economic growth and highly unequal income distribution are not in a strong position to counteract drug production and trade. The narcotics industry not only creates jobs, but also offers an escape from poverty to many people and veritable fortunes to a few. It has been estimated that between 750,000 and 1.1 million people are directly employed in the drug trade in Bolivia, Colombia and Peru. In 1983, in a report of the Government of Bolivia, it was estimated that 300,000 Bolivians were engaged in cultivating, processing or transporting coca and its derivatives. That figure was updated in 1987 to 500,000. In Peru, where twice as much coca leaf is produced as in Bolivia, the number of those employed in the drug business is probably close to that for Bolivia. There is evidence from some countries of the region of the Economic Commission for Latin America and the Caribbean that returns per hectare from narcotic crops can exceed by 10 to nearly 20 times those from traditional agricultural products.³ The street value of cocaine is reported to be 120 times the cost of production, all of which is available for distribution among those who are parties in drug trafficking.⁴ Most drug-watchers reckon that coca-exporting countries receive in foreign exchange about half the export revenues earned by traffickers—or \$1.5 billion.⁵ For 1987, this would mean \$750 million for Colombia and \$375 million each for Bolivia and Peru. For comparison, the total value of recorded exports from Colombia was \$4,000 million and from Bolivia \$566 million in 1987.

The massive profits made from illicit drug trafficking provide resources to destabilize both political and economic systems of poor countries. Funds from the drug trade have been used to corrupt law-enforcement officials, leading politicians and those in national administrations. Illicit traffickers have intimidated and killed cultivators who have not wished to co-operate with them in the production and trafficking of illicit drugs. The illicit drug trade also has proved attractive to insurgents and terrorists who exploit the unrest caused by government suppression of narcotic drug farming. Illicit traffickers have used blackmail and murdered of-

officials who have been unco-operative or who have publicly condemned their activities. Some of the most egregious examples of their tactics were the assassination of Justice Minister Lara Borilla and Attorney-General Carlos Mauro Hoyos, who were leading officials in the fight against drug abuse and illicit trafficking in Colombia.

Over the past decade, eradication programmes and reduction of the economic incentive to grow illicit crops have increased in strategic importance. It has been demonstrated by the United Nations Fund for Drug Abuse Control (UNF-DAC) that income replacement programmes, including crop substitution, together with educational and other social measures taken primarily at the community level, as well as the promotion of rural, agro-industrial, forestal and marketing development, can offer important alternatives to farmers whose involvement in illicit crop production is a prime source of income.⁶ These economic and social development activities need to be carried out concurrently with effective law enforcement designed to deter illicit cultivation and production of narcotic drugs. Furthermore, every effort must be made by government authorities, the populations involved, and the international community to suppress the illicit cultivation of narcotic plants, as well as the illicit production of narcotic drugs and psychotropic substances and their precursor chemicals.

Those who use illicit drugs soon abuse them and become addicted. The high earnings from the production of and trade in narcotic drugs have their origin in the enormous demand for them in countries of all regions of the world. The size of and damage caused by this demand can be estimated by statistics on addiction, not only in countries to which drugs are exported, but also in transit and producing countries. Estimates of the number of drug abusers in selected countries in 1985 are given in table 43.

The earnings from the production and trade in narcotic drugs are illegal because Governments the world over have made the production of, trafficking in, and consumption of these drugs penal offences. It has been argued that if these activities were made legal, the involvement of criminal elements would cease and the resources employed in the enforcement of seemingly unenforceable laws could be put to other uses. It has also been argued that banning liquor in the United States after the First World War did not put an end to the consumption of alcohol and created a whole generation of mobsters. This argument, however, has been rejected by Governments because the rapid destructive force of narcotic drugs makes their case qualitatively different from that of alcohol. Historical experience indicates that in societies where narcotic drugs are socially acceptable and easily obtainable, they are widely consumed, and their use is associated with a high incidence of damage to the individuals involved and their societies.

In 1858, the legal trade of opium was imposed on China. By 1900, 75 million Chinese were addicted to the drug. It took a national revival and 50 years of strict measures for the country to become free of opium. In the 1890s, per capita consumption of opium reached a peak in the United States that has probably never been equalled. Cocaine, which had become available in a pure and cheap form beginning in 1885, peaked in consumption in the first decade of this cen-

tury and the United States was beset by a severe cocaine epidemic.⁷ There were no national laws restricting drug sales, and cocaine was available at the corner drugstore. The damage to users and their families caused by narcotic drugs became so widespread that pressure began to build for legislation. The establishment of a broad public consensus against cocaine took about 20 years, and a decade or more then passed before it was reduced to a minor problem. Attitudes changed, users became ostracized, and cocaine lost its appeal. Restricting the drug's availability was an important element of the solution. Similarly, the unrestricted commercial availability of cocaine and heroin in Egypt in the 1920s resulted in an epidemic abuse of these drugs, which was also curtailed following restrictive measures.

The lesson is that changing the legal status of narcotic drugs may shift costs but society would still pay, and even more dearly. The true solution to drug problems is to cut demand rather than to focus solely on cutting the availability of narcotic drugs. Much greater emphasis, therefore, has to be placed on primary prevention programmes to prevent drug abuse and addiction, as well as programmes for treatment and rehabilitation. Primary prevention of drug abuse through awareness, education and action is fundamental to long-term success in stopping drug abuse and drug-related crime. Prevention programmes should be integrated into the school curriculum and taught by all teachers. In addition, prevention, treatment and rehabilitation programmes should also be focused on the population subgroups with greatest drug use, such as school dropouts and the growing number of homeless people. A more intensive search for effective approaches to promote both preventive and treatment measures is needed, as well as a broader scope of implementation of such measures. Some therapies, such as methadone against heroin addiction, show remarkable success in the process of treatment of opiate-addicted persons. Reducing the market for drugs would also reduce AIDS, drug-related crime and newborn addiction.

Governments have acted with vigour to control the flow of drugs from producers to consumers. In contrast to the great and often unsuccessful efforts made by exporters in developing countries with government assistance to gain access to the distribution networks and markets for legal goods in developed countries, there is seemingly effortless success in obtaining such access for the sale of narcotic drugs. Organized criminals play a key role in this network. The capacity of criminals to convert income from criminal activities into legitimate assets has been a major incentive promoting the transport and marketing of narcotic substances. Illicit traffickers have displayed striking ingenuity in finding ways to foil the attempts of law enforcement officials to stem the flow of drugs to markets. Drugs have been transported concealed in hidden spaces in cars and in suitcases, in food containers, recording equipment, cameras, body cavities and corpses. Carriers have included airline crew, seamen, tour groups and even children. Experience in different parts of the world has indicated that an effective counter-measure to deter the individuals involved in drug trafficking from continuing their operations is to deprive them of their profits. Furthermore, strengthening the legal tools to assure appropriate penalties, and increasing the efficiency of the criminal

TABLE 43. ESTIMATED NUMBER OF DRUG ABUSERS USING SPECIFIED DRUGS, 1985^a

<i>Country or area</i>	<i>Heroin</i>	<i>Opium</i>	<i>Cannabis</i>	<i>Cocaine</i>
Bangladesh	10 000	30 000	2 500 ^b	
Bolivia				40 000
Burma	17 600	159 700		
Hong Kong	33 448			
India		31 714		
Japan			7 000-30 000	
Mauritius	10 000-15 000	400-500	4 000-5 000	
Malaysia	14 101		1 584	
Pakistan	300 000	377 000	595 000	
Philippines			1 906	
Singapore	6 500			
Sri Lanka	24 000			
United States	492 000			
Canada	3 275			
Austria			10 136	
France	75 000			
Italy	20 000		500 000	
Netherlands	15 000-20 000			
Spain	80 000-120 000			70 000
Germany, Federal Republic of	12 300		20 100	
Switzerland	10 000		10 000	
Sweden			12 500	

Source: Report of the Secretary-General on drug abuse and measures to reduce illicit demand (E/CN.7/1987/9).

^a The data for France, Switzerland, Sweden and the United States are for 1984.

^b Thousands.

justice system in arresting, prosecuting and sentencing traffickers will supplement the activities of police and customs authorities.

3. *International efforts to combat drug abuse and illicit trafficking*

The international fight against narcotic drugs pre-dates the formation of the present international organizations, beginning in 1912 when the International Opium Convention was adopted. Subsequently, the League of Nations adopted three main conventions: the Second International Opium Convention of 1925, the Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs of 1931, and the Convention for the Suppression of the Illicit Traffic in Dangerous Drugs of 1936. The United Nations adopted the Single Convention on Narcotic Drugs in 1961, the Protocol amending the Single Convention in 1972⁸ and the Convention on Psychotropic Substances in 1971.⁹

The 1980s brought dramatic changes in attitudes towards drug abuse. The scope of the drug problem and the seriousness of the threat it poses have been universally recognized. Many heads of State have directed their personal attention to launching counter-offensives against drug abuse and illicit trafficking. As drug dependence grew to alarming proportions—an estimated 48 million people worldwide regularly use illicit drugs—the demand side of the equation has assumed increasing importance.¹⁰ The international community has realized that in order to deal with the totality of the

problems posed by drug abuse and illicit trafficking, both the supply of and the demand for drugs should be reduced and action should be taken to break the link between consumers and producers, which is illicit trafficking.

This was one of the main premises of the United Nations International Conference on Drug Abuse and Illicit Trafficking, held in 1987. The two principal documents adopted at the Conference were the Comprehensive Multidisciplinary Outline of Future Activities in Drug Abuse Control¹¹ and the Declaration of the International Conference on Drug Abuse and Illicit Trafficking.¹² The Comprehensive Multidisciplinary Outline covers the main elements in the fight against drug abuse and illicit trafficking, including the prevention and reduction of illicit demand, treatment and rehabilitation, the control of supply, and action against illicit trafficking. The focus is on the following key areas: promotion of education and community participation in the prevention and reduction of the illicit demand for drugs; improved methods to limit the use of narcotics to medical and scientific purposes; improving the treatment and rehabilitation of drug addicts; crop substitution and other methods of reduction of supply; forfeiture of illegally acquired proceeds and the extradition of persons arrested for drug-related crimes; and strengthening the resources of law enforcement authorities.

The Declaration adopted by the Conference reaffirmed the political will of nations to fight the drug problem and set forth priorities for future action against drug abuse and illicit trafficking. By this Declaration, the States participating in the Conference committed themselves to vigorous interna-

tional action against drug abuse and illicit trafficking as an important goal of their policies; expressed their determination to strengthen action and co-operation at all levels towards the goal of an international society free of drug abuse; and to strive for universal accession to and strict implementation of the 1961 Single Convention on Narcotic Drugs, its 1972 Protocol and the 1971 Convention on Psychotropic Substances.

In view of the rapid evolution of government positions with respect to problems arising in connection with drug abuse and illicit trafficking, a new United Nations convention against illicit traffic in narcotic drugs and psychotropic substances will deal with those aspects of the problem not covered in existing international drug control treaties. The adoption of this important new instrument would lead to fundamental changes in approach by many Governments to drug-related problems and would also lead to increased international co-operation in the war against the illicit drug traffic.

Many Governments are strengthening their national enforcement capabilities and improving bilateral co-operation, which has led to the arrest of notorious traffickers and sometimes their extradition, the breaking up of criminal organizations, the destruction of illicit laboratories and airstrips, and the seizure of large quantities of drugs, together with substantial quantities of weapons and vast sums of money.

B. INTERNATIONAL TERRORISM

The problem of terrorism¹³ is in some respects similar to that of drug abuse: it has long been present in the world but has assumed increasing importance in recent years, threatening the stability of States, and has led to calls for action at the international level. Such calls have stressed the need to study the “underlying causes of those forms of terrorism and acts of violence which lie in misery, frustration, grievance and despair and which cause some people to sacrifice human lives, including their own, in an attempt to effect radical changes”.¹⁴

A study of the roots of terrorism is important because it is not a random activity conducted by isolated individuals. As the above quotation implies, the causes of some, but only some, terrorist acts can be traced to misery and frustration. In Europe in the 1970s, terrorist cells were not composed of people who were denied a voice in the political system and whose misery was such that it could explain their resorting to violence. The radical changes that they hoped to effect—and it was not always clear what these changes were—were not supported by the bulk of the population. Yet they can, to some extent, be traced to the student protests that swept Europe in 1968, which in turn demonstrated a deep dissatisfaction with society. A study of the roots of these terrorist cells would involve a very deep probing of the psychology of the participants and why they rejected and wished to destroy the societies in which they lived, especially as such societies were apparently stable and well-functioning. The existence of terrorism thus raises disturbing questions for societies, especially at a time when economic advance and widespread education have removed many of the more obvious causes of social disintegration. In this respect, questions of terrorism

are similar to those concerning crime in general—why is it that social progress and development have often been accompanied by an increase in criminal activities?

For the moment, though, the international community's co-operative efforts have been directed towards concrete steps in dealing with terrorism. In the Convention for the Prevention and Punishment of Terrorism, adopted at Geneva in November 1937,¹⁵ terrorist acts were described as “criminal acts directed against a State and intended or calculated to create a state of terror in the minds of particular persons or a group of persons or the general public”. As mentioned above, the reason for creating a state of terror is often to accomplish a change in government policy.

Defining terrorism as a criminal activity, as in the 1937 Geneva Convention, distinguishes it from regular armed struggle or even from insurgency or partisan warfare. Armed struggles are or should be governed by the rules of war, principally the 1907 Hague Convention respecting the Laws and Customs of War on Land and the Geneva Conventions of 1949 and the supplementary protocols of 1977.¹⁶ In this context, one definition of a terrorist act has been an act committed in peace-time which, if committed in wartime, would be considered a violation of the rules of war.¹⁷ However, difficulties have still been encountered in drawing a clear line between terrorism and the struggle of “peoples under colonial and racist régimes and foreign occupation or other forms of colonial domination”.¹⁸

One objective of many terrorist groups is to weaken the commitment of Governments to the protection of human rights and the rule of law. However, a commitment to these principles is very important to maintaining public support for the struggle against terrorism, which is itself crucial to success. In several European countries, the number of terrorists was quite small, some groups having about 20 to 25 hard-core members, and efficient police work, aided by information provided by the public, was effective in leading to the arrest of many terrorist leaders.

Terrorism is not simply an internal problem, as it often has international ramifications. Terrorists may attack nationals or the property of other countries. They may cross borders to obtain arms and supplies or a safe retreat or they may forge links with terrorists in other countries. Terrorists operating from one country can exert pressure on another country.

Similarly, the departure by a Government from the rule of law, even though confined to its own borders, also has international implications. In the first place, it necessarily involves a denial of human rights as embodied in the Universal Declaration of Human Rights. Secondly, the weakening of respect for the rule of law at the domestic level can have repercussions in weakening respect for the rule of law at the international level.

1. *The inflammatory potential of terrorist incidents*

International terrorism, which has been the focus of the international community's concern, is fraught with much greater dangers for world peace and security than the actual number of victims may suggest, as frequently the targets of terrorist attacks are heads of State, government ministers or

other notable figures.¹⁹ Precisely because terrorists frequently design their outrages to shock and alarm in order to draw attention to their cause, the effects of their actions can be far greater than and far different from what they had anticipated. In this manner, terrorism introduces a random and highly dangerous element into international relations.

Another reason for the growing concern about international terrorism is the increasing sophistication of the weapons used. The interconnection between terrorism and drug cultivation and trafficking in some countries in Latin America has produced what are, in effect, private armies, equipped with modern weaponry. If international terrorist groups were to obtain access to anti-aircraft or anti-ship missiles and to use them in their attacks, the effects could be devastating. The ultimate fear is that terrorists will acquire access to, or even produce, a nuclear weapon. Thus, no matter how small the number of terrorist victims might be in any particular year, the fact that there are groups prepared to kill for political purposes, and the possibility that such groups might one day consider it in the interest of their cause to explode a nuclear device, make terrorism a constant preoccupation for the international community.

2. The geographical distribution of international terrorist incidents

Estimates of the total number of international terrorist incidents, their analysis by geographical area, type of attack,

intended target or victim, and the number of victims, both dead and wounded, are given in table 44. These figures are for international terrorist incidents only, and are released by one Government. There are no universally accepted statistics on terrorism. However, the broad picture indicated by these statistics tends to conform with generally held perceptions of the extent and nature of the phenomenon. Since the late 1960s, there has been a marked increase in international terrorist incidents: from 125 in 1968 to 532 in 1980 and 831 in 1987. They have shown little sign of diminishing on an international scale. Similarly, the number of victims rose from 241 in 1968 to 1,569 in 1980 and 2,905 in 1987.

At the beginning of the present decade, Western Europe, the Middle East and Latin America were the areas where most international terrorist attacks were perpetrated. Towards the end of the decade, the situation in Western Europe had improved and in Latin America there was no marked change. The situation in the Middle East and the rest of Asia had deteriorated.

Only two major areas have been relatively free of international terrorist activities on their domestic territory—as distinct from their installations in other countries—North America and Eastern Europe, including the Union of Soviet Socialist Republics. In both groups of countries, maintaining control over international borders to ensure that suspected terrorists do not enter is easier than in, for example, Western Europe, where visa requirements tend to be loose, reflecting its closer economic and political integration,

TABLE 44. INTERNATIONAL TERRORIST INCIDENTS, 1968-1987
(Percentage of total)

	1968	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
Total	125	309	382	532	496	477	485	598	785	774	831
<i>By region^a</i>											
Africa, Sub-Saharan	0.0	3.6	6.3	4.7	3.8	3.4	4.1	7.5	5.5	2.6	3.5
Asia/Pacific	0.8	7.8	5.8	5.5	3.0	5.9	7.6	4.5	5.4	9.9	20.8
Eastern Europe and USSR	0.0	0.3	0.5	0.6	1.4	1.0	0.4	0.2	0.3	0.0	0.1
Latin America	36.0	41.4	17.5	24.8	22.6	20.1	24.9	13.9	15.2	20.5	13.0
Middle East	14.4	12.9	18.3	22.2	19.6	10.7	22.1	34.3	45.5	46.5	44.5
North America	32.0	8.1	15.4	6.4	6.3	6.7	1.9	0.8	0.5	0.3	0.0
Western Europe	16.8	25.9	36.1	35.9	43.3	52.2	39.0	38.8	27.8	20.2	18.1
<i>By type</i>											
Bombing	66.4	40.5	51.0	42.3	50.8	55.3	51.2	50.7	48.4	59.2	56.9
Armed attack	16.8	11.0	13.6	31.8	20.6	14.8	15.1	23.3	17.1	16.7	15.7
Arson	9.6	18.1	11.3	8.6	9.4	15.2	9.5	9.7	12.4	14.3	18.0
Kidnapping	0.8	13.9	14.7	3.0	4.9	6.5	8.1	7.7	10.6	6.1	6.4
Skyjacking	2.4	5.8	1.0	1.5	2.4	1.0	1.2	1.7	0.7	0.2	0.1
Other	4.0	10.7	8.4	12.8	12.0	7.1	14.9	7.0	10.8	3.4	2.9
<i>By target</i>											
Business	17.5	15.7	28.0	17.3	15.3	23.0	13.2	22.9	23.5	24.9	20.0
Diplomat	31.7	29.5	28.0	36.4	38.3	33.8	33.5	18.5	9.4	10.1	7.6
Government	20.6	20.0	6.9	8.7	6.99	5.9	10.0	11.7	9.5	10.9	9.2
Military	2.4	5.9	3.5	8.6	9.1	11.5	16.2	7.4	6.9	6.0	8.7
Other	27.8	28.9	33.7	29.0	30.3	25.8	27.1	39.5	50.6	48.0	54.5
<i>Number of victims</i>											
Total	241	336	782	1 569	972	883	1 904	1 279	2 042	2 321	2 905
Dead	34	127	266	507	168	128	637	312	825	604	612
Wounded	207	209	516	1 062	804	755	1 267	967	1 217	1 717	2 293

Source: Department of State of the United States of America, Office of the Ambassador at Large for Counterterrorism.

^a The geographical classifications are those given by the Department of State.

which has facilitated a very large volume of tourists and other visitors. In some Western European countries, the number of annual visitors exceeds the total resident population, making control very difficult. Although Western Europe was unprepared for the rapid increase in international terrorist attacks in the 1970s—from 21 in 1968 to 80 in 1970 and a peak of 257 in 1977—figures indicate that the situation has improved recently.

Some lessons can be learned from the experience of Western Europe and other countries. The fight against terrorism has been costly. Terrorism has taken or threatened the lives of heads of State and Government and thousands of ordinary people and destroyed much infrastructure and equipment. Heavy security precautions around public figures, checks and screenings at airports, suspicion of any unattended parcel are all now accepted as necessary features of life in most countries.

In Western Europe and many other areas, Governments have not departed from the rule of law in combating terrorism. In spite of provocation by terrorist groups, constitutional guarantees were not suspended. If it had been the intention of domestic terrorist groups to provoke the authorities into suspending civil rights in an effort to combat terrorism, and then to claim that they were fighting against an “oppressive” régime, that intention was not realized.

Another lesson from this experience is the importance of developing appropriate responses to threats posed by terrorists. Although a country’s armed services are trained to use sophisticated equipment in the battlefield, combating terrorists does not generally require the use of regular armed forces or their equipment. In most instances if the military were used at all, it was in support of the regular police authorities, and special military units were trained for action, when necessary, against terrorists. In the United Kingdom, when the Iranian Embassy in London was seized by terrorists in 1980, the Government used the Special Air Services to effect the rescue of the diplomatic hostages in accordance with the requirement of international law that a host country should protect foreign diplomats. Similarly, when in 1977 domestic and West Asian terrorists hijacked a plane from the national airline of the Federal Republic of Germany, and held its passengers hostage in Somalia, the Somali Government acceded to the request of the Government of the Federal Republic of Germany that it admit to its territory the special anti-terrorist force, GSG-9, which overpowered the terrorists and freed the hostages. Similarly, in March 1981, Indonesian commandos, in co-operation with the Government of Thailand, rescued the passengers from an Indonesian plane that had been taken to Bangkok.

Another principle that is widely accepted is not to accede to the demands of terrorists. In Italy, the Government refused to make concessions to the terrorists who held former Prime Minister Aldo Moro in 1978. Similarly, in Kuwait in 1988 the Government refused to negotiate with the hijackers of one of its aircraft, even after the terrorists had murdered Kuwaiti nationals on board.

The experience of recent years has shown that terrorist atrocities rebound against the causes in whose name they are perpetrated. The repugnance against the loss of totally innocent lives suffered in certain airline and ship hijackings and

consequent upon the planting of bombs in congested areas has served to diminish what support there might have been for the causes the perpetrators espoused.

3. *Terrorism conducted against nationals of third countries*

The geographical distribution of terrorist incidents does not correspond to the geographical distribution of victims. One reason for this is that many terrorist attacks are either random—involving, as in some instances, airline passengers irrespective of nationality—or are directed precisely at nationals of one country living in another, particularly its diplomatic personnel or its armed forces abroad.

Another reason is that countries in Western Europe are often chosen for the locus of terrorist incidents because terrorists perceive that atrocities committed there can more effectively influence public opinion. Further, prominent nationals of those States that the terrorists seek to intimidate often live in exile in countries in Western Europe. In addition, in Western Europe, there are a number of “ethnic” terrorists who do not so much want to disrupt the political process of the country as to effect a change in a particular region, such as the North of Ireland, the Basque country, and Corsica, and who at times co-operate with other distinctly domestic terrorist groups whose aim is to subvert the system of government of those countries and disrupt their existing alliances.

4. *Growing international repudiation of terrorism*

Terrorism, like crimes, cannot be expected to be eradicated altogether in the near term. However, as with other crimes, efforts to prevent it include steps to reach a deeper understanding of the social and historical factors that can help explain why individuals and organizations commit terrorist acts, as well as efforts to increase the chances of apprehending terrorists and bringing them to justice, wherever they perpetrate terror and wherever they seek refuge. The United States has passed legislation to make it a crime, punishable under its laws, to commit any terrorist act involving United States citizens anywhere in the world. There has also been a hardening of the public attitude to terrorism over the past 20 years, which has made it possible for societies to refuse to deal with terrorists or to yield to their demands. In some instances, the perception that a Government has been negotiating with terrorists or their supporters has led to domestic political crises. Similarly, a widespread perception that a State is supporting or acquiescing in international terrorism has become increasingly important in the matrix of factors which determines its position in international affairs, and therefore its own security. For this reason, it has been recognized to be in the collective interest of all nations not just to oppose terrorism, but to be beyond any suspicion of involvement, direct or indirect, with terrorist activity.

To perpetrate a terrorist crime in a foreign country, particularly one with closely guarded borders and an efficient police and watchful public, the sponsorship or active help of foreign government officials can be, at the very least, extremely helpful. Foreign government officials have it in

their power to supply false passports, smuggle in weapons, meet the terrorists' expenses and offer them safe haven in diplomatic premises. They can also supply useful intelligence on how best to perpetrate the crime. The problem has been considered sufficiently serious by some regional groupings to take collective action. The Council of Europe, whose member countries have been particularly exposed to attacks by international terrorists, have drawn up a resolution to co-operate "in measures to counter terrorism involving abuse of diplomatic or consular privileges and immunities and terrorism directed at diplomatic or consular representatives";²⁰ it was resolved that if one member of the Council of Europe suffered from an act of terrorism encouraged by a State, the member States would consider what action in accordance with international and domestic law they might take jointly or individually to respond to this and in particular to make clear to the offending State that such behaviour was unacceptable.²¹ Likewise, in 1987, the South Asian Association for Regional Co-operation adopted a Regional Convention on the Suppression of Terrorism.

5. *International co-operation against various acts frequently perpetrated by terrorists*

The international community has attempted to address the issue of international terrorism. The General Assembly, at its twenty-fifth session in 1970, adopted the principle that each State should refrain from organizing, instigating, assisting or participating in acts of civil strife or terrorist acts in another State or acquiescing in organized activities within its territory directed towards the commission of such acts.²² Subsequently, the General Assembly established an *Ad Hoc* Committee on International Terrorism, which submitted its report to the Assembly in 1979.²³ In addition, agreements covering certain specific crimes that terrorists frequently commit, often with a view to drawing international attention to themselves, have been reached. These agreements include the Convention on Offences and Certain Other Acts Committed on Board Aircraft, signed at Tokyo on 14 September 1963,²⁴ the Convention for the Suppression of Unlawful Seizure of Aircraft, signed at The Hague on 16 December 1970,²⁵ the Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation, signed at Montreal on 23 September 1971,²⁶ the Convention on the Prevention and Punishment of Crimes Against Internationally Protected Persons, including Diplomatic Agents, concluded at New York on 14 December 1973,²⁷ the International Convention Against the Taking of Hostages, concluded at New York on 17 December 1979,²⁸ and the Convention on the Physical Protection of Nuclear Material, concluded at Vienna on 3 March 1980. In February 1988, under the auspices of the International Civil Aviation Organization, a Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation was adopted to supplement the 1971 Montreal Convention. Finally, under the auspices of the International Maritime Organization, a new Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, as well as a Protocol relating to platforms located on the continental shelf, was adopted in March 1988.

The Security Council referred to the relevant international conventions when condemning unequivocally all acts of hostage-taking and abduction, and urged the "further development of international co-operation among States in devising and adopting effective measures which are in accordance with the rules of international law to facilitate the prevention, prosecution and punishment of all acts of hostage-taking and abduction as manifestations of international terrorism".²⁹

The growth in co-operation among States against terrorism shows that countries with different ideologies and social systems can work together against a common threat. Indeed, the behaviour of terrorist groups professing to further a particular ideology or religion has been condemned by States which adhere to that particular ideology and by leading religious figures. The destabilizing and tension-creating potential of terrorist acts was stressed by the socialist countries of Eastern Europe and the Soviet Union in their condemnation of "international terrorism in all its forms, wherever and by whomever, and for whatever motives, terrorist acts are committed"; they considered terrorism an "evil which deprives innocent people of their lives and destabilizes the international situation, creating new sources of tension and provoking international conflicts".³⁰ The General Secretary of the Central Committee of the Communist Party of the Soviet Union and Chairman of the Presidium of the Supreme Soviet has proposed a radical strengthening and expansion of co-operation among States in the eradication of international terrorism within the framework of the United Nations.³¹

The developed market economies have tried to increase co-operation among themselves and at an international level to combat terrorism. The United States of America has played a prominent role in this regard and, largely through its efforts, terrorism is very much an issue on the international agenda. However, it has not always been easy to achieve the degree of co-operation desired, and at times requests for extradition have been refused. It is possible that some of the difficulties would be removed if there were a legal definition of "terrorism". A source of inspiration could be found in the November 1937 Geneva Convention for the Prevention and Punishment of Terrorism. The Convention was signed by 24 European and Latin American countries, Egypt, India and the Soviet Union. The signatories affirmed that it was the "duty of every State to refrain from any act designed to encourage terrorist activities directed against another State and to prevent the acts in which such activities take shape".³² Thirteen parties to the Convention also signed a draft convention for the creation of an international criminal court at The Hague that would have entitled contracting parties to have terrorists tried by that court rather than either prosecuting them themselves or extraditing them. The 1937 Geneva Convention never came into force, but its language has served as a model for subsequent model conventions, such as that submitted by the United States to the General Assembly in 1972.³³ In resolution 42/159, the General Assembly requested the Secretary-General to seek the views of Member States on international terrorism in all its aspects and on ways and means of combating it, including, *inter alia*, the convening, under the auspices of the United Nations, of an international conference.

C. AIDS

1. *Global spread of AIDS*

Acquired immunodeficiency syndrome is a disease caused by a new and deadly virus, the human immunodeficiency virus (HIV), which gradually disables the body's immune system. HIV is transmitted primarily through sexual contact. It is also transmitted by contaminated blood and blood products, passed through transfusions or by sharing or reusing contaminated syringes or other equipment, and from an infected mother to her child during or after birth. Heterosexual contact appears to be less responsible for its transmission in most developed countries but may be the main means of transmission in many developing countries. HIV can remain in a person's body for years, perhaps even decades, before symptoms begin to appear. Once AIDS develops, it has, so far, always proved fatal. The term "AIDS" refers only to the last, fatal stage of the HIV infection.

Current evidence suggests that at least 10 per cent to 30 per cent of HIV infected persons will develop AIDS within five years of infection. That percentage may be even higher over a longer period of time. In addition to AIDS itself, other illnesses may occur, including AIDS-related complex (ARC) and neurological disease. Thus, in the first five years after infection with HIV, 20 per cent to 50 per cent of persons can be expected to develop AIDS-related diseases, in addition to those who develop AIDS.³⁴

The global spread of the HIV infection appears to have started during the mid-1970s. Because of the long symptom-free period between initial infection and disease, HIV spreads unnoticed. It has been suggested that between 5 and 10 million people may be infected with HIV virus worldwide.³⁵ However, because the disease and its pathogens have been under scientific study for only a short period of time, their natural history is as yet inadequately understood.

The magnitude of the HIV problem and its wide spectrum of effects has been seriously underestimated and underappreciated, but there is now a widespread realization that the implications of AIDS in terms of human suffering, cost of health services and social impact are enormous.

As at 31 December 1988, a total of 132,976 cases of AIDS had been reported to the World Health Organization (WHO) from 143 countries; of all reported cases, about 71 per cent were from 42 countries in the Americas, about 12 per cent from 28 European countries, about 16 per cent from 46 African countries, and the remaining 1 per cent from 27 countries in Asia and Oceania. In the past four years, the cumulative number of AIDS cases reported to WHO increased over 15-fold (see figure XIII). Nearly 100 more countries report AIDS cases today than did four years ago.

The data, however, do not represent a complete picture of the incidence of the disease. Underreporting of AIDS is recognized as endemic, especially in developing countries, for several reasons. In many of the world's poorest countries, where physicians and medical facilities are scarce, the likelihood of a person ever seeing a doctor, much less having the disease diagnosed, is remote. Moreover, diagnosing AIDS accurately is complex, and even diagnosed cases may not be reported by local to national health authorities. The negative image of a country conveyed by its having a large number of

reported AIDS cases also encourages underreporting in some developing countries, as it has a potentially harmful impact on tourism. WHO has estimated that the actual number of people infected with the AIDS virus at the end of 1988 may have been 350,000.³⁶

There are three distinct patterns in the incidence of AIDS. The first (Pattern I) includes Western Europe, North America, some areas of South America, Australia and New Zealand. Within the Americas, over 80,538 cases have been reported in the United States. The United States Public Health Service estimates that by 1991, there will be 270,000 cases of AIDS in that country—about five times the total number of cases reported there so far.³⁷ In this pattern, most cases occur among homosexual and bisexual men and intravenous drug users who share contaminated syringes. Although heterosexual transmission currently accounts for a smaller percentage than homosexual contact, its proportion has increased from 1 per cent in the early 1980s to approximately 5 per cent in 1988. HIV transmission from blood or blood products is no longer a serious problem, as blood for transfusion is screened and blood products are treated to prevent contamination. Perinatal transmission is currently uncommon in this pattern, although recent research suggests that years may elapse before the onset of AIDS.

The second (Pattern II) involves parts of Central, Eastern and Southern Africa, Latin America, especially parts of the Caribbean, where health care and public health systems are even for current purposes inadequate. AIDS poses a particularly serious problem in the developing countries of those regions. Though the figures are not known, they account for an increasing percentage of the global total of cases. The dimensions of the AIDS epidemic and its socio-economic impact are still difficult to predict, but there is reason to believe that they will be devastating in some of the world's poorest regions, owing to extreme poverty, weak public health infrastructure, lack of blood screening, and severe shortage of funds for prevention. Limited resources inhibit the ability to respond to the AIDS challenge with effective prevention campaigns.

In Africa, heterosexual contact is presumed to be the predominant mode of transmission and the sex ratio of cases is approximately one. Although cases were first officially reported from Africa in the second half of 1982, most of the cases were reported between July 1986 and December 1988. In some urban areas up to 25 per cent of the 25-40 age group may be infected. Transmission through contaminated blood, through use of unsterilized syringes and from mother to child has become a serious health problem. The latter is a significant source of infection, especially in areas where 5 per cent to 15 per cent of pregnant women have recorded seropositive for HIV. At least 2 per cent to 4 per cent of newborns may be perinatally infected. Increasing infection rates among children have given rise to concern that immunization programmes could serve to transmit the virus from one child to another when syringes are improperly sterilized or reused. If some of the vaccinated children carry the AIDS virus, there is risk that an HIV-contaminated syringe could spread the virus to uninfected children.³⁸ The treatment of malaria with blood transfusions may also provide a means of exposing people to HIV infection.

The third (Pattern III) includes Asia, parts of the Pacific region, West Asia and Eastern Europe. In this category, HIV probably appeared in the mid-1980s. There is no evidence so far that HIV has spread among the general population. Most cases occur in homosexual persons or recipients of blood and blood products. Given the modes of transmission, it is unlikely that these countries will remain free from infection and disease.

2. *Socio-economic repercussions of AIDS*

No other disease is likely to present as broad a challenge as AIDS, with its economic, social, cultural and political ramifications. It raises crucial humanitarian and legal issues having a profound bearing on the cohesion, tolerance and fundamental values of societies. AIDS is a modern affliction. The AIDS pandemic has been abetted by changes in lifestyle and social mores. It throws new light on traditional values.

The AIDS pandemic has the potential to affect many areas of social policy; it is a major health challenge. Owing to its mode of transmission, approximately 75 per cent to 90 per cent of cases in both developed and developing countries are between 20 and 40 years of age.³⁹ AIDS also poses a threat to both mothers and children. In areas where 5 per cent of pregnant women are infected with the virus, the increase in infant mortality rate would be approximately 13 per 1,000 live births, which alone exceeds the total infant mortality rate from all cases of death in industrialized countries. The impact of HIV and AIDS in young people and infants might cause a decline in national life expectancies in many countries. The spread of the disease will also draw heavily on resources for medical care and attention and the impact will be felt by individuals, families, hospitals, insurance companies and Governments at all levels. In the United States, the cost of in-patient care from diagnosis to death ranges from \$50,000 to \$150,000.⁴⁰ In developing countries, the direct and indirect costs of AIDS, while much lower, are still beyond the capacity of most countries' health infrastructure and resources. In countries with a small cadre of trained workers, the loss of even a small number of these workers can cause severe damage.

There is a significant social cost when large numbers of productive members of society are affected. In terms of social and economic development, AIDS robs society of their economic and social contribution. The family structure and function are threatened both by infection and by the loss of mothers and fathers. Their illness and death mean loss of productivity, human capital and support for children and the elderly. Moreover, their care depletes already scarce resources of both families and health-care structures. Should AIDS raise infant mortality rates, some gains in reducing fertility might be reversed.

Complex ethical and human rights issues are raised by the spread of AIDS. The public's response to AIDS, as demonstrated in a number of developed countries, has been characterized by fear, discriminatory behaviour and proposals for policy measures that are unwarranted. Unfounded anxiety about the risks of acquiring AIDS continues to be a tragedy for individuals, families and entire societies. Anxiety results

in widespread discrimination against AIDS-infected persons. The stigma has led to loss of employment, limits to access to education, housing and other social services, denial of insurance coverage, abandonment by friends and separation from family, and the reassessment of social and personal needs. Questions may arise in workplaces about testing prospective employees for the HIV infection, about hiring or firing someone who has AIDS, or about the refusal of employees to work alongside or provide services to someone with AIDS.

Children with AIDS have been abandoned by their parents, placed in foster homes and denied access to public schools. Some private hospitals refuse to admit HIV-infected children. Feelings of stigmatization during hospitalization are frequently expressed. The fear inspired in some health care workers by the advent of AIDS has disquieting implications for medical ethics. AIDS patients may be placed in isolation, hospital staff might refuse to take care of them, failing to fulfil an ethical obligation to provide them with adequate care. In some countries, several public health measures have been suggested, such as isolating and quarantining infected persons, mandatory testing or screening and compiling registries of those who are infected.

AIDS has caused a number of Governments to discuss and implement the screening of visitors for HIV. Many of the countries implementing measures have already sizeable AIDS spread within their borders. Other countries with restrictive regulations screen only particular types of visitors, for example foreign students and workers.

3. *National and international responses to the spread of AIDS*

Governments are determined to fight the spread of AIDS both collectively and individually. The global scope of the AIDS crisis has triggered extensive international co-operation among scientists, and co-ordinated efforts on the part of public health officials, aimed at initiating an effective programme for monitoring and controlling this menacing disease. Intense research is now being directed towards AIDS care and prevention and to producing vaccines and drugs. However, it is not believed that a vaccine would be available for several more years, in part because of the variety of strains of AIDS. Clinical trial testing to treat AIDS patients with Zidovudine (or AZT) indicates that this appears to be the most promising drug at present, notwithstanding the serious side effects.⁴¹ While international medical and health efforts are central to the struggle against this epidemic, until research yields results, prevention remains at present the only effective weapon. Education programmes and public information are indispensable and remain the only instruments at this stage to curb the spread of the disease.

Many countries carry out information and education campaigns targeted at the general population. Radio and television spots, syringe exchange programmes, advertising of condoms, counselling and creation of telephone hot-lines, work among high-risk groups, are the efforts being exerted by several developed countries. Early in 1986 the United Kingdom organized a nation-wide mass media campaign with the aim of educating people about the facts of AIDS,

dispelling myths, offering appropriate advice and reassurance, influencing social opinion so as to change attitudes and modify risk behaviour. The mass media campaign was well supported by intersectoral initiatives involving national and local government authorities and voluntary agencies. The AIDS information programme of France was established with the aim of informing health professionals, of making both the general public and young people more aware of the problem, and of training the personnel of information outlets.

In the United States, expenditure on AIDS has grown from approximately \$60 million in fiscal year 1984 to more than \$900 million in fiscal year 1988. The budget request for 1989 exceeds \$1.2 billion. The sum covers scientific research, disease surveillance, and prevention and control efforts. AIDS has attracted the support of business leaders, private foundations and grass-roots organizations. AIDS education programmes and projects are being developed.⁴² In May 1988, as part of the comprehensive AIDS prevention programme, a brochure entitled *Understanding AIDS* was distributed to every household in the United States.

There has been rapid growth in collaboration between medical research institutions, drug companies, donor agencies and international organizations. The World Health Organization has assumed the responsibility for global AIDS prevention and control. In 1987, WHO established a Global Programme on AIDS (GPA). Many organizations of the United Nations system, multilateral aid agencies, and non-governmental and voluntary organizations are contributing their resources to the global AIDS plan. The Programme has elaborated the Global Strategy for the prevention and control of AIDS, which is designed to prevent HIV infection, reduce the personal and social impact of AIDS, design the care of those infected with the virus, and co-ordinate national and international efforts against the disease.

GPA co-operates with over 140 countries, encouraging the formation of national AIDS committees, sponsoring international conferences and suggesting guidelines for the prevention and control of the deadly virus. WHO is encouraging Governments to involve planning, finance and education ministries in efforts to develop short-term and medium-term strategies for combating AIDS. In concert with GPA, over 90 countries have completed short-term plans, and nearly 30 countries have completed medium-term plans. National AIDS committees have been established in more than 150 countries.

In resolutions 42/8 and 43/15, the General Assembly, recognizing the established leadership and the global directing and co-ordinating role of WHO in AIDS prevention, control and education, requested the Secretary-General, in close co-operation with the Director-General of WHO, to ensure a co-ordinated response by the United Nations system in the AIDS pandemic. A co-ordination mechanism in the form of the United Nations Steering Committee on AIDS has been established in the Department of International Economic and Social Affairs of the United Nations Secretariat.

At the global level, GPA is responsible for strategic leadership, co-ordinating scientific research, exchanging information, assessing technical co-operation and mobilizing and co-ordinating resources. To fulfil the mandate of the Global

Strategy, WHO issues policy statements on problems emerging from the world-wide epidemic. WHO has developed policies on the criteria for HIV screening, international travel, AIDS prevention and control in prisons, neuropsychiatric aspects of HIV infection, the effects of HIV on breast-feeding and childhood immunization and on human rights.

At the time of writing, Zaire and Senegal have received full funding for the first year of the operations of their national programmes, involving a total of \$14.6 million pledged.⁴³ The AIDS control programmes in these countries stress education and information in stopping the spread of HIV, training of medical personnel, improving devices for screening and protecting blood supplies, epidemiological surveillance, improvement of laboratory facilities for diagnosis and treatment facilities for AIDS patients.

During the past two years, many organizations of the United Nations system have been increasingly active in global AIDS control. Some of the areas in which work on AIDS is being undertaken or planned include the operational activities of the United Nations Development Programme (UNDP) through the WHO/UNDP alliance to combat AIDS. The United Nations Children's Fund (UNICEF) is particularly concerned about the impact of AIDS on women and children; the United Nations Population Fund (UNFPA) supports country-level activities through its maternal and child health and family planning programmes. The demographic impact of the AIDS epidemic is being studied in the Department of International Economic and Social Affairs of the United Nations Secretariat. The World Bank, UNFPA, UNICEF and other operational programmes help to ensure the availability of resources for the implementation of national AIDS programmes.

A significant event in the global struggle against AIDS was the World Summit of Ministers of Health on Programmes for AIDS Prevention, held early in 1988. The Summit adopted the London Declaration on AIDS Prevention, which called for the full opening of channels of communication in each society, the forging of a spirit of social coherence through information, education and social leadership, and the protection of human dignity in AIDS prevention programmes. The Summit declared 1988 a Year of Communication and Co-operation about AIDS. The first World AIDS Day (1 December 1988), the purpose of which is to promote information and education in the fight against AIDS, was commemorated throughout the world. On this occasion, a world-wide public information campaign was carried out simultaneously at the headquarters of WHO, at United Nations Headquarters and at regional centres and national information offices.

D. CONCLUSIONS

The three issues treated in this chapter bring out the importance of international co-operation in solving global problems. Drug abuse cannot be controlled without action in both producer and consumer countries; terrorism cannot be effectively counteracted if countries do not co-operate in denying safe haven to its perpetrators; and the spread of AIDS cannot be halted if no preventive action is taken in all countries.

Co-operation can range from an exchange of views, experience and research findings to co-ordinated action. In the case of terrorism and drug trafficking, co-operation between law enforcement agencies and the exchange of information on suspects is of great importance.

There are many difficulties in moving from broad statements of principle and shared concerns enunciated by the international community to establishing the national and international mechanisms to guarantee successful co-operation. The difficulties do not detract from the validity of setting out broad principles. Such principles are essential for defining the nature of the problem and the parameters within which solutions may be sought.

In all cases, these parameters can be said to be set and indeed circumscribed by the principles and relevant decisions of the United Nations itself: especially the rule of law, international comity, respect for human rights and fundamental freedoms and concern for the dignity of the human being. With many different countries, different legal codes and different social and political systems, interpretation of these basic principles and establishment of international bodies that would put into effect the consensus reached cannot be expected to be easy. For this reason, co-operation at the regional level between countries that have similar legal codes or political systems has often proved to be the precursor of broader international action.

NOTES

¹ William Pollin, "Drug abuse, U.S.A.: how serious? how soluble?", *Issues in Science and Technology*, vol. III, No. 2 (Winter 1987), p. 22.

² Behrouz Shahandeh, "Drug and alcohol abuse in the workplace: consequences and countermeasures", *International Labour Review*, vol. 124, No. 2 (March/April 1985), p. 207.

³ See Rensselaer W. Lee III, "The Latin American drug connection", *Foreign Policy*, No. 61 (Winter 1985/1986), p. 148: in 1984 a high-level commission of the Organization of American States found that a farmer in Bolivia's Chapare district "cultivating coca could net up to \$US 9,000 per hectare per year. The next most profitable crop... was citrus, which could net about \$500 per year starting in the fifth year after planting when the trees begin to bear fruit. Income from coca could be 19 times greater than the return for citrus. Based on available studies, there is no crop from coffee to cocoa that could be grown in these regions which compares with the net return of coca under present conditions." Similarly, a spokesman for the Attorney-General's Office in Mexico City stated: "The problem is economic, and the peasants are the last people we should blame. It is a depressed area, and the traffickers are able to pay them \$20 for a little crop of marijuana when they would earn maybe \$2 for the same amount of maize" (see Winthrop P. Carty, "The double-edged threat of drug traffic", *Ceres*, The FAO Review, vol. 20, No. 2 (March/April 1987), p. 39).

⁴ *The Americas in 1988: A Time for Choices*, a report of the Inter-American Dialogue (The Aspen Institute for Humanistic Studies, 1988), p. 50.

⁵ "The cocaine economies: Latin America's killing fields", *The Economist*, 8 October 1988.

⁶ "Interim report of the United Nations Fund for Drug Abuse Control" (E/CN.7/1988/12).

⁷ David F. Musto, "Lessons of the first cocaine epidemic", *The Wall Street Journal*, 11 June 1986.

⁸ Single Convention on Narcotic Drugs, 1953, as amended by the 1972 Protocol Amending the Single Convention on Narcotic Drugs, 1961 (United Nations, *Treaty Series*, vol. 976, No. 14152).

⁹ Convention on Psychotropic Substances, 1971 (United Nations, *Treaty Series*, vol. 1019, No. 14956).

¹⁰ *United Nations Chronicle*, vol. XXIV, No. 2 (May 1987), p. ii.

¹¹ *Report of the International Conference on Drug Abuse and Illicit Trafficking, Vienna, 17-26 June 1987* (United Nations publication, Sales No. E.87.I.18), chap. I, sect. A.

¹² *Ibid.*, sect. B.

¹³ Terrorism is not a new phenomenon. The modern use of the term "terrorism" goes back to the period of the French Revolution and was applied to the policy carried out by the Jacobins in the period of the "Reign of Terror", March 1793-July 1794. The word "terrorist" was applied to the Jacobins and their agents—to those who had control over the levers of government.

¹⁴ See General Assembly resolution 42/159, para. 14.

¹⁵ For the text, see A/C.6/418, annex I.

¹⁶ For the texts of the Geneva Conventions of 1949, see United Nations, *Treaty Series*, vol. 75, Nos. 970-973, and of the supplementary protocols, see A/32/144, annexes I and II. These agreements allowed for partisans by granting them combatant status subject to their (a) being led by a superior officer; (b) wearing permanent insignia clearly recognizable from a distance; (c) carrying arms openly; and (d) abiding in their conduct of battle by the laws and customs of warfare. Article 1, paragraph 4, of Protocol I of 1977 relating to the protection of victims of international armed conflicts (A/32/144, annex I) expressly includes "armed conflicts in which peoples are fighting against colonial domination and alien occupation and against racist régimes in the exercise of their right to self-determination". This Protocol was approved by consensus by the General Assembly at its thirty-second session; it has been ratified by a limited number of States.

¹⁷ L. Paul Bremer III, "Terrorism and the rule of law", *State Department Bulletin*, August 1987, p. 86.

¹⁸ General Assembly resolution 42/159, para. 14.

¹⁹ Historical experience, such as the Orsini Bomb Plot of 1858 against the French Emperor, Napoleon III, and the assassination in 1914 of the heir to the throne of the Austro-Hungarian Empire, the Archduke Franz Ferdinand, in Sarajevo, indicates that such incidents can be highly inflammatory and that it is very difficult to assure public opinion that the Government of the State in which the conspiracy was initiated or which normally supported the cause in whose name it was perpetrated did not have prior knowledge and did not give its implicit consent to the act subsequently perpetrated.

²⁰ Resolution No. 3 of the Ministers of the member States of the Council of Europe taking part in the European Conference of Ministers responsible for combating terrorism (see A/42/519, sect. II.B).

²¹ *Ibid.*, para. f.

²² General Assembly resolution 2625 (XXV), annex.

²³ *Official Records of the General Assembly, Thirty-fourth Session, Supplement No. 37* (A/34/37).

²⁴ United Nations, *Treaty Series*, vol. 704, No. 10106, p. 219.

²⁵ *Ibid.*, vol. 860, No. 12325, p. 106.

²⁶ United States, *Treaties and Other International Agreements*, vol. 24 (1973), p. 268.

²⁷ United Nations, *Treaty Series*, vol. 1035, No. 15410, p. 167.

²⁸ General Assembly resolution 34/146, annex.

²⁹ Security Council resolution 579 (1985).

³⁰ Letter dated 23 July 1987 from the representatives of Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the Union of Soviet Socialist Republics to the United Nations addressed to the Secretary-General (A/42/416), pp. 1-2.

³¹ Letter dated 18 September 1987 from the Deputy Head of the Delegation of the Union of Soviet Socialist Republics to the forty-second session of the General Assembly addressed to the Secretary-General (A/42/574-S/19143), p. 7.

³² A/C.6/418, annex I.

³³ See Helmut Rumpf, "International legal problems of terrorism", *Aussenpolitik*, vol. 36, No. 4/85, pp. 395-396.

³⁴ Statement made on 20 October 1987 by Dr. J. Mann, Director of the WHO Global Programme on AIDS, at an informal briefing on AIDS, held during the forty-second session of the General Assembly in connection with the Assembly's consideration of the question of the prevention and control of AIDS.

³⁵ Note by the Secretary-General on the Global Strategy for the prevention and control of AIDS (A/43/341-E/1988/80).

³⁶ World Health Organization/Global Programme on AIDS (WHO/GPA), "AIDS update", Geneva, December 1988.

³⁷ WHO, Media Service, *In Point of Fact*, No. 56/1988.

³⁸ 'AIDS and poverty in the developing world', *Policy Focus*, No. 7 (Washington, D.C., Overseas Development Council 1987), pp. 5-6.

³⁹ Statement made by Dr. J. Mann, Director of the WHO Global Programme on AIDS, before the World Summit of Ministers of Health on Programmes for AIDS Prevention, London, 26 January 1988.

⁴⁰ *Confronting AIDS: Directions for Public Health, Health Care and Research* (Washington, D.C., Institute of Medicine, National Academy of Sciences, National Academy Press, 1986), p. 21.

⁴¹ *World Health*, March 1988, p. 6.

⁴² *Scientific American*, vol. 259, No. 4 (October 1988), p. 132.

⁴³ *In Point of Fact*, No. 56/1988 (WHO, Media Service).

Chapter IX

MIGRANTS AND REFUGEES

International migration is in many cases voluntary—people seek better economic and social opportunities in other countries, much as they do in migrating inside their own country. In many other cases, however, people are driven to seek refuge in other countries as a result of persecution or discrimination, or of man-made or natural disasters, such as war or famine. The distinction between economically motivated migrants and refugees is not always clear, but both kinds of migration give rise to sensitive and difficult issues for an international community in which States have come to consider it natural to control immigration or emigration or both.

Emigration may offer countries of origin a safety valve, if unemployment is high and intractable, and the remittances of migrants may turn into an important source of foreign exchange for a while. More than 20 million people are reported to be working outside their country of nationality. Some developing countries, even large ones such as India, have received as remittances from emigrants amounts exceeding 25 per cent of merchandise exports. But they may also lose their most skilled and motivated people. The host countries receive immigrant workers whom they have not had to rear and train. Such an influx may keep wages lower than they would otherwise have been, which benefits producers, but may harm the local labour force unless the host economy is in a process of dynamic growth, in which the native labour force can ascend the social ladder, while migrants take over jobs with low status and low pay.

The number of refugees fleeing into other countries has increased markedly in recent years, notably among developing countries, where the costs and the organizational difficulties of receiving refugees have in some cases been very high. In 1986, there were some 12 million people living as refugees, about 10 million of them in developing countries. In many instances, large populations live as refugees or displaced persons in their own countries, posing problems very similar to those of foreign refugees.

A. INTERNATIONAL MIGRATION

1. *Changes in the size and composition of migrant populations*

In the early 1980s more than 20 million people worked outside their own countries. There were 6 million emigrant workers from developing countries in North America, 3 million in West Asia and another 3 million in Latin America.¹ In 1987, there were significant numbers of emigrant workers in several countries of Africa, especially western and southern Africa. With family members and dependants, the total number of immigrants is likely to be several times

the number of workers themselves. In 1987, in 19 countries or areas (Australia, Bahamas, Bahrain, Canada, Côte d'Ivoire, France, Gambia, Israel, Kuwait, Liechtenstein, Luxembourg, Monaco, Nauru, New Zealand, San Marino, Saudi Arabia, Singapore, Switzerland, United Arab Emirates), the immigrant population exceeded 11 per cent of the total.² In the absence of systematic information, it is not feasible to provide a better idea of the numerical magnitude of the phenomenon.

There have been substantial changes in patterns of migration over the longer term. Most international migration now tends to occur among neighbouring countries: from Central America and the Caribbean to North America, from North Africa and Southern Europe to Northern Europe, from East and South Asia to West Asia, and among countries in West Asia and Africa. There has also been an increase in emigration from the USSR and Eastern Europe to the West over Europe and North America. In Europe, where there had been steady immigration until the early years of the 1970s, policies were more restrictive in the 1980s, with some encouragement to earlier immigrant workers to return to their countries of origin. The low rate of global economic growth, continuing high rates of unemployment in developed market economy countries, and the fall in earnings of petroleum-exporting countries, have contributed to these new policies. At the same time economic factors have strengthened the motives for emigration. In most developing countries there has been a steady increase in the working-age population with no commensurate increase in jobs for new entrants to the labour market. The annual increase in the working-age population in developing countries in the 1980s has been estimated to be about 60 million, compared with around 29 million in the mid-1960s. The pressure for emigration has been intensified by seemingly intractable political conflicts and social tensions. Long periods of austerity have caused many to emigrate. Fast and efficient modern communications and the relative ease of travel have prompted the educated and the young to seek employment overseas.

2. *Undocumented international labour migrants*

Illegal or undocumented migration is widely prevalent. European countries, the United States and some other countries have experienced large-scale clandestine labour immigration since the mid-1970s. The scale of this phenomenon is obviously considerable, but the available estimates vary significantly and are hard to verify. It has been estimated that undocumented clandestine or irregular migrants in 1986 may exceed 1.25 million in Southern Europe alone, of which between 700,000 and 1 million were in Italy, roughly 450,000 in Spain, 50,000 in Portugal and at least 40,000 in

TABLE 45. INWARD REMITTANCES BY EMIGRANT LABOUR, SELECTED COUNTRIES^a

Country	Remittances											
	Millions of US dollars					Percentage of merchandise exports					Per capita (1986 US dollars)	
	1975	1980	1984	1985	1986	1975	1980	1984	1985	1986	Remittances	Merchandise exports
Yemen	271.5	1 023.8	942.5	828.2	665.5	1 912.0	8 125.4	10 833.3	8 810.6	3 230.6	94.4	2.9
Democratic Yemen	58.8	347.4	499.5	425.6	281.7	298.5	582.9	1 632.4	1 001.4	926.6	119.4	12.9
Lesotho	121.7	263.2	343.7	242.8	273.5	901.5	439.4	1 214.5	1 103.6	1 116.3	175.3	15.7
Tonga	6.6	8.9	13.5	14.9	21.3	89.2	121.9	190.1	193.5	409.6	193.6	47.3
Jordan	166.7	640.1	982.0	786.0	938.3	109.0	111.2	130.0	99.7	128.3	256.4	199.8
Western Samoa	8.3	18.7	20.3	23.7	28.5	110.7	108.7	110.9	147.2	271.4	178.1	65.6
Dominica	0.0	8.6	10.8	11.1	11.6	0.0	85.1	41.4	38.8	29.4	145.0	492.5
Pakistan	257.4	2 036.9	2 566.6	2 524.1	2 441.4	24.5	79.2	103.5	95.5	77.7	24.6	31.7
Turkey	1 312.5	2 070.7	1 820.4	1 710.8	1 555.6	93.7	71.2	24.6	20.8	20.5	30.9	150.8
Egypt	365.5	2 695.5	3 962.7	3 211.5	2 505.9	23.3	69.9	102.5	83.7	95.2	50.5	53.1
Yugoslavia	1 695.0	4 094.6	3 167.3	3 105.9	3 730.7	41.6	45.1	31.2	29.2	33.7	160.3	476.3
Morocco	479.6	976.1	843.6	951.4	1 380.8	31.4	40.4	39.0	44.3	57.3	61.4	107.2
Syrian Arab Republic	52.2	773.1	327.0	293.4	300.0	5.6	36.6	17.6	17.9	25.0	28.3	113.1
Bangladesh	15.3	286.2	436.8	420.8	587.9	4.8	36.1	46.9	42.1	66.9	5.8	8.7
India	429.8	2 728.0	2 266.3	2 458.1	0.0	9.2	32.9	22.3	25.9	..	3.2 ^b	13.4
Sudan	1.8	219.0	275.7	247.2	90.0	0.4	31.8	53.0	55.6	27.4	4.1	14.8
Haiti	19.7	51.9	44.4	49.4	53.8	27.8	24.1	21.0	21.7	27.2	10.0	36.9
Mali	11.8	40.5	20.8	21.3	25.7	16.4	19.8	10.8	11.8	13.4	3.0	22.7
Dominican Republic	28.0	183.1	205.0	242.0	242.0	3.1	19.0	23.6	32.8	33.5	37.7	112.5
Cyprus	18.8	84.9	68.1	65.4	77.3	13.2	17.4	13.0	15.7	17.1	115.4	674.5
Sri Lanka	8.6	151.6	300.8	292.3	325.3	1.5	14.3	20.6	22.2	26.9	20.2	74.9
Tunisia	126.3	296.7	301.4	253.8	347.3	15.8	13.8	17.0	14.9	19.7	48.0	243.9
Philippines	0.0	613.0	717.5	808.2	856.4	0.0	10.6	13.3	17.4	17.7	15.6	87.9

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on IMF balance-of-payments computerized data. Population figures taken from IMF, *International Financial Statistics*, July 1988.

^a Countries with remittances accounting for more than 15 per cent of merchandise exports in 1980 or in 1985.

^b 1985 data.

Greece.³ The number of undocumented migrants in the United States has been estimated at between 4 and 6 million, more than half being labour migrants from Mexico.⁴ Japan, where the stock of immigrant labour is low, is reported to have had an inflow of about 100,000 illegal aliens seeking work during the past few years.⁵

Illegal migrants are largely motivated by economic considerations. They seek work and wages. The demand for immigrant workers, on the other hand, is most evident in so-called "low-level jobs", which include "the difficult, unpleasant, ill-located, ill-timed, intermittent or part-time, and low-paid jobs, with no promotional prospects".⁶ In the United States, for instance, such jobs are to be found in farms (picking fruits and vegetables), in construction, in the garment industry, in restaurants and laundries, in general cleaning and household services and in other manual services. For such low-paid, low-status and often temporary work, native workers are not available, even when local rates of unemployment exceed 10 per cent of the labour force. Native workers shun these jobs for many reasons. Some find alternative sources of income, such as unemployment compensation, welfare payments and support by family and friends, more attractive choices. Others do not wish to work at tasks and in surroundings which they find unattractive. The presence of an underground, informal or parallel economy also fuels the demand for illegal immigrant workers. Enterprises in this "informal" economy functioning beyond the pale of government regulations and taxation find it both convenient and economical to employ illegally immigrant workers, who cannot themselves have recourse to formal institutions of government.

Cross-border movement of undocumented workers is not restricted to developed economies. The economic boom in the 1970s and 1980s in some oil-exporting countries of Asia, Latin America and Africa pulled in many migrants from neighbouring countries. A notable example of such a movement of labour took place in Nigeria. The subsequent fall in oil prices and the economic downturn caused a massive reflow to neighbouring countries.

Several countries have resorted to strict enforcement of frontier controls and employment regulations to cope with the problem of illegal immigration. Argentina, Barbados, Canada, France, Italy, the United States and Venezuela, among other countries, have attempted to regularize the status of these immigrants. But such remedies have met with limited success in restraining illegal labour migration, which now appears to be woven into the economic fabric of many receiving countries. Undocumented illicit migrant workers are easily exploited. They are not protected by the economic and social legislation of the host country and their work place is beyond the reach of the laws of their home country. The problem of illicit immigrant workers remains a major social problem requiring continued attention on the part of the international community.

3. *Emigrant workers' remittances and other gains*

For some developing countries, remittances by emigrant workers constitute an important inflow of resources and a significant source of foreign exchange (see table 45). The amounts remitted depend on earnings and expenses in the

host country. Some workers are paid in the home country in local currency and earn little in foreign currency to remit home. Others may find it either more convenient or more remunerative to remit funds through unofficial channels. Both these factors may artificially depress the figures in the table, which are based on officially recorded remittances.

Taken together, the countries shown in the table account for the bulk of the global foreign exchange remitted by workers of developing countries working abroad. Remittances to these countries amounted to \$19.0 billion in 1985, 38 per cent of their merchandise exports. In a number of countries, notably Bangladesh, Egypt, Jordan, Pakistan and the Sudan, remittances were even more prominent. Remittances per capita are much higher in small countries than in those with large populations, such as India or Bangladesh. For most of the countries termed "high remittance recipients", recorded per capita remittances are rather modest.

The steady growth of remittances as a source of foreign exchange in low-income Asian and African countries has been paralleled by a decline of this source of foreign exchange for middle-income countries such as Yugoslavia and Turkey, which have workers in both industrialized Europe and oil-exporting countries. Indeed, receipts from emigrant workers' earnings are volatile. Any significant contraction of demand for migrant labour in the countries of destination has serious repercussions on the balance of payments and employment in the country of origin. This has been the experience of both the Southern European countries with their dependence on demand for foreign labour in the industrialized countries⁷ and those countries whose migrant workers have primarily gone to the oil-exporting countries.⁸

Little is known about the primary and secondary effects of the spending of remittances. It is widely reported, however, that remittances introduce changes into expenditure patterns and increase the demand for imports including modern household appliances and expensive consumer durables. These spending patterns tend to reduce the net foreign exchange benefits of migration. Channelling of remittances into productive investment is apparently very difficult for countries receiving remittances. In some Southern European countries the flow of remittances may have generated inflationary pressure.⁹

There have also been changes in perceptions regarding the emigration of skilled and professionally trained workers (the "brain-drain"). There has been a considerable outflow of doctors, nurses, engineers, scientists, managers, teachers and the like, either as immigrants settling in developed market economy countries or as limited-stay workers in more prosperous developing countries. The United States and Canada have been the chief destination for these emigrants. Over the past quarter of a century, the United States and Canada have admitted about 825,000 skilled migrants from developing countries.¹⁰ The net migration figure is considerably lower when return migration is taken into account.¹¹ Many skills, such as those of carpenters, plumbers, other construction workers, mechanics and office and clerical personnel, can be easily imparted within the existing educational system. In general, fewer countries now express concern over the brain-drain than formerly. Among the 109 countries that responded to the Fifth United Nations Popula-

tion Inquiry, in 1982, only three—Jamaica, the Philippines and Thailand—mentioned the brain-drain as a specific concern. In the *1987 United Nations Monitoring Report*,¹² these concerns were voiced by Egypt and the Dominican Republic.

The net result for the countries of origin depends very much on who migrates. If those who leave the low-wage countries are the least employable and the positions filled in the high-wage countries are the least skilled, the loss to the country of origin may be minimal. In fact, however, cross-border labour movement involves the costs and uncertainty of job search, travel and resettlement, and challenges of overcoming language and cultural barriers. To overcome these barriers, migrants must be assumed to have higher education, better skills, more savings and more initiative than most of their compatriots. Their departure imposes a greater cost to the nation than when the least productive workers emigrate.

Where significant volumes of human capital are transferred with the migrant labour, productivity tends to rise in the country of destination and fall in the country of origin. Most migrant labour belongs in the semi-skilled category. Many developing countries appear to promote the migration of semi-skilled labour even if such migration sometimes creates temporary shortages of certain skills.

In order to maintain the services of highly skilled persons, some countries have adopted measures either to curb or discourage their emigration. At the same time, a larger number of countries, which include all major labour-supplying developing countries, have adopted policies to increase their returns from the labour outflows.

4. *Changing perception towards international labour migration*

In the 1960s, during the vigorous economic expansion in most OECD countries, migrant labour was seen as a source of benefit to all parties: workers and employers and countries of origin and destination. As the economic expansion levelled off in the 1970s and "guest workers" tended to stay longer, problems began to emerge. The composition of the migrant population changed, from mostly working men to families with children. A better appreciation emerged of the wider social context, including the migrant worker's family, within which decisions regarding migration and continued stay abroad were taken.¹³ Temporary workers who would return to their home countries after a spell of work became a settled minority population, not separated totally from their original home countries with which relations were maintained by periodic visits and the transfer of resources to relatives. The maintenance of these relations and the adherence to their own cultural practices have made integration into their new societies more difficult. The experience may be traumatic for children born in the host society who by their upbringing are almost total strangers to the home society of their parents.¹⁴

For various reasons, mostly economic, the countries from which the migrants originated have found it advantageous to maintain liaison with their emigrant population. This experience in Western European countries may be repeated in some countries in West Asia. It has been reported that a

growing proportion of foreign workers succeed in remaining in the host country after their initial contracts come to an end. Where the immigrant population is very large in relation to the nationals of the host country, these changes may give rise to major problems.

5. *New international programmes in respect of labour migration*

International labour migration problems have until recently been considered a matter of domestic policy. However, the rising legal, economic and social problems connected with migrant labour have prompted international cooperative action. Under the aegis of the United Nations, work has been progressing since 1979 on an international convention on the protection of the rights of migrant workers and their families.¹⁵

This work reflects the growing recognition that labour migration workers are a permanent global phenomenon requiring international attention. The draft convention views the migrant worker as part of a larger social entity and not solely as an independent economic unit. Hence many draft articles are meant to facilitate the maintenance of the family unit. The draft also includes provisions relating to the civil and political rights of migrants. Cultural rights including specific educational and language rights of migrant workers and their families are still a subject of considerable discussion since the costs and implementation of these rights will be borne by the State of employment. There is also the concern of receiving countries anxious to preserve their national character and cultural homogeneity.

A number of international programmes have been initiated to ameliorate the adverse consequences of emigration of skilled personnel. Among the proposed programmes is the establishment of an international labour compensatory facility along the lines of existing International Monetary Fund facilities, drawing resources mainly from receiving countries. The accumulated resources would be used to compensate for the estimated costs from the loss of skilled labour. Another proposal aims at the establishment of an international fund for vocational training. The proposed fund would enable countries suffering manpower outflows to train personnel to fill the gap created by emigration. Yet another proposal calls for an international assistance plan which would facilitate the retention of skilled manpower in developing countries.¹⁶

B. REFUGEES

1. *Growing dimension of the problem*

The number of people fleeing persecution (for reasons of race, religion, ethnic origin or political beliefs), internal conflicts, war and disasters has significantly increased in the 1980s.¹⁷ It has been estimated that there are now more than 12 million refugees globally.¹⁸ The number of refugees in developing countries increased from about 6.5 million in 1980 to some 10 million in 1986 while the number of refugees granted asylum or resettlement opportunity in developed countries remained well above the 2 million mark during the same period (see table 46). There is also a marked change in the refugee population and in the pattern of refu-

TABLE 46. WORLD REFUGEE POPULATION, BY REGION

Region	1980	1986
Africa	3 660 800	3 436 600
Latin America and the Caribbean	177 600	335 100
Asia	2 622 400	6 280 800
Europe	575 500	711 200
North America	1 187 000	1 353 000
TOTAL	8 223 300	12 116 700

Sources: Geography of Exile (map prepared by the Office of the United Nations High Commissioner for Refugees (UNHCR), 1 January 1987); and direct communication from UNHCR.

NOTE: In accordance with General Assembly resolution 302 (IV) of 8 December 1949, Palestinian refugees do not come within this classification. A separate United Nations body, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) was set up in 1949 to provide humanitarian assistance and essential services to refugees in the Gaza Strip, Jordan, Lebanon, the Syrian Arab Republic and the West Bank.

gee movements. While a relatively small number of refugees continue to leave countries in Eastern Europe, the vast majority now flee from countries in developing regions.¹⁹ Moreover, they mostly seek refuge in neighbouring countries as poor as the ones from which they have fled, which are frequently incapable of meeting even the needs of their own population. The most vulnerable are the more than 3 million of the refugee population who are accommodated in Africa. Famine in sub-Saharan Africa has triggered a mass displacement of populations and large-scale migratory movements, both within States and across state boundaries. Environmental disasters have uprooted increasingly more people in recent years. The growing size of the refugee population presents a sharp challenge to international humanitarian efforts.²⁰

2. International humanitarian response

Many developing countries with a large concentration of refugees in relation to local population also rank amongst the poorest in the world (see table 47). They incur exceptional economic, political and social costs in granting asylum. A mass influx of refugees puts enormous strains on their fragile economic and social infrastructures and their over-stretched administrative systems. Prolonged stays raise problems of integration into the host society with the risk of refugees becoming a source of future conflict. Development assistance for the host country often becomes necessary in addition to humanitarian assistance for refugees.

Countries offering asylum are assisted by multilateral, bilateral and non-governmental organizations. As shown in table 48, the major donors continue to be bilateral ones. There has been a marked drop in contributions from inter-governmental, non-governmental and private organizations. The general pressure on Governments to reduce expenditure in the latter half of the 1980s may well have adverse consequences for the effort to provide international humanitarian assistance to refugees.

The growing size and the changing nature of the international refugee problem has helped to concentrate attention on its root causes. The global refugee population is concentrated in areas of major regional conflict and ethnic and political strife. The war in Afghanistan has created the world's largest refugee population, some 5 million. The Geneva Agreement on Afghanistan of 14 April 1988 offers new prospects for the return of these refugees. A special international programme has been established to aid the repatriation, relief and resettlement of Afghan refugees. Regional

TABLE 47. RATIO OF REFUGEES TO LOCAL POPULATION AND PER CAPITA GNP

Region/country	Number of refugees		Ratio of refugees to population (percentage)		GNP per capita (United States dollars)
	1980	1985	1980	1985	1985
<i>Africa</i>					
Algeria	52 000	167 000	0.3	0.8	2 530
Angola	75 000	92 200	1.0	1.1	..
Benin	..	800	..	0.02	70
Botswana	1 300	5 000	0.2	0.5	840
Burundi	50 000	256 300	0.03	5.4	240
Cameroon	110 000	13 700	1.4	0.1	810
Central African Republic	7 000	42 000	0.4	1.6	270
Congo	..	1 000	..	0.05	1 020
Côte d'Ivoire	..	600	..	0.06	620
Djibouti	45 300	16 700	14.6	3.9	..
Egypt	5 000	5 000	0.01	0.01	680
Ethiopia	11 000	59 600	0.02	0.1	..
Kenya	3 500	8 000	0.02	0.03	290
Lesotho	10 000	11 500	0.7	0.7	480
Morocco	500	800	0.02	0.02	610
Mozambique	..	800	..	0.05	..
Nigeria	105 000	4 700	0.1	0.04	760
Rwanda	10 000	49 000	0.2	0.8	290
Senegal	5 000	5 200	0.08	0.08	370
Somalia	2 000 000	700 000	50.0	15.0	270
Sudan	480 000	690 000	2.6	3.2	330
Swaziland	5 200	8 000	0.9	1.2	650
United Republic of Tanzania	156 000	179 000	0.8	0.8	270

TABLE 47 (continued)

Region/country	Number of refugees		Ratio of refugees to population (percentage)		GNP per capita (United States dollars)
	1980	1985	1980	1985	1985
<i>Africa (continued)</i>					
Zaire	350 000	317 000	1.3	1.0	170
Zambia	36 000	96 500	0.6	1.4	400
Zimbabwe	..	46 500	..	0.6	650
<i>Latin America and the Caribbean</i>					
Argentina	26 300	11 500	0.09	0.03	2 130
Belize	4 000	3 000	2.7	1.8	130
Brazil	24 000	5 300	0.01	0.03	1 640
Costa Rica	10 000	16 800	0.4	0.6	1 290
Cuba	3 000	2 000	0.03	0.01	..
Dominican Republic	3 800	6 000	0.06	0.09	810
Ecuador	700	900	0.08	0.08	1 160
Guatemala	4 000	70 000	0.05	0.9	1 240
Honduras	25 000	47 800	0.6	1.0	730
Mexico	44 000	175 000	0.06	0.2	2 080
Panama	3 000	1 100	0.1	0.05	2 020
Peru	1 500	600	0.08	0.03	960
Nicaragua	..	18 500	..	0.6	850
Venezuela	..	1 400	..	0.08	3 110
<i>Asia and Oceania</i>					
Australia	304 000	89 000	0.2	0.6	10 840
China	263 000	179 800	0.02	0.01	310
Hong Kong	24 000	11 900	0.5	0.2	6 220
India	..	7 200	..	0.09	250
Indonesia	8 400	9 500	0.05	0.06	530
Iran, Islamic Republic of	..	1 900 000	..	4.3	..
Japan	1 900	1 500	0.01	0.01	11 330
Lebanon	3 200	2 900	0.1	0.1	..
Macao	2 900	700	0.1	0.2	..
Malaysia	104 000	99 000	0.7	0.6	2 050
New Zealand	10 000	4 500	0.3	0.2	7 310
Pakistan	1 428 200	2 500 000	1.7	2.6	380
Papua New Guinea	1 000	..	0.03	..	710
Philippines	13 800	15 100	0.03	0.03	600
Thailand	261 300	128 500	0.6	0.3	830
Turkey	1 100	2 600	0.02	0.03	1 130
Viet Nam	33 000	21 000	0.06	0.04	..
Yemen	1 500	..	0.02	..	..
<i>Europe</i>					
Austria	27 700	20 500	0.4	0.3	9 150
Belgium	33 000	36 400	0.3	0.4	8 450
Denmark	1 800	8 500	0.03	0.2	11 240
Finland	..	500	..	0.01	10 870
France	150 000	167 300	0.3	0.3	9 550
Germany, Federal Republic of	94 000	126 600	0.1	0.2	10 940
Greece	3 800	4 100	0.03	0.04	3 550
Ireland	..	500	..	0.01	4 840
Italy	14 000	15 100	0.02	0.02	6 520
Netherlands	12 000	15 000	0.08	0.1	9 180
Norway	6 000	1 000	0.1	0.2	13 890
Portugal	7 600	600	0.07	0.05	1 970
Spain	21 500	9 900	0.05	0.02	4 360
Sweden	20 000	90 600	0.2	1.1	11 890
Switzerland	32 000	31 200	0.5	0.5	16 380
United Kingdom	148 000	135 000	0.3	0.2	8 390
Yugoslavia	2 000	1 600	0.08	0.06	2 070
<i>North America</i>					
Canada	338 000	353 000	1.4	1.4	13 670
United States	849 000	1 000 000	0.4	0.4	16 400

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on *Demographic Yearbook, 1985* (United Nations publication, Sales No. E/F.86.XIII.1); *World Bank Atlas, 1987*; and UNHCR map, *Geography of Exile*, 1 January 1985, as annexed to *Refugees*, No. 24 (December 1985).

TABLE 48. VOLUNTARY CONTRIBUTIONS TO INTERNATIONAL ASSISTANCE FOR REFUGEES
(Millions of United States dollars)

Type of donor	1980	1986
Governmental	311.1	361.8
Intergovernmental organizations	83.2	51.7
Non-governmental/private organizations	23.5	8.5
UNHCR/World Bank project in Pakistan	-	2.2
TOTAL	417.8	424.2

Source: Department of International Economic and Social Affairs, based on *Official Records of the General Assembly, Thirty-sixth Session, Supplement No. 5E (A/36/5/Add.5)*; and *ibid.*, *Forty-second Session, Supplement No. 5E (A/42/5/Add.5)*.

conflicts, internal strife and natural calamities have affected many African States. These conflicts and calamities have also highlighted the plight of people internally displaced as a result of civil strife.

In the 1980s, the number of internally displaced persons in Africa, Central America and South-East Asia has been growing at an alarming rate, and their plight has been deteriorating. In Africa alone, there were in 1988 an estimated 10 million people internally displaced, including 2.7 million in Uganda, 2 million in the Sudan, 1.1 million in Mozambique, 600,000 in Somalia and 554,000 in Angola.

These figures do not include the extremely large number of people who have been severely affected by natural or man-made disasters, and who have moved individually or in small family groups into urban areas, where they have swollen the number of destitute people.

As in the case of the millions of refugees around the world, the displaced persons have been driven from their homes by circumstances beyond their control. However, while the refugees are those who have crossed international boundaries and are protected by international legal instruments, the displaced persons have remained within their national boundaries and thus fall under the normal jurisdiction of their own Governments. The primary responsibility for meeting the immediate need for food, shelter and basic health care for displaced persons thus remains with the Governments concerned.

Such a large number of displaced persons, however, represents an almost unbearable burden for most of the Governments of developing countries. Their limited resources, even when supplemented by regular international development assistance for affected countries, are not sufficient to meet the urgent needs of the displaced persons. The need for additional resources for the relief and rehabilitation of, and longer-term development assistance for, displaced persons has become ever more pressing. A close linkage between emergency operations and rehabilitation leading to development activities should be emphasized.

NOTES

¹ ILO, "World Recession and Global Interdependence", 1987, p. 33. The ILO global estimates of migrant workers quoted, particularly those for

North America, include a considerable number of illegal or undocumented workers.

² *World Population Trends and Policies: 1987 Monitoring Report* (United Nations publication, Sales No. E.88.XIII.3), table 97.

³ OECD, *The Future of Migration* (Paris, 1987), p. 286.

⁴ *The Americas in 1988: A Time for Choices*, a report of the Inter-American Dialogue (The Aspen Institute for Humanistic Studies, 1988), p. 57.

⁵ *The Wall Street Journal*, 23 June 1988; and South, September 1988.

⁶ S. Klein, ed., *The Economics of Mass Migration in the Twentieth Century* (New York, Paragon House Publishers, 1986), p. 17.

⁷ H. Korner, "Long-term aspects of international migration flows—the experience in the main geographical OECD areas: European-sending countries", in OECD, *The Future of Migration* (Paris, 1987), p. 70.

⁸ ESCAP, *International Labour Migration and Remittances between the Developing ESCAP Countries and the Middle East: Trends, Issues and Policies*, Development Papers No. 6 (United Nations publication, Sales No. E.87.II.F.6), p. 67; and Ed. G. Gunatillek, *Migration of Asian Workers to the Arab World* (Tokyo, United Nations University, 1986), p. 339.

⁹ H. Korner, *op. cit.*

¹⁰ UNCTAD, "Trends and current situation in reverse transfer of technology", (TD/B/AC.35/16), para. 25.

¹¹ Returning migrants comprising professional, technical and kindred persons in the 1970s are estimated at approximately 25 per cent of the gross flow. See S. Klein, ed., *The Economics of Mass Migration in the Twentieth Century* (New York, Paragon House Publishers 1986), p. 14.

¹² *World Population Trends and Policies: 1987 Monitoring Report* (United Nations publication, Sales No. E.88.XIII.3).

¹³ For a detailed discussion, see Martin O. Heisler and Barbara Schmitter Heisler, eds., "From foreign workers to settlers? Transnational migration and the emergence of new minorities", in *The Annals of the American Academy of Political and Social Sciences*, May 1986.

¹⁴ See Oded Sterz and David E. Bloom, "The new economics of labour migration", in *American Economic Association Papers and Proceedings*, May 1985.

¹⁵ See General Assembly resolution 34/172.

¹⁶ There are also two international programmes already in place to mitigate the negative effects of skill outflows. In 1977, the United Nations Development Programme (UNDP) launched a programme known as TOKTEN (Transfer of Knowledge Through Expatriate Nationals). The programme is now in operation in 25 countries. In the past 10 years over 1,700 expatriate consultants have visited their country of origin to undertake various assignments. UNESCO also initiated a programme similar to TOKTEN to assist developing countries to bring home, on short duration, expatriate professionals. See UNDP, Report of the Fourth International Workshop on Transfer of Knowledge Through Expatriate Nationals, New Delhi, 3-7 February 1988.

¹⁷ According to United Nations instruments a refugee is a person who, "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence, is unable or, owing to such fear, is unwilling to return to it" (United Nations, *Treaty Series*, vol. 189, No. 2545, p. 150; and *ibid.*, vol. 606, No. 2791, p. 267).

¹⁸ Global estimates of the number of refugees vary from one source to another. The total quoted above does not include Palestinian refugees who numbered 2,100,000 in 1985 (see the note to table 46).

¹⁹ For detailed statistics on the refugee movements in the 1980s see *World Population Trends and Policies...*, pp. 241-246.

²⁰ *Refugees—Dynamics of Displacement: A Report for the Independent Commission on International Humanitarian Issues* (London and New Jersey, Zed Books, 1986), p. 11.

Chapter X

CHANGING PERCEPTIONS REGARDING SOCIAL DEVELOPMENT ISSUES

The preceding chapters of this report have been devoted to selected social development issues. This chapter will discuss recent changes in the broad perceptions of such issues. Shifts in perception will be considered in terms of both the role of the State and popular participation in economic and social life.

The role of the State, in particular, has long been the subject of political and ideological controversy. However, the following discussion is not cast in ideological terms, because recent changes in perceptions have cut across ideological and national boundaries. The changes have been essentially pragmatic, although they have affected the political climate in many countries and international relations.

The changes discussed are not necessarily uniform or identical throughout the world. In many countries it is not clear what the trend is, or whether there is one at all.¹ But they are sufficiently widespread to merit inquiry, not only for what they mean at the present time but also for what they portend for the future.

A. THE ROLE OF THE STATE

The most important change in perceptions pertains to the role of the State. The prominent role accorded the State in economic and social development since the Second World War derives from many sources, such as the experience of the Soviet Union and of the United States of America under Franklin Roosevelt's New Deal, the economic analysis of John Maynard Keynes, and the moral persuasion of the Fabian socialists. Many of the developing countries that emerged from colonialism in the two decades after the War followed the policy paradigms that helped the Soviet Union to emerge as a world military and economic power or those that helped the developed market economies to sustain a long period of prosperity after the War. In countries where the private sector was insignificant, even rudimentary governmental machinery appeared to be a superior agent of development. With nascent and fragmented markets, allocation by central planners seemed a necessary mechanism of allocation. In the older developing countries of Latin America, it was thought that the structural rigidities hampering development required vigorous State initiatives.

1. *Welfare services*

The State has been called on to provide myriad services and benefits in both developed and developing countries. The goal of comprehensive coverage in the provision of public services and benefits is based on the conviction that all citizens should enjoy equal access to them. To achieve such a

goal there must be greater uniformity in the services and benefits available in different parts of a country and to different social classes, as well as greater equality in the distribution of resources among regions and among income strata and social groups. The provision of these services has been predicated less on private decisions based on the individual's view of what constitutes welfare than on a collective notion of the good society. The policies of the welfare State have so enhanced the quality of life for many that they have been characterized as "a triumph of modern civilization".²

None the less these tenets of economic and social policy have come under criticism since the 1970s. Slow growth in total resources and a growing reluctance to channel increasing portions of these resources through government machinery have called into question the desirability of expanding the coverage of welfare services. The context in which policies are formulated and carried out has been transformed since the 1950s and 1960s, a seminal period for the ideas that shaped approaches to development generally, and social development in particular.³

The consensus on the role of the State, which seemed so firm in virtually all countries, regardless of their political organization, appears tenuous in the late 1980s. In many developed market economy countries, persistently high rates of unemployment, with idle capacity in machinery and equipment, slower growth and the experience of double-digit inflation have brought into question the validity of the policies and instruments that served so well in the previous quarter century.

The priority given to full employment, a means of both raising output and maintaining incomes, has given way to the control of inflation and the bolstering of international competitiveness, which has come to be regarded as a prerequisite for long-term growth and full employment. A high and rising level of social spending has come to be associated with sluggish economic performance. No clear empirical connection has been established between the level of social spending and the rate of economic growth. However, in support of such an association, it is argued that higher payroll taxes raise the cost of labour; high taxes on income discourage saving, investment and enterprise; budget deficits engender inflation; social welfare payments are disincentives to work; and all of these factors promote inflexibility and retard growth.

During the long period of post-war expansion in social services, it was a predominant belief that the main burden of financing this expansion was carried by those that were economically well off.⁴ Since the late 1970s, at least, this perception has changed. The change owes much to the past suc-

cesses of social policy. In most developed countries a majority now enjoys social services and social security that seemed utopian a generation or two ago. That the system no longer redistributes from rich to poor has been demonstrated in many countries.⁵ The burden of social spending there rests on a broad segment of middle-income strata, whose resistance to accepting further burdens has grown sharply, as reflected in a variety of “tax revolts”, the growth of the “underground economy” and similar defensive measures.

The system of publicly provided or supported social services has become vast and complex under both the welfare State and the centrally planned economy models. With its proliferation of agencies, overlapping jurisdictions, professional compartmentalization and growing administrative centralization, the system is cumbersome and responds badly to new needs or even to old ones. It has become progressively less accountable to legislatures and users.⁶ While some are able to abuse the system because it is so complex, many people with real needs fail to get access to it, especially those who are in greatest need. They are discouraged by complicated procedures or an insensitive administration, or they are simply not informed about the services to which they are entitled.

One worrisome problem has been termed “the welfare trap”. Public support for the very poor and those without social or marketable skills (especially the young) single parents with young children, or minorities exposed to discrimination has been seen to perpetuate dependence on government assistance. A new policy objective is to wean people from dependence on “welfare” by providing training and making it easier to obtain jobs, for example. Some schemes of this kind have been successful. They seem to work best on a voluntary basis.⁷ For this approach to work, the economy has to provide an adequate supply of jobs, especially in lower-skill categories and in the right places. The work must be sufficiently flexible to be attractive to working mothers or those with elderly or disabled dependants to care for at home. Even then, such schemes cannot provide a complete answer to dependence, since there will always be those who, neither mentally nor physically disabled, nevertheless have difficulty in coping with the demands of work and daily living and remain dependent on family support or public care.

The public in many countries has become more demanding and more aware of the nature of social services and has come to demand change. Professional opinion on the need for more varied and humane social support systems also coincides with a shift of the political climate towards greater emphasis on community, family and individual responsibility for activities related to social policy.⁸

Another fundamental criticism of social care in industrialized countries concerns the institutional approaches to social care, which is called both expensive and dehumanizing. This criticism is stressed particularly in countries with market economies.⁹ There is a strong current of opinion in favour of alternative provisions for those who need care or support, relying more on community or family-based care for the aged and disabled, with the objective of maintaining their capacity for an independent life.¹⁰ Experience has shown, however, that adequate alternatives to institutional care are often just as expensive.

2. *The inherent and instrumental value of freedom*

Bureaucratic regimentation of economic and social life has also been felt to reduce free choice unduly, and State intervention has come to be seen as inefficient. The allocation of resources through government planning often results in misallocation and the production of goods and services that do not respond to the wants of consumers. The mass of regulations governing economic and social life serve to protect enterprises from competition and to provide bureaucrats with the means of securing advantages to themselves with no gain for society. Perhaps the most important change is that freedom from government intervention is seen as valuable because of what Milton Friedman has called the “fecundity of freedom”—because freedom itself is regarded as productive.¹¹

The instrumental value of freedom from government intervention in raising production and productivity and in broadening choice is seen to have two sources. First, it permits society to tap the initiative and creative power inherent in people. Secondly, it breaks down the rigidities of regulations and systems of licensing that ossify the *status quo* and resist change and innovation. Less regulated markets permit more competition and promote greater efficiency in the use of resources.

However, individuals may be unfree in another sense. Public health measures may be so poor that people cannot avoid infection. Illiterates who have received no schooling may be unable to participate in the political process. Others have no skills with which to earn a living or can find no job in a sluggish economy. Government, by providing public health services, education and full employment, increases the range of choice available to the individual. The provision of health and education, information and physical infrastructure needs to be undertaken by Governments because markets have inherent difficulties in handling them. Cut-backs in these and similar services reduce the capacity of large segments of the population to participate effectively in society and thus reduce social mobility.

There is a widespread concern, ranging from rich to poor countries, that the financial stringencies so widely experienced by Governments in the 1980s have resulted in greater inequality and injustice. Everywhere, but especially in the poorest developing countries in the throes of making severe adjustments to reduced commodity prices and rising debt-service costs, the burden of adjustment tends to fall on the poorest segments of the population. A widespread complaint about government-provided social services is that Government agencies are inefficient and unresponsive. Two sets of proposals have been made. The first is to contract out work through competitive bidding so that Government may purchase services at competitive prices. In several developed countries, municipal and State governments have handed over the provision of selected services to private firms on the basis of competitive bidding. Laundering linen and garments in hospitals, the maintenance and cleaning of premises and similar ancillary services are frequently offered for competitive bidding. In some countries even fire departments and prisons are being entrusted to private companies.

The second proposal is to introduce elements of competition among service institutions by permitting consumers a

choice among them. Parents would receive vouchers from the Government to pay the cost at whichever school they chose for their children rather than being assigned to a school on the basis of where they live. Schools that performed better in the eyes of the students and parents would prosper and others would wither. Similarly, physicians and hospitals would attract patients on the basis of the quality of their services. Such proposals, however, have not yet been adopted.

3. *State ownership of enterprises*

One part of the process of redefining the role of the State has been the divestiture of State enterprises. Governments have in the past taken over enterprises or established new ones for a variety of reasons. It was assumed that government ownership of the commanding heights of the economy would help in planning the national economy. It was presumed that Governments would have a longer view of the economy than would private owners and that they would invest more in physical and human capital. It was sometimes hoped that government industrial relations would be more harmonious than those in the private sector. Government ownership of enterprises with monopoly power would enable the Government to protect the consumer from the consequences of "market failure".

Whatever the force of such considerations in the past, by the 1980s the same objectives were sometimes thought to be more readily achievable through a revitalized form of private ownership. With the greater interdependence of the world economy, the complexity of modern economic relationships and rapid advances in technology, long-term economic planning at a national level was seen as much less feasible. Private management might have been shortsighted, but with increasing international competition, over-cautious management simply would not survive. Government-run industries themselves tended to develop bureaucratic tendencies that stifled initiative and innovation, and it could not be assumed that they would be more competitive. If anything, the record suggested the opposite as the losses of public sector industries assumed increasing importance in government deficits. The history of industrial relations in nationalized industries was not encouraging: conflict between private owners and employees had been replaced by conflict between Government and unions, and the Government, which often had such objectives in mind as controlling inflation, was not especially capable of resolving disputes.

Lastly, the industrial structure of countries changed, with new companies in the high-technology and service sectors growing in importance relative to the traditional manufacturing industries. In these dynamic companies, especially smaller ones, relations between management and employees were more informal and personal, and the stake of all concerned in the success of the enterprise was more immediately apparent.

In the United Kingdom, a determined effort has been made to return government-run business to private ownership. The main objectives were to widen share ownership, decrease central government expenditure and improve performance. By encouraging the spread of property ownership

(both home ownership and share ownership) the climate for the creation of wealth would improve.¹² Widening share ownership would facilitate the mobilization of investment resources and contribute to a growth of incomes and wider participation in economic life.

The United Kingdom thus introduced several schemes to widen and encourage the ownership of shares, such as the Business Expansion Scheme (BES) and the Personal Equity Plan (PEP), and provided tax incentives to encourage equity finance and equity participation by individuals.¹³ The number of shareholders rose from 3 million in 1979 to nearly 9 million in 1987. However, the proportion of shares in personal-sector gross wealth increased only slightly,¹⁴ and notwithstanding greatly improved tax incentives, the share of equity held directly by individuals continued to decline, from more than half in the 1960s to about one quarter in the mid-1980s.

In the case of enterprises with substantial monopoly power, such as British Telecom and British Gas, their transfer from the public to the private sector did not change the conditions in which they operated, and competition remained absent. Regulatory bodies were created following the privatization of British Telecom and British Gas to reduce the risk of such abuse. It has been suggested that the problems that regulators face *vis-à-vis* monopolistic firms should be fully considered at the planning stage.¹⁵

The scope of denationalization efforts in other market economies has been more modest. In the Federal Republic of Germany, where the public sector consists of 56 non-financial enterprises and 39 financial institutions, the Government sold 4.4 million shares in the VEBA industrial group, reducing government holdings from 43.7 per cent to 30 per cent. VEBA is a conglomerate company holding shares in 465 enterprises. In addition, some shares in the Berliner Bank were also sold in 1985. However, a partial denationalization planned for VIAG — an energy, chemical and aluminium company — and Volkswagen was postponed because the stock market was not sufficiently buoyant.¹⁶

France also suspended its privatization programme after the 1987 stock market collapse. A five-year programme announced after the election of 1986 provides for denationalization of 42 banks, including two large financial holding groups (Cie. Financière de Suez and Paribas), nine industrial groups and three insurance companies (Union des Assurances de Paris, Assurances Générales de France and Société Commerciale de Réassurance).¹⁷ In Italy, privatization of parastatal enterprises started in 1983. However, since that time, only a number of small companies have been sold.

In Canada, since 1984 the Federal Government has sold almost all of its stake in the Canada Development Corporation (CDC) and several major companies: Northern Transportation (a marine transport service), Kidd Creek Mines (a mineral producer), De Havilland Aircraft (aerospace manufacturer), and Canadian Arsenal (munitions manufacturer). Several other deals are still under negotiation (Teleglobe Canada, El Dorado Nuclear, Air Canada and Petro Canada).¹⁸

The scale of privatization in the United States was limited, mainly because of the small share of the public sector. At the

federal level, there are 15 non-financial enterprises and 30 financial institutions.

In developing countries, privatization has so far had only a modest effect on the role of the public sector. Although many countries in Africa and Latin America have adopted rather ambitious programmes of privatization, only a few have pursued them actively. Out of 3,975 public enterprises in 28 countries, 35 were liquidated, 102 were closed, 85 were sold (fully or partially) and 45 were leased or had their management contracted out.¹⁹ On average, as a percentage of the total number of public enterprises in these countries, the number of enterprises sold was 2 per cent, the number leased and contracted out about 1 per cent, and the number closed and liquidated 3.4 per cent. The highest rates of divestiture were in Zaire and in the Sudan (58 per cent and 14 per cent, respectively).²⁰

In Latin America, Governments have so far sold mostly relatively small firms. In Brazil, of 17 enterprises sold, only one had more than 1,000 employees.²¹ In some countries, privatization has taken place within debt-to-equity swap programmes (Mexico and Chile). However, denationalization in Latin America and the Caribbean is facing political opposition, especially when it involves direct foreign ownership.

In Asia, some countries have undertaken privatization programmes. The Philippines formed the Asset Privatization Trust to sell government companies, in particular assets of the Philippine National Bank and the Development Bank of the Philippines. Approximately 150 companies have been selected as targets for privatization, including Philippine Airlines (proposed for 1988) and the San Miguel Corporation. Some transfers took place within debt-to-equity swap programmes. For example, a 71 per cent stake in the Century Park Sheraton Hotel was sold for \$8.5 million.²² The Singapore Government intends to sell a 46 per cent share in Mitsubishi Singapore Heavy Industries and a stake in Singapore Airlines. Since 1981, it has privatized 45 per cent of its share in Rank Hovis McDougall, a food company, and a stake in Neptune Orient Lines, a shipping company.²³ Relatively large privatization programmes have been implemented in Bangladesh, India and the Republic of Korea.

There has also been a marked improvement in relations between transnational corporations and developing countries. Part of this growth in mutual understanding was due to economic circumstances. The strategy of borrowing rather than encouraging equity participation by foreign partners is thought to have been less successful. New production and management techniques come with equity participation. Furthermore, institutional arrangements were devised which inspired confidence that the foreign partners would respect the sovereignty of the host country and that the foreign companies would be allowed to operate in a stable and supportive environment without excessive government intervention or nationalization. The creation of intergovernmental institutions, such as the Multilateral Investment Guarantee Agency (MIGA), also helped.

B. PARTICIPATION IN ECONOMIC AND SOCIAL LIFE

Ordinary citizens participate in the economic and social life of their country in many ways. For example, most con-

tribute to the economic output of society; they also take part in the decision-making processes of both public and major private institutions; and they spontaneously form organizations for the purpose of promoting their common interests.

1. Unemployment

One recent development has been a greater understanding of the limits of the power of the State in determining the level of employment. With the greater interdependence of economies, as manifested in flows of trade and finance, the ability of a Government to manage its domestic economy without regard to the international economic situation has been reduced. Governments that have attempted to raise levels of employment by raising expenditure have ended up with high rates of inflation and serious imbalances in their balance of payments. Consequently, rates of unemployment compatible with price and balance-of-payments stability have reached high levels in most OECD countries, and the policies intended to bring unemployment levels down have changed. These Governments now seek to promote employment by making their economies more adaptable to market forces, encouraging entrepreneurship and removing obstacles to growth. Since 1983 there has been a gradual easing of unemployment levels for OECD as a whole (see table 49).

During this period the unemployment rates of women tended to be higher than those of men. As discussed in chapter II, there has been a marked increase in the participation of women in the labour force. The duration of their unemployment also increased. The number of those unemployed for over one year as a percentage of the unemployed rose in the United Kingdom from 19.0 per cent in 1980 to 41.1 per cent in 1986; from 32.5 per cent in 1981 to 47.8 per cent in 1986 in France; and from 16.2 per cent in 1981 to 32.0 per cent in 1986 in the Federal Republic of Germany.²⁴

Many of the unemployed are young people. In the first half of the 1980s, on average, the unemployment rate in the European Economic Community was about 11 per cent, and 40 per cent of the unemployed were less than 25 years old.²⁵ This rate varied across social groups and regions. For instance, in Western Europe, the unemployment rate of young people from migrant families or declining industrial regions was higher than the national average. In the United States, the unemployment rate of young people from ethnic minorities was four to five times the national average.²⁶

Several new features of youth unemployment have emerged during the second half of the 1980s. First, unemployment among disadvantaged youth has increased and their spells of unemployment have become longer. Secondly, even the better educated and better trained young people have encountered considerable difficulties in finding secure jobs and making the transition to working life. Thirdly, in nearly all OECD countries, labour-force participation rates for youth have dropped, while educational enrolment rates have risen. Fourthly, many OECD countries face the new problem of providing employment opportunities for the "high-risk" generation of young people born between the 1950s and mid-1960s.²⁷ The young people of this generation have received a better education on average than did previous generations and their employment aspirations are cor-

TABLE 49. STANDARDIZED UNEMPLOYMENT RATES IN SELECTED OECD COUNTRIES
(Percentage of total labour force)

	1979	1982	1983	1984	1985	1986	1987
North America							
Canada	5.9	9.7	9.7	7.8	7.4	7.2	6.4
United States	7.4	10.9	11.8	11.2	10.4	9.5	8.8
Central and Western Europe	4.8	8.9	9.9	9.7	9.6	9.4	9.1
Belgium	8.2	12.6	12.1	12.1	11.3	11.2	10.9
France	5.9	8.1	8.3	9.7	10.2	10.4	10.6
Germany, Fed. Rep. of	3.2	6.1	8.0	7.1	7.2	6.5	6.5
Netherlands	5.4	11.4	12.0	11.8	10.6	9.9	9.6
United Kingdom	5.0	11.3	12.5	11.7	11.2	11.2	10.3
Southern Europe	7.9	11.2	11.8	13.1	13.7	14.0	14.1
Italy	7.6	8.4	9.3	9.9	10.1	..	..
Portugal	..	..	7.9	8.4	8.5	8.5	7.0
Spain	8.5	15.8	17.2	20.1	21.4	21.0	20.1
Nordic countries	3.1	3.6	4.0	3.7	3.4	3.3	2.8
Finland	5.9	5.3	5.4	5.2	5.0	5.3	5.0
Norway	2.0	2.6	3.4	3.1	2.6	2.0	2.1
Sweden	2.1	3.2	3.5	3.1	2.8	2.7	1.9
Australia	6.2	7.1	9.9	8.9	8.2	8.0	8.1
Japan	2.1	2.4	2.6	2.7	2.6	2.8	2.8
TOTAL	5.1	8.1	8.6	8.0	7.8	7.7	7.4

Source: OECD, *Employment Outlook* (Paris, September 1988), p. 24.

respondingly higher. However, they are entering the labour market at a time when job opportunities are not abundant. Many of them are forced to rely upon their families and remain with them as dependants for extended periods.

This delay in entering the labour force is one of the factors that leads to future hard-core unemployment and may account for certain negative social trends. Thus, in the United States young people under 21 years of age account for more than half of all arrests for serious crimes. The high rate of drug and alcohol abuse among youth in many developed market economies is also a matter of serious public concern.²⁸

Another result of the limited employment opportunities for young people is that the children of the unemployed are frequently raised in poverty. In the United States, for instance, less than 40 per cent of unwed and never-married mothers have jobs, and over half of them rely on welfare to support themselves and their children. Special efforts are being made to integrate them into economic life by breaking the cycle of dependence and providing training opportunities. In 1982, the United Kingdom instituted one-year subsidies to encourage employers to hire young workers. Similar schemes were introduced in Australia, Austria, France, Portugal and other countries.

Much attention has been given to youth training, enlisting the assistance of both official and voluntary organizations. Several approaches have been taken: (a) expanding the existing vocational training system (as in Australia, Belgium, the Federal Republic of Germany, Finland and Sweden); (b) introducing new forms of youth training (in-firm training, individual training leave, inter-firm associations, "sandwich" training facilities) in all sectors; (c) introducing new training schemes for young people within compulsory education; (d) launching youth employment projects at different levels, including the community level.

The participation of the aging in economic activity has acquired growing importance in developed market economies. Some Governments, as well as private firms, are considering widening the involvement of the aging in productive activities, especially in view of the decline expected in the labour force by the end of this century. Governments have thus taken steps to ensure the right of the elderly to participate in economic activity. Japan's goal has been described as an "active aging population". In line with the International Plan of Action on Aging, it has promoted continuing employment beyond the age of 60. The measures introduced include a subsidy programme for employment of older workers and a "part-time bank" to provide vocational counselling and placement services for older persons seeking part-time employment.²⁹ Other developed market economies have also introduced flexible retirement ages. For example, in Canada retirement at the age of 65 is no longer mandatory; pensions and income-support programmes have also been improved.

In the late 1980s, there has also been a noticeable growth of measures to involve older people in active participation in non-governmental organizations, particularly at the community level. For example, the University of Dortmund in the Federal Republic of Germany has launched an innovative programme for citizens aged 50 and over to prepare and train them for post-professional voluntary activities.³⁰

2. Promotion of rural employment in developing countries

The emphasis of many Governments in the developing countries, in their efforts to ensure greater participation in the labour force, has been on promoting rural employment and reaching the poorest and most disadvantaged segments of the population. The objective of rural programmes has in part been to stem the rapid migration from rural areas to

large cities. For example, the Government of Peru has legalized the settlements of landless and land-poor peasants on unutilized land in the Salitral region and organized them in 10 Salitral Peasants Committees. Several schemes were initiated to provide support for the income-generating activities of these co-operatives, including irrigation, crop diversification and forestation projects. In addition, to strengthen the new co-operatives, a revolving fund was established. In 1986, the co-operatives in the Salitral region settled 500 families, with secured control of 1,157 hectares of land.³¹

In 1981 the Indian Government initiated several small-scale projects to promote the economic participation of poor rural women. In one of these projects, women from seven villages formed their own grass-roots organization, which ensured them control over the income they derived from forest-based products produced by simple technology made available by the Government. As this approach to poor women's involvement proved to be successful, the Indian Government endorsed it in its Seventh Five-Year Plan as an effective strategy.³² The National Rural Employment Programme and the Rural Landless Employment Guarantee Scheme, both initiated by the Government, have also been both judged successful. During 1984 and 1985, these programmes generated 1 billion person-days of employment.³³

In Africa recent rural employment schemes combine several elements: incentives, technical and financial support, environmental targets, and promotion of self-organization and self-reliance of producers. Since 1980 the Government of Zimbabwe has undertaken several measures to improve maize production. Maize collection depots have been moved from the railheads closer to the farmers in order to lower transport costs. The number of small farmers with access to credit has increased from 3,000 to nearly 70,000; maize prices have been set at a sufficiently high level to give the farmers incentives to produce and fertilizer prices have been affordable. The farmers were encouraged to form self-help groups to co-ordinate questions dealing with supplies and credit. The National Farmers' Association was established to co-ordinate this activity nationally. The result was judged satisfactory, and as in 1984-1985, the contribution of small maize producers to total production, which had never exceeded 7.5 per cent in the past, was about 35 per cent.³⁴

Another successful venture in Zimbabwe has been the Organization of Rural Associations for Progress (ORAP). Founded in 1981, by 1987 it had about 500 village groups with membership ranging from 50 to 100 persons. The groups in their turn organized themselves into 30-40 "umbrella" federations and then into 10 associations. Besides conducting a wide variety of social and economic activities, ORAP has also established development centres at the association level. The centres have extensive functions, among other things serving as assembly halls and market places for the sale of the group's products. ORAP also conducts workshops to teach baking, construction and blacksmithing. Workshops also play a role as training schools within communities. More recently ORAP has begun to participate in the construction of basic amenities for member households.³⁵

In Burkina Faso, a tradition of co-operation and community work in the so-called "Naam" groups has been revived

and turned into development-oriented organizations. The main purpose of Naam groups is to take full advantage of high levels of underemployment during the dry season, when unemployed youth migrate to urban areas. By 1987, over 2,000 Naam groups averaging some 50 members each had been formed in 33 zones. Eight hundred of these were women's groups. The groups engage in such income-generating activities as vegetable gardening, stock farming, handicrafts, millet milling, storing grain, and producing and selling agricultural equipment. They also participate in environmental protection and restoration activities: the construction of dams and dykes, anti-erosion works, wells and afforestation projects. All groups have a savings fund financed through members' subscriptions and receipts from income-generating activities. Recently, skill promotion has been initiated by Naam groups: more educated members possessing knowledge of a certain technique or technology establish a mobile "labour-yard" school to teach the skill to other groups. The significant improvements in employment, income and socio-economic security in the villages covered by Naam groups have been noted with keen interest in neighbouring countries, and the movement has spread to Chad, Mali, Mauritania, Niger and Senegal.³⁶

Governments of developing countries have also tried to promote the participation of youth in economic activity through special youth employment and training programmes. Within the context of the Lagos Plan of Action for the Implementation of the Monrovia Strategy for Economic Development of Africa, the following schemes have been launched: in Egypt and Malawi, youth settlements on unutilized land; in Benin, the formation of producer mini co-operatives; in Burkina Faso, the substitution of rural training centres for formal schooling; in Kenya, the initiation of labour-intensive rural works programmes; and in Ethiopia, the hiring of large numbers of young agricultural workers in the new State farms.³⁷

Although still on a very limited scale, developing countries are also trying to address issues related to the elderly, first, by establishing policies for strengthening the family and, secondly, by initiating rural development schemes to preserve traditional sources of support for the elderly.

3. *Political activities*

In developed market-economy countries the ways of ensuring popular participation in the political process and the enjoyment of human rights and individual freedoms have not been radically altered in recent years. However, one notable change is that citizens of many of these countries can now seek protection from international bodies, such as the European Court and the Commission on Human Rights, against actions by their own Governments. Many of these societies have also tried to bring minority groups into full participation in the political process.

The new provisions for popular participation in the election and conduct of Government in the USSR has received wide attention. These changes were characterized as opening "a new chapter in the development of Soviet statehood on the basis of democratization and popular self-government" and were enacted into law in December 1988.³⁸

The law created a new body—the Congress of People’s Deputies—which would convene annually to debate and decide upon the important issues. Each deputy would be elected by secret ballot from among several candidates. The Congress would also elect the Supreme Soviet of 400 to 450 members, as well as the President of the Supreme Soviet, by secret ballot. The President would be accountable to the Congress and serve 2 five-year terms.

The new constitutional arrangements gives more weight to the legislature than to the Party. Together with steps to strengthen the independence of the judiciary, the new measures are expected to buttress the rule of law and prevent abuses of power. The innovations are buttressed by a policy of “more openness about public affairs in every sphere of life” (*glasnost*).³⁹

There have recently been notable advances in providing greater opportunities for political participation in developing countries, particularly in Asia and Latin America. Authoritarian forms of government, whether dominated by the military or not, have been replaced by systems of open elections. Free political activity has emerged in several countries.

However, there are still many obstacles to the full participation of the population in the political processes. The low levels of literacy and education are a particular problem. Poor transport facilities and scant communications networks also hamper participation in the political process. Organization for political activity on a national scale is difficult where means of communication are not well developed and production is carried out in small and isolated units.

4. Non-governmental organizations

The proliferation and momentum of voluntary organizations have been important forces in changing the social landscape in the 1980s. Participation in such organizations has been a spontaneous phenomenon in many countries but is also promoted by Governments. It has at the same time found greater prominence in international instruments and plans of action adopted under United Nations auspices.⁴⁰

A revitalized civil society serves to fill the gap between what the government machinery and the market offer and what people perceive to be their needs.⁴¹ In developed market economies, interest in wider and more meaningful participation reflects the desire of citizens to have greater influence over decisions that affect their well-being. In centrally planned economies, it is a concomitant of the policy of *glasnost* and a means of restructuring their economies. In developing countries, there is a need to improve social and economic conditions through popular action and mobilization of community resources in the face of public-sector retrenchment. It is hoped that greater participation will increase motivation, expand opportunities for groups whose scope for engaging in productive activities has been artificially restricted and bring into play underused skills and talents.⁴²

The interest in participatory forms of social action is reflected in several trends. One is the strength and proliferation of co-operative, self-help and community groups and non-governmental organizations. Another is the growing

strength of organizations demanding a greater say in decisions affecting them. Initiatives have been taken all over the world to give people a greater voice in the running of institutions—for example, to give workers a greater role in the management of enterprises and clients more say in the design and administration of social services. Greater autonomy is being given to public enterprises in both centrally planned and mixed economies; power is being shifted to local authorities; and new forms of partnership are being sought between government and non-governmental organizations.

The process of codifying rights has also gained momentum. This is reflected at the international level in the adoption of a number of global instruments relating, *inter alia*, to the advancement of women and the situation of specific population groups, particularly youth, the aging, migrant workers and their families, disabled persons and those in detention or involved in criminal proceedings.

A highly influential voluntary association is that of the international scientific community. Although the “republic of learning” has always existed, its growing concern with social and political issues is a new phenomenon. Its beginning can be traced to the early realization by the scientific community of the destructive power of nuclear weapons. It was also fed by the scientists’ understanding of the present and prospective damage to ecosystems. It was reinforced by the scientific contributions to development, such as the “green revolution”.

The shift in some developed market economies towards “hard” social programmes, which typically enjoy wide public support, may have been accelerated by the growth in scale and intensity of citizen and self-help movements. While the latter development may be considered highly desirable, it can also have adverse consequences for those least able to organize. Conflicts between the interests of different groups—for example, poor children and poor pensioners, the frail old and the active old, or the better off and the marginalized minorities—are no longer a distant possibility but a present reality, as some Governments now recognize.⁴³ In many developing countries, ethnic conflicts are even more serious and constitute a major challenge to political stability.

An institution that has encouraged wide participation is the trade union. Economic and social changes, especially of the past decade, have affected the character of the union movement. In market economies, both developed and developing, its traditional influence in improving or in protecting the income and working conditions of workers has waned. In many of these countries, the degree of unionization is falling. This is due to the decline of heavily unionized industries, growing unemployment and the rising proportion of women in the labour force. In some countries, Governments have also taken a more restrictive stance towards unions. At the same time, the trade union movement in many countries is taking on new responsibilities to help improve labour productivity and labour relations, and it is showing new dynamism in some countries, including centrally planned economies.

The co-operative movement, which is quintessentially participatory, has grown in membership and continues to

expand rapidly. A progressively wider range of activities is being undertaken within the co-operative framework. From the traditional focus on agriculture, through production, marketing, service and input co-operatives, and on wholesale and retail trade, the movement has expanded into urban areas and the industrial sector. Lately, housing and credit co-operatives have shown special dynamism. Another recent development has been the spread of women's co-operatives, and co-operatives of young people, the aging and the disabled.⁴⁴ In a number of centrally planned economies, the Government is seeking to stimulate the supply of goods and services by opening new areas for small-scale ventures based on co-operative principles. In countries where the movement was checked by over-regulation, Governments are reviewing their policies with a view to providing greater support.⁴⁵

The co-operative and other mutual self-help movements may be seen as protective mechanisms designed to defend members' interests in a world increasingly dominated by large organizations and impersonal and remote decision-making. At the same time, they have been able to exploit new opportunities in times of economic difficulty and meet a widening range of needs that are inadequately served by either Government or the business sector.

Popular movements have also arisen for the purpose of protecting the consumer. This issue arose first in the industrialized countries. As products grew more complex and the companies producing them became larger and more powerful, a need was felt to change the balance of power between buyer and seller. The principle of "let the buyer beware" became increasingly untenable when even the retailer had little knowledge of his products. Moreover, the safety factor assumed new importance with the development of new materials that could be toxic or hazardous.

Thus, laws have been passed to ensure the safety of children's toys, restrict the use of certain materials, create safety standards for electrical appliances, ensure that products are properly labelled and provide mechanisms for the investigation of consumers' complaints. The consumer movement has now spread to certain developing countries. Consumer protection has an international aspect in that it is in the interest of all countries to share information on dangerous products. Companies denied access to one country, because of non-compliance with its standards, can sell these inferior products in another country. Moreover, the creation of different standards can be a barrier to international trade. Recognizing the need to harmonize standards, the General Assembly adopted guidelines for consumer protection on 9 April 1985 (see resolution 39/248).

C. CONCLUSIONS

The changes in perceptions and attitudes discussed in this chapter have not been observed in every country of the world. Where they have occurred, their manifestations often vary considerably. Yet it remains a striking fact that changing attitudes towards the role of the State and towards popular participation in economic and social life have been noted in a range of countries at varied stages of development and with widely different historical traditions and levels of in-

come. This has resulted in a certain convergence in the sense that, although economic and social problems vary and must be treated differently in distinct parts of the world, in certain basic respects the approaches to them have become more similar over the past decade.

How is one to explain this simultaneous shift of ideas in so many countries that are extremely heterogeneous in many other important respects. There is no doubt an internationalization of ideas as communications among the peoples of the world multiply and the media spread information about conditions and events in all parts of the world. International organizations have facilitated frequent exchanges of experience in dealing with economic and social problems. Other essential forces are the globalization of the world economy and its reliance on a shared set of technologies and the existence of a single scientific community that has awakened to the shared threat to the ecosystem of the planet.

The case for State management of essential functions remains unquestioned. What is at issue is where the line between the State and civic initiative should be drawn. There is, in countries of all descriptions, some concern that with the present repudiation of the role of the State, the pendulum may be swinging too far and too soon. But there is little overt opposition to the rapid growth of popular participation in national or, indeed, international affairs. The voices of the "peoples of the United Nations", to which the Charter of the United Nations alludes in its preamble, are gaining in strength.

NOTES

¹ See United Nations, *Social policy in transition: analysis of formal governmental statements made at the Interregional Consultation on Developmental Social Welfare Policies and Programmes, Vienna, 7-15 September 1987* (United Nations sales publication forthcoming); Economic Commission for Africa, "The social welfare situation in Africa" (E/CONF.80/5); Economic Commission for Latin America and the Caribbean, "The social welfare situation in Latin America and the Caribbean" (E/CONF.80/6); Economic and Social Commission for Asia and the Pacific, "The social welfare situation in Asia and the Pacific" (E/CONF.80/7); Economic and Social Commission for Western Asia, "The social welfare situation in Western Asia" (E/CONF.80/8). (The four regional reports were reproduced in United Nations, *Social Development Newsletter*, vol. 1987-2, No. 26 (Vienna)). See also Adalbert Evers, *Social policy in transition: an analysis of the country reports from the Conference of European Ministers Responsible for Social Affairs, Warsaw, 6-10 April 1987* (Vienna, European Centre for Social Welfare Training and Research, 1987).

² A. Lindbeck, "Individual freedom and welfare state policy", *European Economic Review*, No. 32 (1988), p. 297.

³ See United Nations, "Social policy in transition . . .".

⁴ *1982 Report on the World Social Situation* (United Nations publication, Sales No. E.82.IV.2), chap. 1.

⁵ *Ibid.*

⁶ Adalbert Evers and Helmut Wintersberger, eds., *Shifts in the Welfare Mix: Their Impact on Work, Social Services and Welfare Policies* (Vienna, European Centre for Social Welfare Training and Research, 1988).

⁷ Isabel V. Sawhill, ed., *Challenge to Leadership: Economic and Social Issues for the Next Decade* (Urban Institute Press, 1988).

⁸ "Developmental social welfare" (E/CONF.80/3), and Evers, *op. cit.*

⁹ Evers and Wintersberger, *op. cit.*

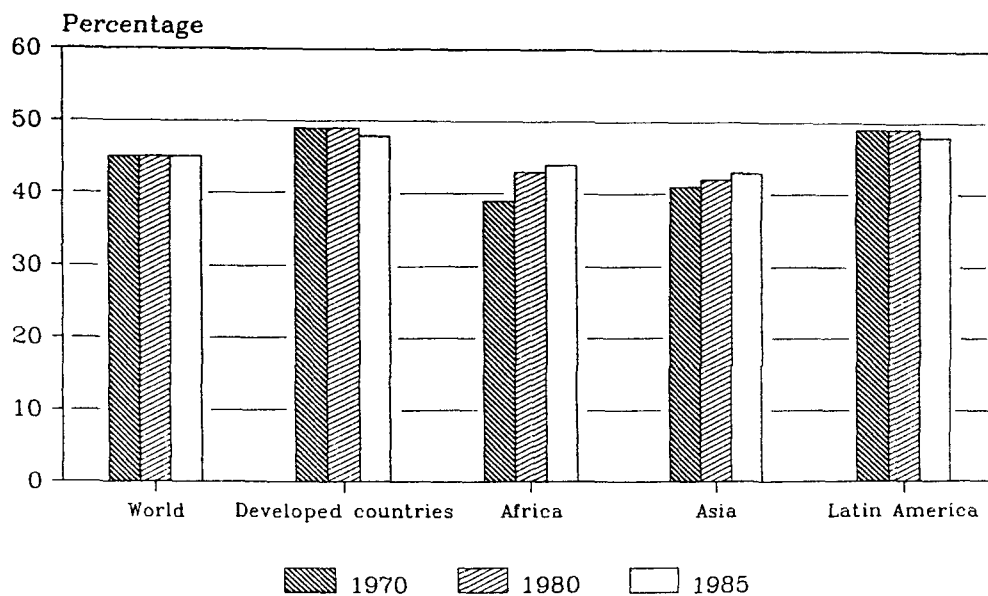
¹⁰ *Developmental Social Welfare: A Global Survey of Issues and Priorities since 1968* (United Nations publication, Sales No. E.86.IV.6.) and "Guiding principles for developmental social welfare policies and programmes in the near future" (E/CONF.80/10) (reproduced in United Nations, *Social Development Newsletter*, vol. 1987-1, No. 25 (Vienna)), sects. C and D.

¹¹ Quoted in A. Sen, "Freedom of choice", *European Economic Review*, No. 32 (1988), p. 270.

- ¹² "Wider share ownership", *Economic Progress Report*, No. 181 (London, Her Majesty's Treasury, November-December 1985), p. 2.
- ¹³ To encourage small investors, since the end of the 1970s the Government of the United Kingdom has introduced the following modification of its tax system: the stamp duty payable on share transactions was halved to 1 per cent in 1984; the investment income surcharge, at 15 per cent, was abolished in 1984; the life insurance premium relief on new policies was abolished in 1984; and over 1,000 tax incentives for share schemes were introduced between 1979 and 1984.
- ¹⁴ "Who needs privatization now?" *The Economist*, 19 December 1987, p. 49.
- ¹⁵ Richard Henning and Ali M. Mansoor, "Privatization and public enterprises", IMF Working Paper, No. 25 (February 1987), p. 12.
- ¹⁶ *Institutional Investor*, December 1987.
- ¹⁷ *Ibid.*
- ¹⁸ Richard Henning and Ali M. Mansoor, *loc. cit.*, p. 41.
- ¹⁹ Elliot Berg and Mary Shirley, "Divestiture in developing countries", World Bank Discussion Paper, No. 11 (1987), pp. 25-30.
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- ²¹ Samuel Paul, "Privatization: a review of international experience", *Economic and Political Weekly*, No. 6 (February 1988), p. 274.
- ²² *Euromoney*, December 1987, p. 95.
- ²³ *Ibid.*
- ²⁴ United Kingdom, Department of Employment, *Employment Gazette*, No. 10 (1980), pp. 531-533, and No. 5 (1985), pp. 523 and 524.
- ²⁵ United Nations, *Youth Information Bulletin*, vol. 1984-1, No. 50, p. 39.
- ²⁶ OECD, *New Policies for the Young* (Paris, 1985).
- ²⁷ William H. Kolberg, "Employment, the private sector and at-risk youth", *The Annals*, November 1987, pp. 94-96.
- ²⁸ *Ibid.*, pp. 95-96.
- ²⁹ United Nations, *Bulletin on Aging*, vol. X, No. 3 (1985), p. 14.
- ³⁰ *Ibid.*, No. 2 (1985), p. 20.
- ³¹ ILO, "Rural employment promotion: Report VIII" (Geneva, 1988), p. 90.
- ³² *Ibid.*, Report VII (Geneva, 1988), pp. 79 and 80.
- ³³ *Ibid.*, p. 74.
- ³⁴ Lloyd Timberlake, *Africa in Crisis: the Causes, the Cures of Environmental Bankruptcy* (Earthscan, 1985), pp. 207 and 208.
- ³⁵ "Rural employment promotion: Report VIII" . . . , p. 89.
- ³⁶ *Ibid.*, p. 88.
- ³⁷ See United Nations, *Social Development Newsletter*, vol. 1986-1, No. 23 (Vienna), pp. 12-13.
- ³⁸ *The New York Times*, 2 December 1988.
- ³⁹ Mikhail Gorbachev, *Perestroika: New Thinking for our Country and the World* (New York, Harper and Row, 1987), p. 75.
- ⁴⁰ Among others, the Nairobi Forward-looking Strategies for the Advancement of Women, the Guidelines for Further Planning and Suitable Follow-Up in the Field of Youth, the International Plan of Action on Aging, and the World Programme of Action concerning Disabled Persons.
- ⁴¹ Evers, *op. cit.*
- ⁴² See, for example, the Nairobi Forward-looking Strategies for the Advancement of Women, and "Social policy" (E/CONF.80/2), chap. III, sect. C.
- ⁴³ Organisation for Economic Co-operation and Development, *Aging Populations: The Social Policy Implications* (Paris, 1988).
- ⁴⁴ "National experience in promoting the co-operative movement" (A/42/56).
- ⁴⁵ United Nations Office at Vienna, *Report of the Seminar on the Role of the Government in Promoting the Co-operative Movement in Developing Countries* (Moscow, 1987).

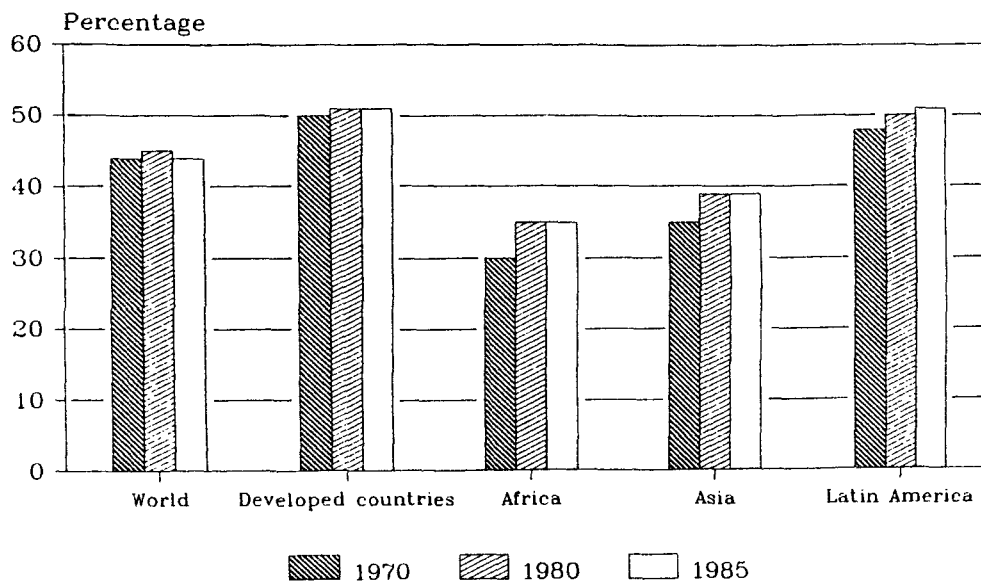
FIGURES

Figure I. Females in total enrolment in first level education



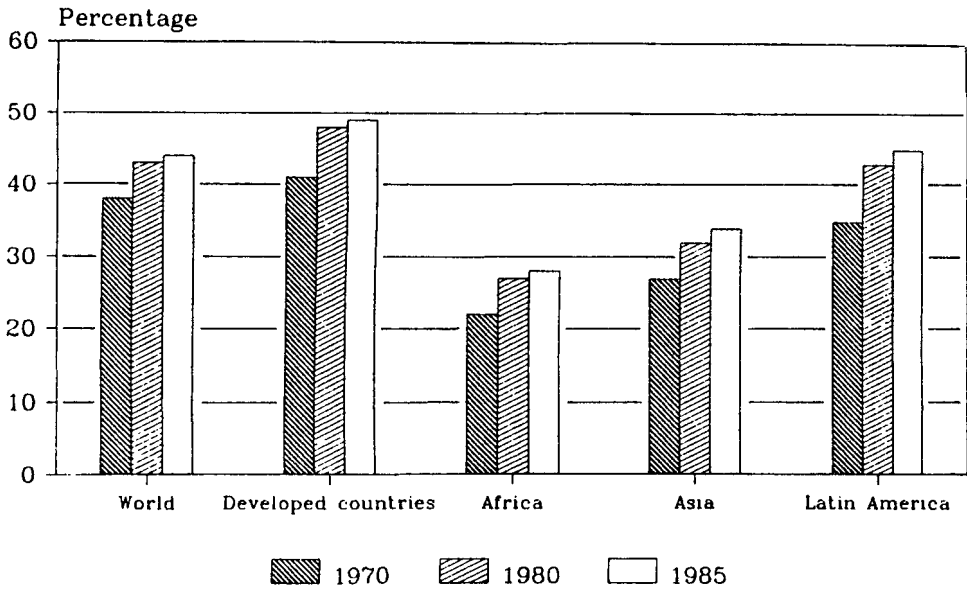
Source: UNESCO, *Statistical Yearbook*, 1987.

Figure II. Females in total enrolment in second level education



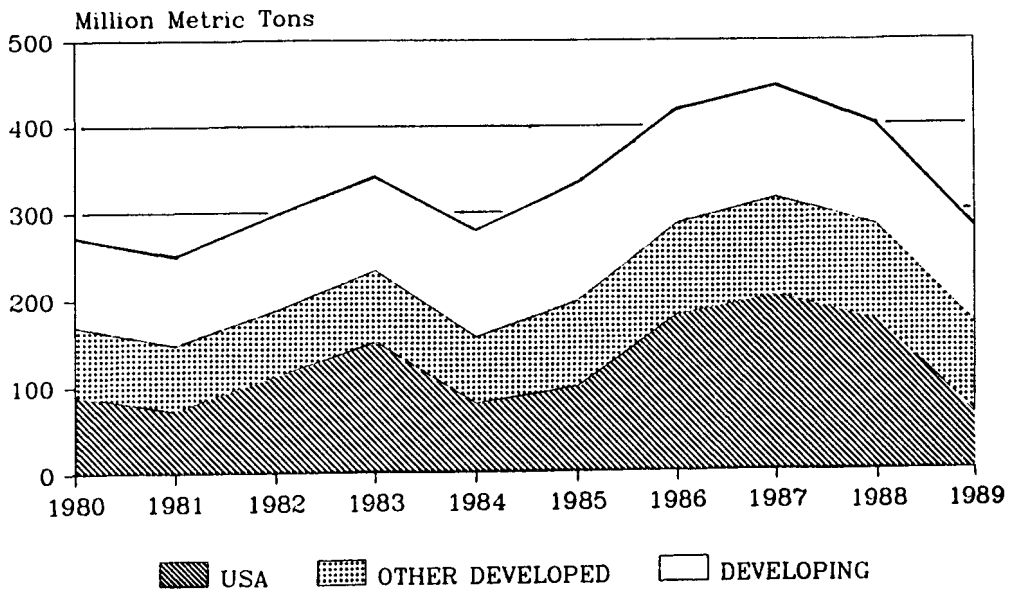
Source: UNESCO, *Statistical Yearbook*, 1987.

Figure III. Females in total enrolment in third level education



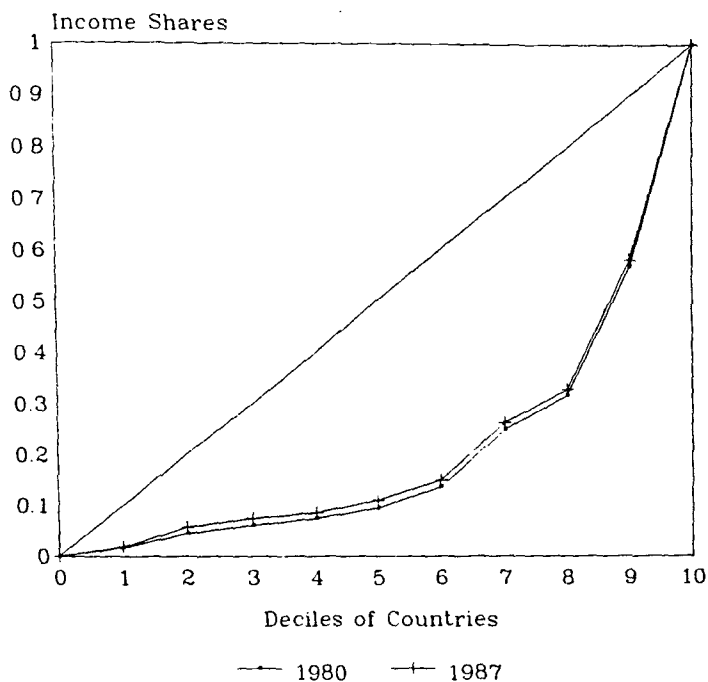
Source: UNESCO, *Statistical Yearbook*, 1987.

Figure IV. World stock of cereals, 1980–1989



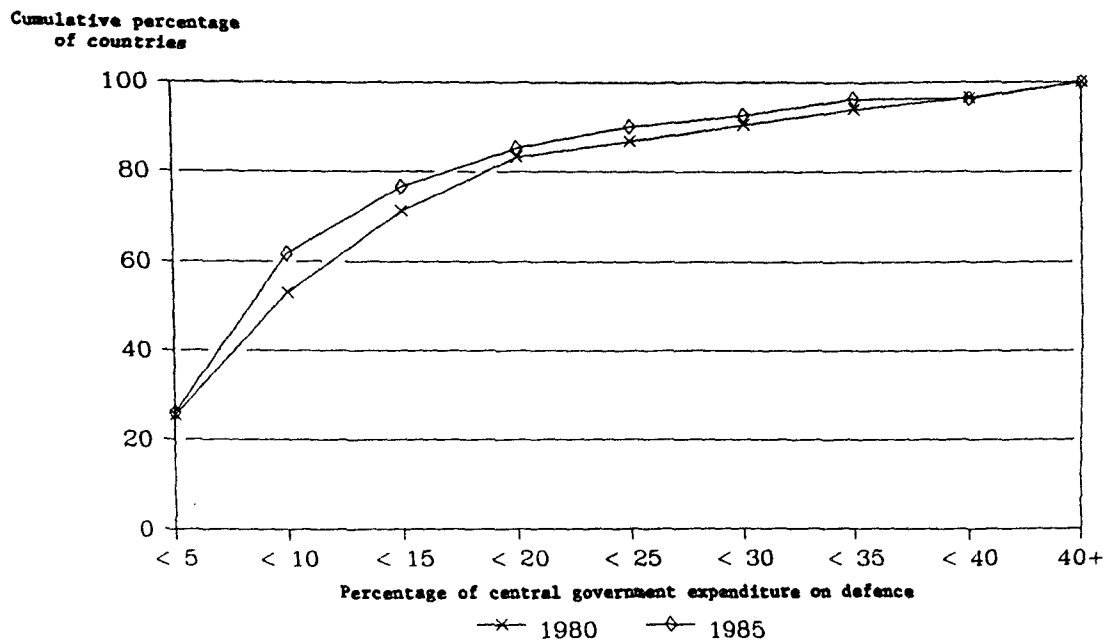
Source: Data of Food and Agriculture Organization of the United Nations.

Figure V. Lorenz curve of distribution of world GDP among countries, 1980 and 1987



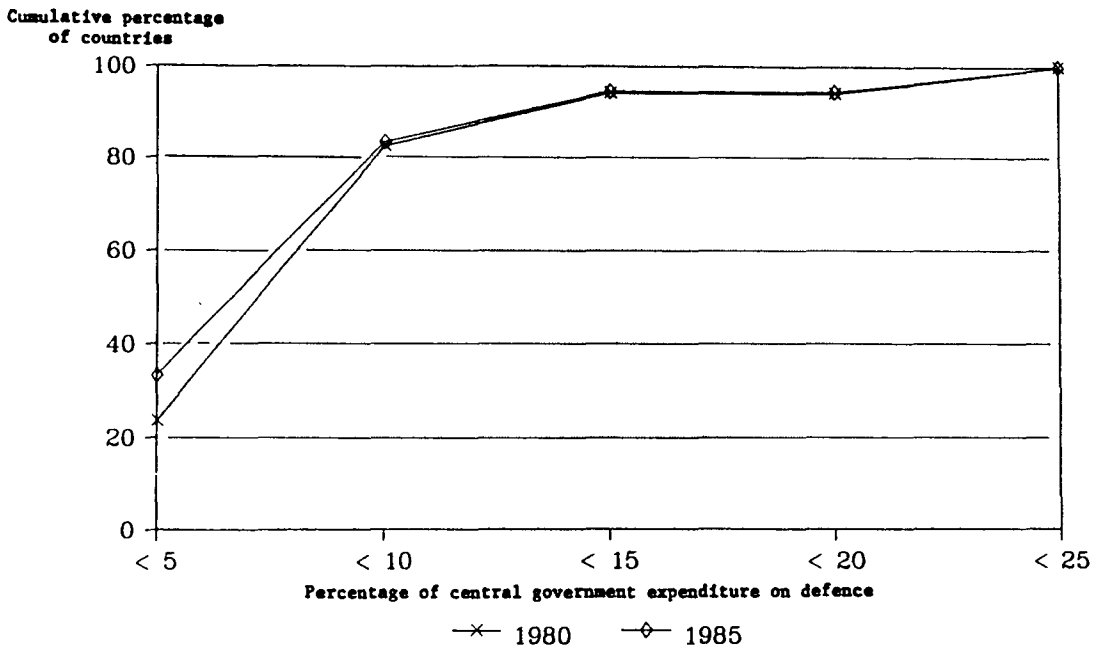
Source: Department of International Economic and Social Affairs of the United Nations Secretariat.

Figure VI. Defence expenditure 1980, 1985: all countries



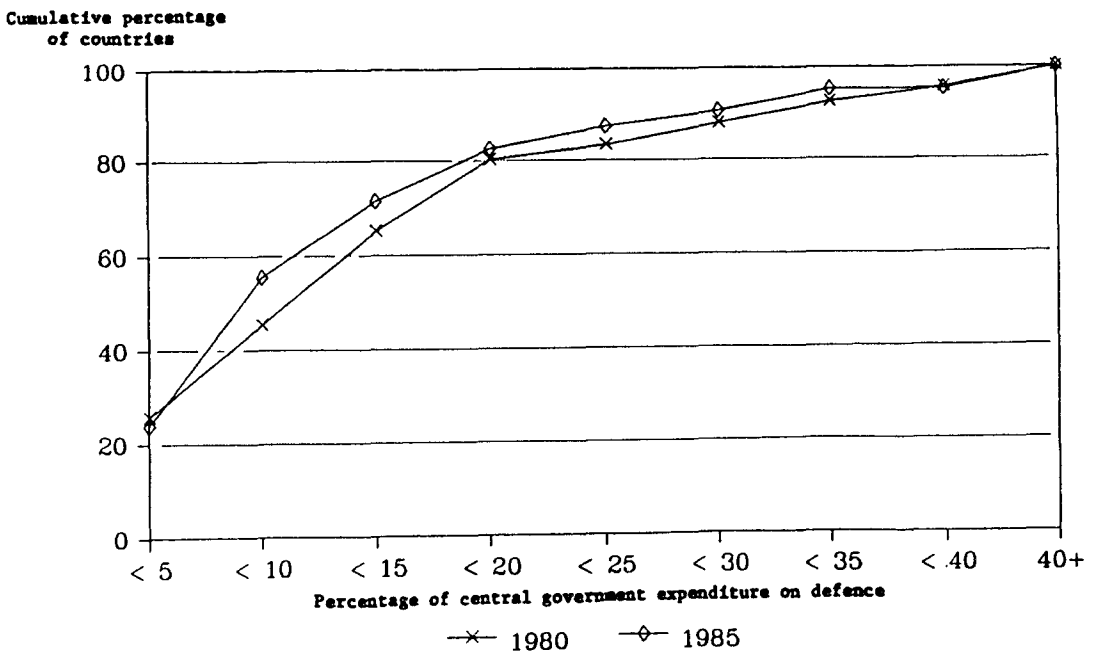
Source: IMF Government Finance Statistics Yearbook 1987.

Figure VII. Defence expenditure 1980, 1985: developed market economies



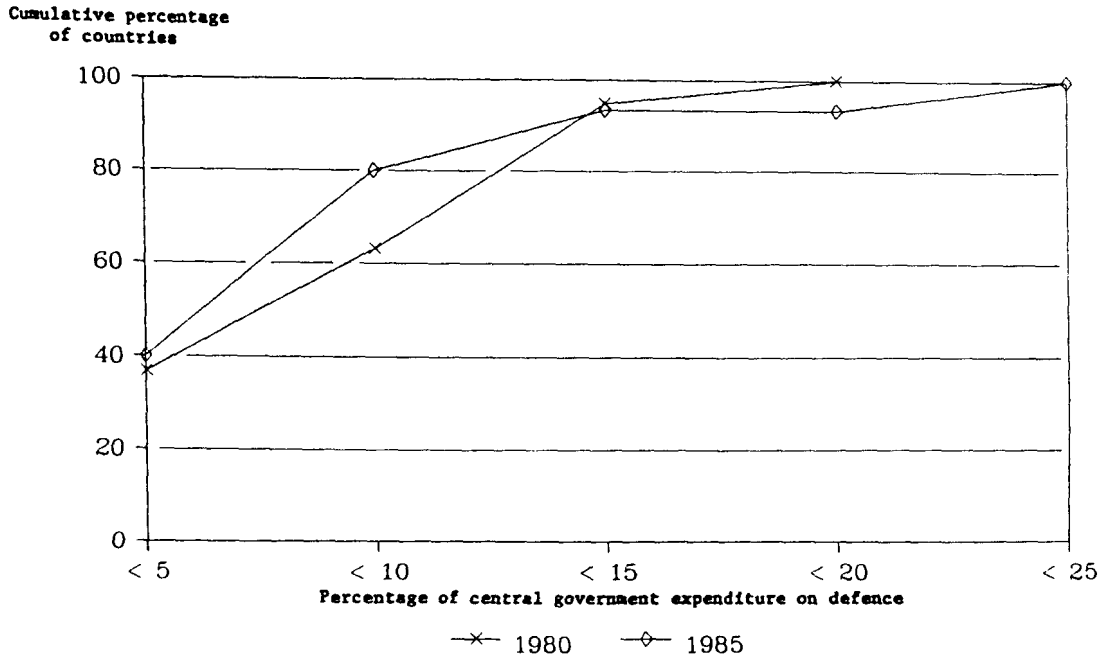
Source: IMF Government Finance Statistics Yearbook 1987.

Figure VIII. Defence expenditure 1980, 1985: developing countries



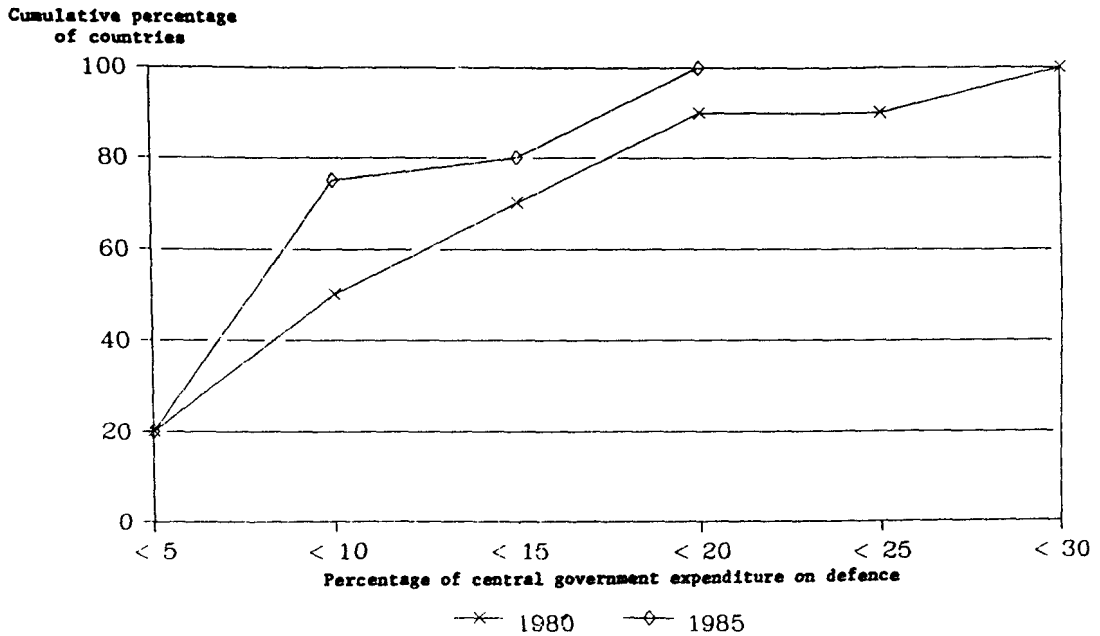
Source: IMF Government Finance Statistics Yearbook 1987.

Figure IX. Defence expenditure 1980, 1985: Latin America



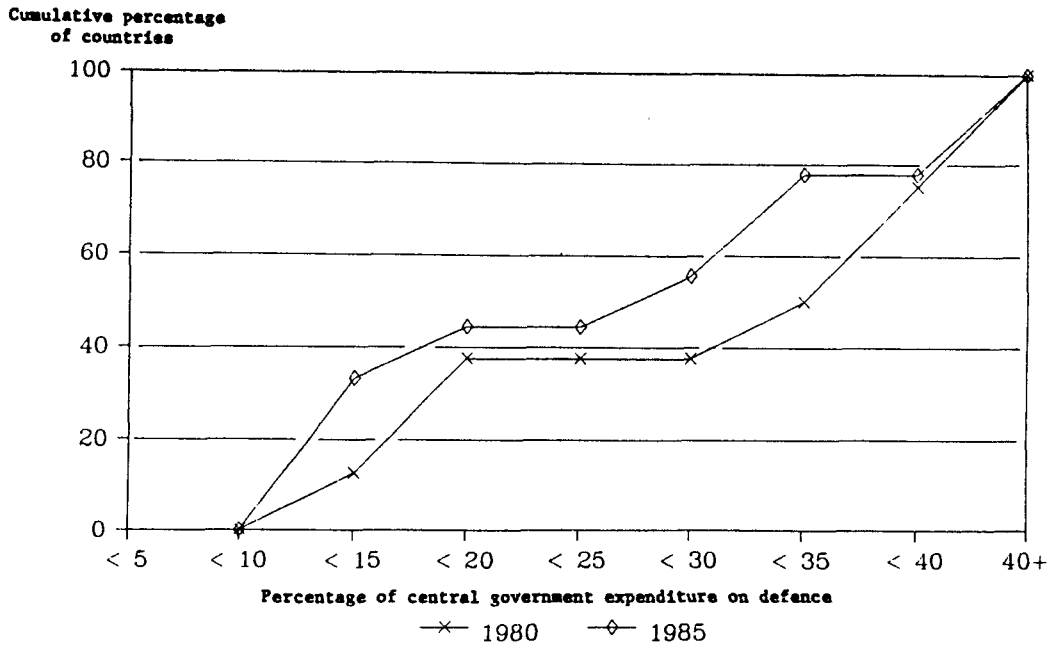
Source: IMF Government Finance Statistics Yearbook 1987.

Figure X. Defence expenditure 1980, 1985: Africa



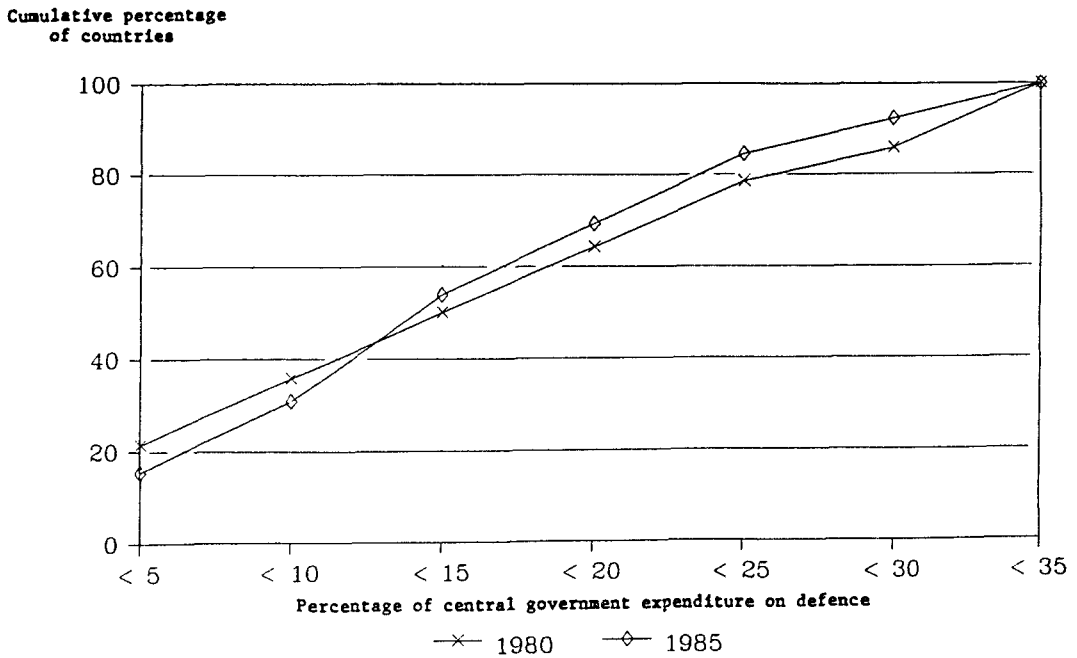
Source: IMF Government Finance Statistics Yearbook 1987.

Figure XI. Defence expenditure 1980, 1985: West Asia



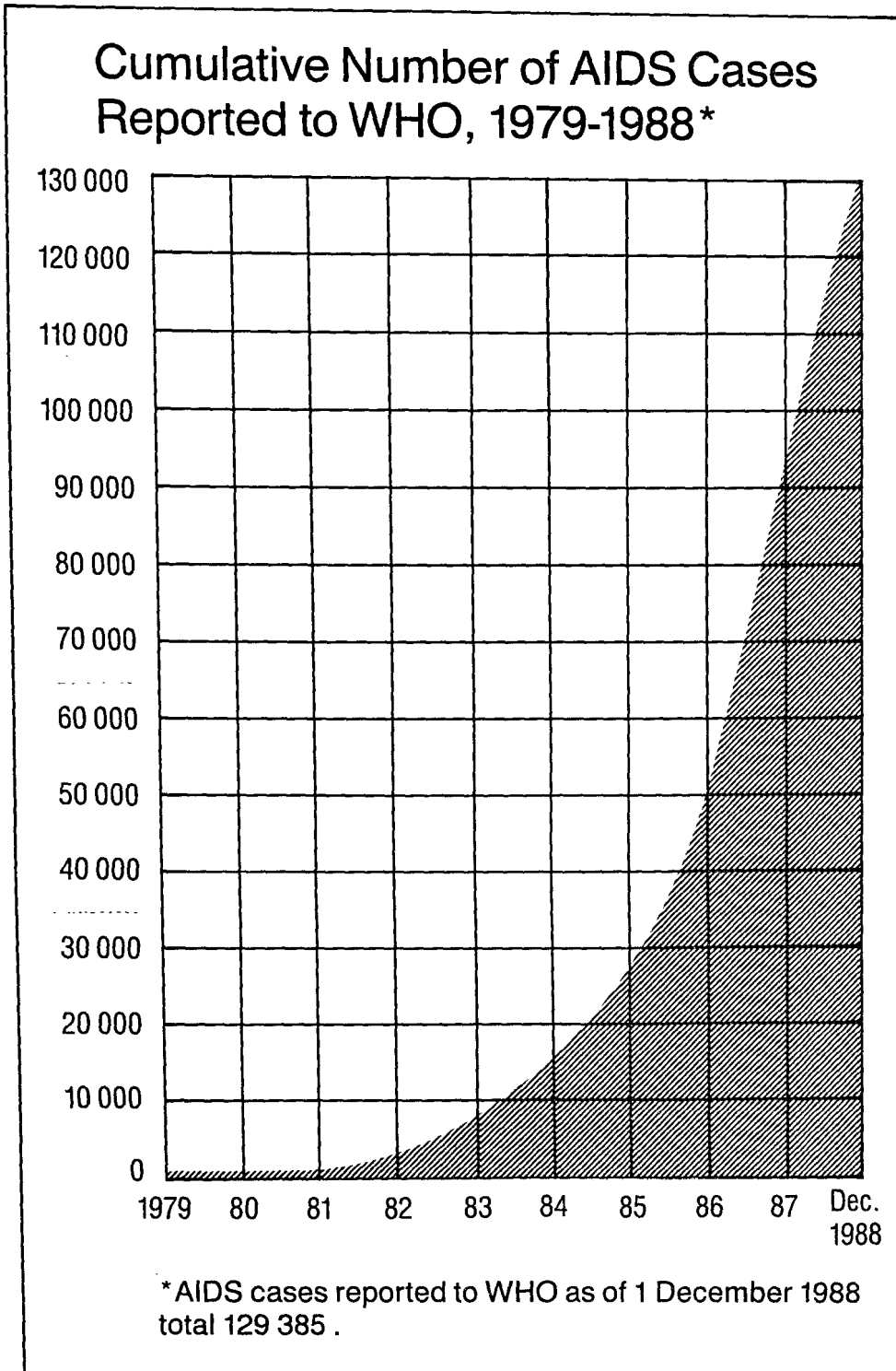
Source: IMF Government Finance Statistics Yearbook 1987.

Figure XII. Defence expenditure 1980, 1985: Asia



Source: IMF Government Finance Statistics Yearbook 1987.

Figure XIII. New AIDS cases reported to WHO, 1979-1988



Source: World Health Organization, *Global AIDS Factfile*, Case Review (Information from the WHO Global Programme on AIDS), December 1988.

ANNEX

The critical social situation in Africa

In resolution 1987/39, the Economic and Social Council requested the Secretary-General, in consultation with the Organization of African Unity, the Economic Commission for Africa and the African Development Bank, to prepare, for inclusion in the 1989 report on the world social situation, a comprehensive annex on the critical social situation in Africa, paying particular attention to the obstacles to the attainment of the objectives contained in the Declaration on Social Progress and Development (General Assembly resolution 2542 (XXIV)), including the impact of structural adjustment policies on the social situation in Africa. The annex has been prepared by the secretariat of the Economic Commission for Africa.

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INTRODUCTION

The first decade and a half of African independence to the mid-1970s had seen considerable progress towards the attainment of fundamental human goals and social integration. Visible improvements had been made in education, literacy, health and employment and in the provision of housing, clean drinking water and other social amenities for large numbers of African people. A new sense of national pride and cultural identity had emerged among the diverse populations which had been grouped, under colonial rule, into new nation States.

Unfortunately, most of these social gains were either lost or became seriously eroded in the 1980s. The unprecedented crisis which has confronted the African countries in this decade has thrown their economies into disarray and caused widespread deterioration in the social condition of the people. The improvements in human capital stock have been severely undercut by decelerating education, hunger, malnutrition and famine, the resurgence of endemic diseases, drought and environmental degradation. *Apartheid* and acts of violence committed by the racist régime in South Africa, as well as other regional political conflicts, have eroded human rights and made millions of people refugees. Furthermore, a hostile international economic environment has continued to undermine the ability of African Governments to sustain the development of the region. Certain measures taken by those Governments, with the support of international financial and eco-

nom institutions, to stabilize and adjust their economies have mainly served to aggravate the social crisis. As a result, large segments of the African population that were already disadvantaged, including women, children, small farmers, and poor rural and urban wage workers, have suffered real misery.

Under such circumstances, the African Governments' initial efforts to implement the objectives of the Declaration on Social Progress and Development¹ have met with serious obstacles in recent years. It was against this background that the Conference of Ministers responsible for economic development and planning of the Economic Commission for Africa (ECA) adopted resolution 601 (XXII) on 24 April 1987 and the Economic and Social Council adopted resolution 1987/39 on 28 May 1987 focusing regional and international attention on the critical social situation in Africa and calling for its study. Pursuant to the Conference of Ministers resolution, a detailed report on the African social situation² was prepared for the twenty-third session of the Commission and fourteenth meeting of the Conference of Ministers, held at Niamey in April 1988.

Sections I-IV below review and analyse the trends in economic crisis and social deterioration, particularly in the areas of employment, incomes, food, nutrition, health and education. Section V analyses the pervasive social effects of *apartheid* and destabilization perpetrated by the Pretoria régime on the peoples and States of southern Africa, as well as of other regional conflicts. Section VI draws major conclusions from the preceding analyses and indicates important new directions for efforts towards sustained social progress and human-focused development in Africa. The citation of cases from specific countries is meant to be indicative rather than comprehensive.

I. BACKGROUND TO AFRICA'S SOCIAL DETERIORATION

A. Structural economic imbalances

It is now well established that the root causes of the economic and social crisis in Africa lie primarily in the structural imbalances and weaknesses of the African economy. This was clearly pointed out in 1980 in the Lagos Plan of Action for the Implementation of the Monrovia Strategy for the Economic Development of Africa.³ It was reiterated in 1986 in the report entitled "Africa's Submission to the Special Session of the United Nations General Assembly on Africa's Economic and Social Crisis".⁴ A major feature of the structural problems is that production is dominated by export-oriented agricultural, mining and other extractive commodities.

Although agriculture accounts for 60 to 80 per cent of gross domestic product (GDP) and provides the livelihood of more than 75 per cent of the population, its food sector is characterized by rudimentary production techniques, poor conservation and processing technologies, insufficient price incentives and inadequate marketing and other basic social and economic infrastructures. At the height of the crisis, African government leaders acknowledged that "in spite of the recent shift of emphasis in favour of food production, research and extension services and direct investment as well as basic infrastructure in this critical sector still lag behind the attention given to export crops, and the linkages among the economic and social sectors are still so weak that many African countries do not as yet enjoy the mutually supportive sectoral interactions that are essential for building dynamic, self-reliant and self-sustaining economies".⁵

The African economies are heavily dependent on external sources both for major factor inputs for development, such as capital, equipment and expertise, and for major revenues derived from exports. This has made both economic growth and consumption in the continent greatly subject to the vagaries of the international economic and socio-political environment. When faced with world economic recession in 1980-1982 and an unprecedented drought emergency from 1983 to 1985, the structurally weak and misoriented economies, which admittedly also suffered from poor manage-

ment, succumbed to a major crisis with precipitous declines in the living standards of the people. The situation has continued in varying degrees to the present. Economic growth rapidly decelerated from the 1970s, when GDP averaged 3.3 per cent growth per year, to only 1 per cent in 1986 and 0.8 per cent in 1987. Agriculture expanded by 3.8 per cent in 1986, largely due to good rains, but declined by 1.1 per cent in 1987 reflecting recurrent drought in several parts of the continent. Growth in industry has equally been weak or marginal owing mainly to the under-utilization of installed capacity, which in some countries is as high as 50 per cent.⁶

Poor economic growth has resulted in serious declines in per capita income, which fell by an annual average rate of 3.4 per cent between 1980 and 1986. This meant that average income per head was between 15 and 25 per cent lower than in 1970. Per capita consumption also fell by as much as 14 per cent in the 1980-1987 period.⁷ A sharp rise in inflation and shortages of essential goods and services pushed prices up beyond the reach of most workers. Thus, while real wages declined by an average of 19 per cent between 1980 and 1986, prices increased on the average by 18.9 per cent in 1982-1983, 24 per cent in 1984 and 11.7 per cent in 1985. The results have been an intolerable reduction in living standards and a serious social retrogression in nearly all countries.

The contraction of the African economies in the 1980s was aggravated by an interrelated set of external factors, particularly the collapse in commodity prices, debt and debt-servicing burdens and diminishing resource flows. Most African countries depend on not more than three main export commodities for their foreign exchange earnings. Between 1980 and 1983 the region lost some \$13.5 billion, a figure which rose to \$19 billion in 1986, as a result of the sharp falls in the export prices of its primary commodities. In actual earnings, Africa's non-oil commodity exports acquired only \$24 billion, about 20 per cent less than in 1985. At the same time, the external debt of the region had risen from \$150 billion in 1983 to \$218 billion in 1987. The ratio of debt servicing as a percentage of exports has been high and growing. It reached 35.8 per cent in 1987 when 10 per cent or less is considered a healthy benchmark. Meanwhile, resource flows to support Africa's development efforts decreased from \$21.2 billion in 1982 to \$13 billion in 1986—that is, less than the amount required to offset the sharp fall in export earnings that year.

In order to manage these imbalances, most African Governments adopted measures largely to reduce government expenditure and control imports. The reductions in expenditure fell mainly on the development budgets and the social sectors. Since the Government is the largest formal employer as well as the major financier of social development services in most countries, the curtailment of public spending had particularly deleterious effects on the lives of the poor and vulnerable, as will be seen in sections II-IV below. It should be noted here that the social sectors bore the brunt of the retrenchment in expenditures largely because of a persisting misconception that social development is only a residual resource-consuming sector whose activities must await the generation of funds and resources by the economic and productive sectors.⁸ There is an imperative need to change this perception if the human factor is to play its essential and central role in sustainable

development in Africa. A change of perception is also necessary because of the compelling environmental and demographic dimensions of the crisis.

B. Environmental and demographic dimensions

During the period 1983-1985, Africa's structural underdevelopment and mounting debt received a jolt from the drought and associated desertification that ravaged all parts of the continental mainland. The island countries of the Indian Ocean region were also damaged by cyclones or floods caused by excessive rainfall. While these are age-old natural calamities, their intensity and widespread nature made them the worst in the region's history and they undercut the natural foundations of existence for millions of people. In 1983 alone, the Sahara desert was estimated to have advanced 150 kilometres southwards. Usable pastoral land in arid and semi-arid zones was reduced by some 25 per cent and rampant bush fires destroyed other vegetation. In the West African Sahel and other affected regions, desertification is reducing other useful lands at the rate of 8 to 10 kilometres per year. Forests have virtually disappeared in some countries. The Food and Agriculture Organization of the United Nations (FAO) estimates that deforestation exceeds tree planting rates by a factor of 30:1 in several least developed African countries. Livestock suffered heavy losses, from 30 to 80 per cent in many poor countries, and food production shortfalls, especially in cereals, were as high as 30 to 50 per cent.

The toll on human lives of the great drought emergency has been well documented and therefore only a brief reference needs to be made here. More than 1 million people from mostly agricultural and pastoral communities lost their lives. Some 250 million people were seriously affected, and nearly 40 million of them faced severe famine, malnutrition, debilitating diseases and epidemics. Over 10 million people were displaced from their lands and homes and had to cross the boundaries of neighbouring countries with their emaciated livestock in search of food and water. The social fabric of African society was rent further as the refugee population swelled to over 5 million or half the world's total refugee population. Rural areas with chronic poverty and inadequate developmental support and poor peri-urban areas bore the brunt of the socio-economic dislocations. Nor have the conditions improved, since localized droughts have re-emerged in several countries and swarms of locusts and other pests have destroyed millions of hectares of new crops and renewed Africa's food deficit situation.⁹

Another major factor that has aggravated the deteriorating socio-economic situation is the demographic factor. As is well known, Africa is the least densely populated continent in the world and is also underpopulated overall. Therefore, the significance of the demographic dimension for the current crisis and future development lies not in the gross numbers of people but in the rate of growth and patterns of distribution of the population relative to present levels of development resources, techniques and productivity. As table A.1 shows, the population is growing at a current rate of 3 per cent per annum and has had a high growth profile since the 1950s compared with the rest of the world. In 1950 the region's population stood at 224 million. In 1989 it will be an estimated 628 million or an increase of 160 per

TABLE A.1. MAJOR DEMOGRAPHIC INDICATORS IN AFRICA IN COMPARISON WITH THE WORLD, MORE DEVELOPED AND LESS DEVELOPED REGIONS, 1950-1990, MEDIUM VARIANT

Region	Annual population growth rate (percentage)		Crude birth rate (per 1,000 population)		Crude death rate (per 1,000 population)		Infant mortality rate (per 1,000 live births)		Life expectancy (years, both sexes)	
	1950-1955	1985-1990	1950-1955	1985-1990	1950-1955	1985-1990	1950-1955	1985-1990	1950-1955	1985-1990
Eastern Africa	2.26	3.09	50.3	47.8	28.2	17.0	179	116	36.5	49.8
Central Africa	1.89	2.91	46.6	44.8	27.6	16.0	183	107	36.9	50.0
Northern Africa	2.26	2.73	48.9	38.0	24.7	10.7	189	86	41.9	59.0
Southern Africa	2.28	2.33	43.7	33.4	21.0	10.1	153	77	44.1	59.7
Western Africa	2.13	3.26	49.7	48.9	28.9	16.5	204	112	35.6	49.4
Total Africa	2.18	3.00	48.9	44.7	27.0	14.9	187	106	38.0	51.9
World	1.80	1.73	37.4	27.1	19.7	9.9	155	71	45.9	61.5
More developed regions	1.28	0.53	22.6	14.6	10.1	9.8	56	15	65.7	73.4
Less developed regions	2.05	2.10	44.6	30.9	24.3	9.9	180	79	41.0	59.7

Source: *World Population Prospects: 1988*. To be issued as a United Nations publication.

cent. Since no downward trends are expected in the growth rate, the population is expected to reach 872 million by the turn of the century.

Although there are slight subregional variations in the growth rates, the age distribution for the whole region is characterized by high child dependency. According to *World Population Trends and Policies: 1987 Monitoring Report*¹⁰ the African child population, that is children aged 0-14 years, constitutes 45 per cent of the total population, and the elderly, those aged 60 years and over, constitute 4.8 per cent. Africa has the highest age dependency ratio of 92.9 per cent, compared with 64.7 per cent for the world, 69.9 per cent for the less developed regions and 50.2 per cent for the more developed regions. The implications for Africa are serious in terms of the high demand for subsistence consumption and provision of social services, particularly educational and health facilities. The high dependency could also exert a negative pressure on the capacity of the economically active population to save and invest in productive enterprises. The demographic profile and dynamics also have consequences for employment. In sub-Saharan Africa in the 1980s the labour force has been expanding at a rate of 2.7 per cent per annum compared with 2.2 per cent in the 1960s. Four million new jobs were estimated to be required in 1988 alone but these were not possible to create. On the contrary, unemployment, underemployment and labour displacements have been rife.¹¹

The worsening social conditions have been felt in varying degrees by different segments of the population whose spatial distribution has traditionally been uneven. Over 75 per cent of the African population currently lives in rural areas, from where unequal development patterns, ecological disasters and lack of opportunities have been forcing the rural young and able-bodied to flee in large numbers to the urban areas and even out of their countries. Although the continent is the least urbanized region of the world, the current urbanization rate of 5 to 10 per cent is considered too high, since the growth is not in response to an expanding urban economy or expanding opportunities for employment. The results have been overcrowded cities and towns with overburdened social amenities and depressed labour markets. On the other hand, the rural areas have been left with predominantly young and aging males and overworked women to maintain the food production systems and strained social structures. For these and other reasons, an increasing number of countries are pursuing comprehensive population policies and programmes as part of their efforts at recovery and long-term development, in line with the 1984 Kilimanjaro Programme of Action for African Population and Self-Reliant Development.¹² However, other aspects of the demographic dimension remain. They relate to the millions of the conflict and war displaced populations and refugees whose disrupted lives reflect the socio-political malaise of the continent (see sect. V below).

C. Impact of stabilization and structural adjustment programmes

The sharp economic decline and severe socio-economic imbalances necessitated some forms of adjustment and corrective measures in nearly all African countries. However, the aspects of the problem that attracted immediate and greatest attention were those associated with the external economic position of the countries, especially their balance of payments, currency exchange rates, exports and imports. By 1987 some 34 African countries had undertaken various combinations of austerity and reform measures under financial "stabilization" and macro-economic "structural adjustment" programmes. While a few countries, notably Nigeria, undertook some of these measures on their own, the majority of African countries adopted wide-ranging stabilization and adjustment programmes under the influence of the International Monetary Fund (IMF) and the World Bank. The ultimate goal of these programmes was seen as the restoration of conditions favourable to sustainable economic growth. However, their dominant feature has been an intense, short-term focus on achieving quick external financial liquidity and recovery of export capacity in the countries.

Much detailed study is required to assess the full impact of structural adjustment programmes in Africa. But the available data and emerging evidence strongly indicate that the effects on the well-being of the people have been devastating especially with regard to employment, incomes, food, nutrition, health and education. A fundamental problem of IMF and World Bank programmes has been the highly sectoral and narrowly economic approach both in analysing development malfunctions and in prescribing solutions. Such an approach is inadequate to deal with the crisis in Africa, which is multidimensional and seriously aggravated by endogenous and exogenous factors. What need to be restructured in Africa are the basic patterns and relations of production, distribution and consumption in their technical, economic, social, political, external and internal dimensions. The overall perspective must be long-term and transformational: short-term surgical

macro-economic operations that return the economies to their externally oriented, dependent, pre-crisis state are not enough.

IMF and the World Bank supported stabilization and adjustment programmes in the early 1980s but paid scant attention to the social, political and human aspects of the development crisis. The approach was the classic derivative one, whereby economic growth was supposed to lead to social improvements and progress after some span of time. The economic hardships and social dislocations of the most vulnerable social groups were assumed to be unavoidable, short-term and transitional. It is significant that in nearly all countries, structural adjustment programmes were designed and managed as specialist activities of ministries of finance and economic planning supported by large teams of foreign experts. Where social sector ministries were involved, their role was minimal and did not change the dominant economic perspectives. Accordingly, the success of the programmes was to be judged by economic criteria dominated by such elements as growth of GDP and exports, balance of payments, rate of inflation, public sector deficit as a percentage of GDP, and "realistic" exchange rates for local currencies. To meet these performance criteria, more or less standard packages of measures were instituted comprising, *inter alia*, cuts in public investment and government expenditure, freezes or limits on public employment and wages, removal of subsidies on consumer goods especially food and fuel, cost recovery for social services, export promotion through input and incentive provisions, trade and capital liberalization, devaluation and price de-controls. A crucial enabling factor for good performance was understood to be the substantial inflows of foreign assistance and aid, which paradoxically were fraught with conditionalities and unreformed disbursement problems.

The disquieting record so far shows that in nearly all cases, but more especially in the African least developed countries,¹³ economic disequilibria have been aggravated and social regression and human misery exacerbated. For example, expansion in exports has been achieved at the expense of food production, which is the means of livelihood of the vast majority of small farmers, particularly women. The adjustment drive has reinforced the existing agricultural dualism since imported inputs, infrastructural rehabilitation and producer price incentives have been export-oriented and have benefited mostly wealthy commercial farmers.¹⁴ Thus, structural adjustment has not only side-stepped the problem of alleviating rural poverty, it has also made the attainment of Africa's priority goal of food self-sufficiency even more illusory.

The plight of the poorer populations has worsened. Their health and nutritional status have been particularly jeopardized by the removal of government subsidies on imported food and the introduction of cost recovery for health care. The dramatic price increases in food, fuel and essential household commodities also hit the low-income earners the hardest. In many cases the timing and sequencing of the measures were poor and the political costs have manifested themselves in food riots, labour strikes, student revolts and social unrest in several countries including Algeria, Ghana, Nigeria, Senegal, Sierra Leone, the Sudan, Tunisia and Zambia. Other serious effects have resulted from the freeze in wages and employment and the retrenchment of the labour force in the civil services and parastatal organizations. While the gross numbers of retrenched workers appear relatively small in some countries, in most cases the numbers are very substantial. The retrenchment measures were deemed necessary to tackle a fundamental problem of over-manning in the public sector; but their impact must be viewed in other respects. Since government in Africa is the major employer in the formal sector and the informal sector has not received the necessary support for dynamic growth and reorganization, the public sector retrenchment exercises have created something of a crisis of confidence in the State as an efficient manager of the economy. In addition, for the labour force growing at an annual rate of 2.7 per cent, the freeze and retrenchment have meant the loss of hundreds of thousands of job opportunities. Furthermore, since the "excess" employees removed from government payrolls were mostly of the lower echelons, they were the least equipped to find alternative employment. Consequently, in their tens of thousands, they have added to the growing crisis of unemployment and underemployment mainly in the urban areas. The seriousness of the situation has forced many countries including Benin, Ghana, Guinea, Mali, Niger and Senegal, to establish crash retraining programmes within their compensatory schemes for retrenched workers. However, available evidence indicates that the success of these compensatory measures has been limited and has not been cost-effective.¹⁵

The structural adjustment programmes have created a dilemma and a vicious circle. Where some measure of economic growth has been achieved, the countries have become ever more indebted and dependent on

external financial resources and less capable of delivering to the people the social benefits assumed to be derived from that growth. This is why there has been a distinct shift of the financial burden of important basic needs from the public to the private domain and to families, whether they could afford it or not. The financial resource problems of the countries have been aggravated by the inhospitable trading environment in the 1980s, the weak and declining prices of Africa's principal export commodities such as cocoa, coffee, tea, copper and phosphates, and by the inadequate capital flows. The cumulative impact of these adverse global conditions has been more devastating in Africa than in any other developing region.¹⁶ In June 1988 IMF reported that the ratio of debt to exports of goods and services had deteriorated from 93.6 per cent in 1980 to 330.1 per cent in 1986 and 355.4 per cent in 1987. Some African least developed countries, including Guinea-Bissau, Mozambique, Somalia and the Sudan had ratios over 1,000 per cent. Under such circumstances it was little wonder that only 12 out of 44 sub-Saharan African countries could service their debt as scheduled between 1980 and 1987. According to the Fund, the current scheduled debt service for 1988-1989 is \$21.4 billion a year, more than twice as much as the actual debt-service payments African countries could make in 1986 or 1987. If the current scheduled debt service could be paid, it would consume nearly 55 per cent of export earnings.¹⁷ Commenting on the intolerable situation, the Assembly of Heads of State and Government of the Organization of African Unity (OAU) declared in December 1987 that "the excruciating debt-service burden is depriving our economies of resources needed not only for development but also in many countries for the survival of our peoples."¹⁸

The cases of Senegal and Ghana, countries which have had long and widely acclaimed experience with structural adjustment, may be cited here to illustrate the complex problems of the policies and their impacts. In Senegal, adjustment efforts began in 1979 but showed uneven progress until a new Medium and Long-term Adjustment Programme (PAML) was launched for 1985-1992. By May 1988 IMF was extolling the progress in the country's growth, measured by positive economic indicators, in GDP, domestic savings budget and fiscal deficit, and "a strengthening of its external payments position".¹⁹ Exogenous conditions were then favourable. Good rains in the drought-prone country in 1985/86 and 1987/88 produced bumper harvests in groundnuts, Senegal's second largest export commodity. In addition, substantial aid flows, including a World Bank Consultative Group pledge of \$1.8 billion for three fiscal years, 1987/88, 1988/89 and 1989/90, met one of the major prerequisites for adjustment success. In spite of these favourable conditions, Senegal faced the daunting challenges of severe slumps in groundnut and phosphate prices and a debt-service obligation which was well over 40 per cent of its total recurrent revenue. Social sector "adjustments" were not made a coherent part of PAML. As a result, the removal of subsidies on rice, an urban staple, the freeze of civil service salaries, liquidation of parastatals and employment reduction involving over 12,000 redundancies in a country whose labour force increases annually by 100,000 people, substantial cuts in health and education budgets and accompanying cost recovery schemes cumulatively produced very serious social and political difficulties and strains in the body politic which have not been fully resolved.

In Ghana, "adjustment with growth" had been possible with the energetic promotion of cocoa and gold production and a large infusion of adjustment aid. After the first phase of the Economic Recovery Programme (ERP), from 1983 to 1986, multilateral and bilateral aid commitments rose from \$391 million in 1986 to \$747 million in 1987. Real GDP growth of over 5 per cent exceeded population growth, exports and imports improved in volume, and debt-service payments were virtually up to date by the end of 1987. However, the country's external debt has almost doubled since 1983, the debt-service ratio has risen to 63 per cent, and as much as 27 per cent of the earnings from exports of goods and services in 1987 went to service the debt due to IMF alone.²⁰ The Government acknowledged that the benefits of adjustment had been seriously undermined by the sharp decline in cocoa prices and the social costs in the mean time were considerable. The imbalance between food and export production has been aggravated, inflation has reached 39 per cent, and devaluation, price increases and removal of subsidies have wiped out any meaningful relationship between the minimum wage and the worker's command over basic food and services. The unemployment and underemployment situation in urban areas has been complicated by the ongoing and planned retrenchment of over 80,000 employees from the civil service and parastatals. Malnutrition, educational deterioration and social malaise were at their worst by 1985. This is why the Government, with the assistance of the World Bank and other donor agencies, adopted the Programme of Actions to Mitigate the Social

Consequences of Adjustment (PAMSCAD) in 1987 to deal with the dramatic social fallout. PAMSCAD is innovative and its adoption was timely. However, its scope is limited in the light of the tremendous social challenges.

II. THE CRISIS IN EMPLOYMENT, INCOMES AND POVERTY

A. Employment

Data on employment, incomes, poverty and other social conditions in Africa, as in other developing regions, are fragmentary and subject to variations of definition. In addition, most available data are not sufficiently disaggregated to unmask the qualitative dimensions, scope and intensity of variables as they affect different socio-economic groups. None the less, careful analysis of the available data clearly reveals sharply deteriorating trends in productive employment in the region. Table A.2 shows the falling refined activity rates for all subregions from 1981 to 1987. Whereas total employment was estimated to have increased by 2.0 per cent per year in the 1970s in sub-Saharan Africa, it stagnated in the 1980s and the overall employment situation worsened by some 16 per cent between 1980 and 1987.²¹ Given the existing structural adjustment impetus, the unfavourable external economic environment and the difficulties of fundamental social changes in the areas of population, income and resource distribution between the urban and rural areas and the rich and the poor, the employment prospects look bleak indeed.

TABLE A.2. ECONOMICALLY ACTIVE POPULATION AND REFINED ACTIVITY RATE (BOTH SEXES)

Subregion	Economically active population (thousands)		Refined activity rate (percentage)		
	1981	1987	1981	1984	1987
North Africa	31 191	37 209	39.90	41.10	40.20
West Africa	62 779	71 256	63.35	61.70	60.25
Central Africa	24 224	27 653	64.85	62.25	61.25
East and southern Africa	67 158	78 192	69.30	68.05	67.00
Total Africa	185 ^a	214 ^a	59.25	58.40	57.55

Source: ECA statistical data base.

^a Millions.

The impact of the contracting economy has been felt most severely by workers in agriculture and the manufacturing and construction industries. The serious decline in agriculture, due particularly to the longstanding neglect of small farmers, especially women in the food sector, and the inadequate policies to promote rural industries and non-farm development activities have made the rural areas the fountain-head of Africa's employment problems. At the same time, industry has not been reoriented to labour-intensive strategies to absorb more of the rapidly growing work-force. In fact, as industry is currently operating only at about half the installed capacity, it has tied up sizeable scarce national resources in most countries without generating further employment opportunities. Together with the cut-backs in development investment, these circumstances cost the African region an estimated 1.5 million new permanent jobs per annum from 1985 to 1987, while the employment freezes eliminated hundreds of thousands of job opportunities. The retrenchment of workers added to the already precarious situation by rendering some 3 million people unemployed in the same period.²² The scale of the lay-offs by 1987 ranged from 12,000 and 30,000 in the public sectors in the least developed countries of Senegal and Guinea, respectively, to over 80,000 and 1.1 million, respectively, in Ghana and Nigeria.

Some estimates show that open and disguised unemployment increased by some 8 per cent between 1980 and 1985. Urban unemployment rates increased from 10 per cent in the 1970s to some 30 per cent in the mid-1980s, some of the highest rates being found in African least developed countries such as Burkina Faso, Ethiopia, Guinea, Niger, Senegal, Sierra Leone, Somalia and Togo. The rising unemployment rates in the face of a labour force growing at the rate of 2.7 per annum means that the absolute number of unemployed and underemployed persons in the region is expanding at an alarming rate. Thus, the ECA secretariat has estimated that the

number of openly unemployed persons rose from 9.7 million in 1983 to 22 million in 1985 or nearly 40 per cent of the labour force. The underemployed increased from 63.6 million to 95 million in the same period.²³

The social profiles and characteristics of the unemployed population are extremely important for the future development of the African region. Available data indicate that between 65 and 75 per cent of the unemployed are young people, aged 15-24 years, although they constitute only 30 per cent of the total population. Their unemployment rate averages three times that of adults. A major question is whether the African youth will be an engine of growth or a perennial burden on development. Women also constitute a very significant group within the unemployed. The economic crisis and heavy male migration out of the rural areas and the continent have forced many African women to seek employment in the services and industries as well as the traditional informal sector. Despite existing methodological deficiencies in properly classifying women's work, there is growing evidence of increased female labour force participation rates in the modern sector. However, time allocation studies are only in their infancy in Africa and so there is a lack of useful indicators of women's work burdens. But one recent study in Côte d'Ivoire is instructive. It shows that in the agricultural sector, women undertake 67 per cent of all the work done by the combined male and female population above the age of 10. 'A girl of 10-14 works as much as a man of 20-25, and a woman of 25-30 works a third longer than a man the same age'.²⁴ Yet women are left out in agricultural policy-making and the increasing attention given to export agriculture in adjustment policies has only added to their work burdens and impoverishment in the food sector. As the employment markets became tighter and more precarious under the crisis and adjustment, women faced serious job discrimination. Studies done under the Jobs and Skills Programme for Africa of the International Labour Organisation (ILO/JASPA) show that women have at least twice as many chances of being laid off and unemployed as men in the formal sector.²⁵ The studies also show that the high and growing female unemployment rates extend well beyond the limit of 25 years while male unemployment has remained predominantly a youth phenomenon. This has serious implications for women as mothers, home-makers and, increasingly, as managers of the rural household economy.

Another important feature of the unemployment problem is that it is affecting educated Africans more and more, thus destroying the human capital gains made at great financial and social costs by Governments and families. The poor match between the output of the educational systems and the manpower demand in the shrinking economy had resulted in 4 to 5 million jobless educated persons in the region by 1987. A disturbing trend in several countries is that the unemployment rate for the educated tends to be higher than—in some instances twice as high as—the rate for the work-force without formal education.²⁶ For example, a tracer study of graduates in Nigeria in 1986 found that only 58 per cent had secured full-time jobs 18 months after they had completed their mandatory national youth service. A high degree of underemployment and job dissatisfaction was also noted: 30 per cent of the graduates found their education irrelevant to their jobs and 60 per cent expressed dissatisfaction with what they were doing.²⁷ It is evident that budgetary constraints are forcing many Governments to abandon the hitherto virtual guarantee of public employment for graduates.

Paradoxically, several countries in which graduate unemployment has become a costly social problem rely heavily on even more costly expatriate manpower in many sectors of their economies. For instance, it is estimated that a minimum of 80,000 resident non-national technical assistance personnel are currently working in public and parastatal sectors of 40 sub-Saharan African countries at an annual cost of at least \$4.0 billion. Some 10,000 of them are employed in the agriculture sector alone.²⁸ Such contradictory trends are a function both of poor human resources planning, development and utilization policies in African countries and of the conditionalities and interests of donor assistance. Some of the unsalutary consequences are the eroded morale, motivation and efficiency of the qualified and experienced Africans. Their working conditions in many cases are appalling with respect to the means to perform their tasks and the remuneration they receive. This is particularly true of agricultural scientists, engineers, medical doctors and secondary-level and higher-level teachers, who face severe shortages in tools, equipment, books, materials and transport. With regard to their incomes, the catastrophic drop in real wages between 1980 and 1984 in the face of sharp price increases, which reached as high as 24 per cent, meant that the real value of the monthly salary, for example, of a university professor in Sierra Leone was equivalent to \$66, a doctor in Ghana to \$42 and a permanent secretary in Uganda to \$40 in 1984.²⁹

A major consequence of the above situation has been the intensification of the brain-drain from Africa. An estimated 70,000 middle-level and high-

level skilled and professional Africans are now working in Europe, North America and West Asia. More than 30,000 of them left the continent between 1984 and 1987. A substantial number of trained personnel also sought employment in other African countries. On the other hand, most men and women who could not emigrate had recourse to the informal sector within their countries. Thus, very many civil servants, teachers, nurses and other public servants were found trying to meet their basic needs by undertaking secondary micro-enterprises even during official working hours or else practising a certain amount of their profession for their own account. Low-income families were forced to withdraw children from school to support additional income-generating activities, thus threatening serious social problems of child labour.

In a region where formal social security protection is very limited and somewhat foreign in its orientation,³⁰ a great deal of human suffering was mitigated during the crisis by time-honoured traditions of family and community solidarity. In some countries, such as Egypt, Somalia and the Sudan, remittances from migrant workers provided a safety net and helped to maintain family welfare in the villages. Such support seemed to have come more from lower-income and less skilled migrants than from the higher professionals, as a 1985 study in the Sudan showed.³¹ At the same time, African households, particularly the women within them, showed a great deal of resilience and resourcefulness. Their heavy recourse to informal sector employment created some 6 million jobs between 1980 and 1985 while the modern sector created only 0.5 million new jobs.³² The sector engaged relatively more women than the modern sector and they provided essential distributive services in trade as well as food preparation, over and above their household and child-caring tasks. However, there can be no romanticization about the informal sector as a "cushion" for women and the poor. Work in the sector is tedious and often undertaken in unsafe and unsanitary conditions. Productivity and incomes from the overcrowded micro-enterprises are also low. In the final analysis, when neither the formal nor the informal sector was able to meet the employment and income needs of families and individuals, frustration, idleness and poverty led to social disorders. Although hard data and statistics are inadequate or poorly reported, there are real indications that crime, corruption, juvenile delinquency, youth disorientation, drug trafficking and social violence are assuming widening proportions in many countries. The informal system of social security has become strained, family life has been disrupted by the heavy migrations, and women heading 30 to 50 per cent of households, especially in the rural areas, have become more overburdened with managing family survival.

Owing to the multiple social consequences of the employment crisis, several countries have taken steps to strengthen their labour-servicing institutions, enhance the capacity of the informal sector for self-employment and promote a more effective participation of women and youth in national development. Most countries now have machineries to promote the advancement of women and youth, although the resources of many are too limited to be effective. Kenya appointed a Presidential Committee on Unemployment in 1982 and established a National Employment Bureau in 1987. The United Republic of Tanzania passed a Human Resources Development Act in 1983 and established a scheme to promote productive employment in rural and urban areas. Côte d'Ivoire has placed special emphasis on informal sector development within a new National Employment Policy declared for the decade 1985-1995. Ghana's Programme of Actions to Mitigate the Social Consequences of Adjustment of 1987 incorporates job training and placement for some 3,000 of the retrenched public workers as well as labour-intensive public works programmes, and credit and income-generating schemes for women and small-scale entrepreneurs in disadvantaged areas. Nigeria has established a new Directorate of Employment with a National Open Apprenticeship Programme. The Programme reached some 100,000 school-leavers in 1987/88 with training and support services for self-employment. Related programmes in public works, afforestation and agriculture are also creating employment opportunities for young people. However, it must be noted that remedial programmes can have only a limited impact. The fundamental challenge lies in eradicating poverty and socio-economic inequalities, especially in the rural areas, which are the main source of the unemployment problems.

B. Incomes

While Africa's population growth rate averaged 3 per cent per year during the period 1980-1986, per capita income declined at an annual average rate of 3.4 per cent. But, as noted earlier, real wages declined more rapidly than per capita income and had an average fall of 19 per cent between 1980

TABLE A.3. REAL MINIMUM WAGES IN SELECTED AFRICAN COUNTRIES
(1980 = 100)

	1975	1980	1981	1982	1983	1984	1985	1986
Burkina Faso	87	100	92	105	97	92	86	89
Burundi	..	100	90	148	136	119	115	..
Cameroon	..	100	97	104	107	111	102	108
Central African Republic	83	100	87	76	77	64	59	..
Congo	157	100	85	76	70	67	64	61
Côte d'Ivoire	114	100	92	94	89	85	84	79
Ethiopia	..	100	94	89	89	82	73	77
Gabon	..	100	92	99	89	101	101	96
Gambia	..	100	94	98	89	73	65	..
Ghana	523	100	105	86	80	80	133	150
Guinea	115	100	91	87	79	71	64	..
Kenya	120	100	89	89	81	72	71	75
Liberia	..	100	93	88	85	84	85	83
Madagascar	..	100	90	81	68	68	65	64
Malawi	140	100	139	147	129	108	128	109
Mali	169	100	91	98	100	90	108	..
Mauritania	..	100	84	93	92	86	..	..
Mauritius	..	100	89	84	81	79	77	76
Niger	..	100	87	78	80	74	75	77
Nigeria	..	100	148	138	115	81	79	..
Rwanda	103	100	94	83	78	74	73	..
Senegal	112	100	99	91	94	84	78	74
Somalia	277	100	90	79	58	30	22	16
Sudan	137	100	50	64	49	47	45	..
Togo	131	100	84	83	76	78	80	77
United Republic of Tanzania	195	100	99	77	61	60	45	36
Zambia	..	100	88	93	88	81	75	..
Zimbabwe	..	100	97	143	107	117	110	123

Source: ILO/JASPA, *African Employment Report 1988* (Addis Ababa, 1988), chap. I, table 5.

and 1986. Table A.3 shows the trends in real minimum wages in some 28 countries. The declines were particularly severe in countries undertaking structural adjustment programmes including the Gambia, Ghana (up to 1984), Guinea, Somalia, the Sudan and the United Republic of Tanzania. Salaried and wage workers suffered a dramatic loss in the purchasing power of their earnings, but the impact was greatest on the lowest paid, who could barely meet their food needs. For example, in the United Republic of Tanzania, when the minimum wage was 600 Tanzanian shillings in 1981, the minimum food budget per month for an average household of 4 persons was TSh 900. By 1984 the minimum wage had been increased to TSh 810 but the real purchasing power was less than TSh 100.³³ In Zambia, in 1985, the minimum subsistence budget or poverty datum line for a family of five was above 300 Kwacha a month, which was almost twice the average wage.³⁴ The minimum wage of 116 cedis in Ghana in mid-1988 could not buy a tuber of yam, a local staple; and a chicken costing over 1,200 cedis was more than a ninth of the monthly salary of a nurse.³⁵ That is why nearly all classes of workers had to find informal ways of supplementing their incomes not only to meet their food requirements but also to pay the fees for health care and educational services demanded under the structural adjustment cost recovery schemes.

Data on income distribution and measurements of income disparities are inadequate. Some evidence suggests that there has been a compression in the wage structure so that the differentials between the highest and lowest income earners in the public sector decreased to some extent during the crisis in the 1980s.³⁶ However, given the drastic declines in per capita income levels and the resultant increase in income competition among the rapidly growing labour force, income disparities and concentrations must still be quite high between the different socio-economic groups. Thus, it was not uncommon in the mid-1980s to find in some countries the top 20 per cent of the population earning 60 per cent of the total income and the very top 10 per cent appropriating 45 per cent. There are reported cases where the top 6 per cent of the population in one country received 34 per cent of the national income and the top 5 per cent in another country appropriated over 43 per cent.³⁷ In addition, one estimate in 1985 showed that, on the average,

the ratio of urban to rural incomes was 4:1 and that the gap was widening in several countries.

It should be noted, however, that geographical income groups are not homogeneous. All urban areas contain poor, unskilled marginal workers with very low incomes, while many rural areas have rich commercial farmers. Thus, in Lesotho in 1980, the top 20 per cent of the rural households controlled 53 per cent of the allocated land, while the bottom 40 per cent had only 6 per cent of the holdings. Forty-seven per cent of the households had no livestock.³⁸ An earlier survey of rural income distribution in Botswana had shown that in 1974/75 some 5 per cent of the rural households owned 50 per cent of the national herd while some 45 per cent had no cattle at all.³⁹ However, a significant aspect of the overall income situation in the rural areas is that the majority of households have low income opportunities owing to the continued neglect of the so-called subsistence sector of agriculture and the low levels of public investment, productive assets and infrastructure in those areas. Despite the fast urbanization rate, Africa will remain a rural continent up to and beyond the year 2000. Therefore, given the relatively young demographic profile and high population growth and age dependency rates, rural incomes can remain structurally depressed for a long time unless definite political commitments are made towards rural transformation and the enhancement of the productive capacities of small farmers, pastoralists and poor rural workers, with particular attention to the women among them.

C. Poverty

It is generally acknowledged that the crisis and drought emergency of 1983-1985, as well as structural adjustment programmes, have increased the incidence and prevalence of poverty in Africa. However, the identification of the poor is not easy since a socially meaningful definition of poverty must take into account the norms and values of particular societies and cultures. For this reason there is a need for continuous study to deepen understanding about the complex socio-cultural, political and economic causes and varieties of poverty, if poverty-alleviation strategies of Governments and communities are to be effective. Despite the conceptual inade-

quacies, it is generally accepted that poverty defines the condition of insufficient income or "exchange entitlements"⁴⁰ of some people to meet their basic needs in food, clothing, shelter, health care, education and so forth and to live at a standard widely regarded as satisfactory within their society. Poverty therefore denotes a condition of deprivation and not just a state of unavailability of goods and services. It is thus linked to inequalities in access to and distribution of income, goods, services and productive resources.

A comprehensive analysis of poverty in Africa is not available. But it is evident that mass poverty is widespread and has deepened in this decade. Some of the important indicators are the worsened conditions of malnutrition, infant mortality, stunted growth of children and maternal morbidity and mortality (see sect. III below). The poor, whose plight requires the greatest attention, include displaced victims of drought, natural disasters and war, small farmers and pastoralists, landless or unskilled rural workers, low-income urban wage earners and informal sector workers, and women heads of households, who are among the poorest strata in the rural population. Some estimates indicate that some 50 to 75 Africans out of every 100 are currently living in poverty.⁴¹ The highest concentration of absolute poor are found in the rural areas, which is characteristic of the poverty phenomenon especially in the developing world. The International Fund for Agricultural Development (IFAD) estimates that between 50 and 90 per cent of the total rural African population lives in absolute poverty.⁴² A recent study of the human situation in Africa's 27 least developed countries concluded categorically that "the main social problem of African LDCs is one of poverty... generally characterized by malnutrition, physical deficiencies, shortened life expectancy, fear and despair".⁴³

The poor could not compete for income under structural adjustment trade liberalization or foreign exchange modifications which favoured well-to-do traders and speculators.⁴⁴ Indeed, the export-oriented and outward-looking macro-economic adjustment policies were not designed to deal with the problems of Africa's poor. Those problems are profoundly structural and cannot be solved with short-term remedial welfare or relief consumption, as has often been perceived by the proponents of structural adjustment. Lacking adequate productive opportunities, capacities and assets, the rural and urban poor have borne the brunt of increasing prices in food, medicines, kerosene, transportation and other essential goods and services. Thus their vulnerability increased during the crisis and adjustment period not only as an immediate social issue but also as a profound developmental problem.

The response of African Governments and the international community to this human tragedy has been increasingly positive, especially as some measures are being undertaken under Africa's Priority Programme for Economic Recovery 1986-1990 and the United Nations Programme of Action for African Economic Recovery and Development 1986-1990 to resuscitate smallholder agriculture and promote efficient human resources development and utilization.⁴⁵ To the same end, at least two ECA member States, Côte d'Ivoire and Ghana, have undertaken comprehensive national living standards surveys to identify the scope of the problems in order to plan long-term measures to alleviate poverty. However, as clearly stated in the Khartoum Declaration: Towards a Human-focused Approach to Socio-economic Recovery and Development in Africa,⁴⁶ adopted in March 1988, poverty alleviation cannot be a selective remedial strategy. It must enhance the productive capacity of all the poor "through better access to productive resources and assets" and through their participation in all the decisions and programmes of development. The Declaration stressed the conviction that "no nation can be great and prosperous if the majority of its people are poor, malnourished, illiterate, miserable and perpetually vulnerable". But much is required to translate this conviction into political commitment and actions to effect the necessary socio-economic transformation that would put Africa's poor majority at the centre of sustainable development as contributors and beneficiaries. The damages the poor have sustained in eroded health and human capital destruction make such actions extremely urgent.

III. THE CRISIS IN FOOD, NUTRITION AND HEALTH

A. *The critical situation of food and nutrition*

The crisis of the 1980s has left a deep imprint on the lives of millions of African people and the long-term effects must be a subject of serious monitoring and study. The most compelling aspects are those associated with death, starvation, malnutrition and the massive dislocations of peoples. At the core of all these tragedies was the inaccessibility of nutritionally adequate food to the unfortunate people. The domestic food supply in Africa

has suffered for more than a decade from imbalances between production levels and population growth rates, ecological constraints, backwardness in production, processing and storage techniques and misguided policies that *de facto* discriminate against local foods and their producers, in favour of export-production of externally desired beverages (cocoa, coffee and tea), minerals and timber. Agricultural inputs, prices and incentives have not been gender or poverty sensitive with respect to the millions of poor, small food producers, of whom about 80 per cent are women. In particular, women and poor small farmers are constrained in their access to land and credit. In addition, their years of accumulated knowledge about the production of local staple crops such as millet, sorghum, cassava, yams, plantain and sweet potatoes are virtually ignored by modern agricultural scientists whose new techniques, if properly disseminated at all, find certain resistance for socio-cultural and poverty reasons.

The cumulative effect has been continuing food crises and rapidly diminishing food self-sufficiency ratios in the continent. ECA calculations show that the ratio dropped from 98 per cent in 1972-1974 to 86 per cent in 1980 and is projected to fall to 71 per cent by the year 2008. In 1980, each African had about 12 per cent less home-grown food than in 1960. By 1986, one out of every five Africans depended for his or her survival on food imports, about 25 per cent of which were provided by food aid.⁴⁷ The massive food aid that came to Africa in the 1983-1985 drought emergency was a notable manifestation of human solidarity. The recurrent droughts, recent locust infestations and continuing civil wars and political conflicts have also made food aid a continuing necessity in many countries, especially in the Sahel, the Horn and southern Africa. FAO has estimated that the food aid requirements of sub-Saharan Africa for 1987/88 are 4.6 million tons, an increase of more than 45 per cent from the previous year.⁴⁸ It must also be noted that African countries are increasingly relying on food aid because their capacity to finance commercial food imports has become substantially reduced with the economic crisis, structural adjustment and mounting debt. In 1985 alone the food import bill for the region was \$11.3 billion.

Food is so vital to the social and economic well-being of a people that no society should be so vulnerable in respect of this basic resource. However, it must be noted that the food and nutritional insecurity in Africa is not simply a question of food scarcity in aggregate terms. Inadequate logistical capacity, poor communications, especially between rural zones, socio-political biases and skewed patterns of distribution are important factors. Urbanization and urban-biased food import policies have influenced tastes and consumption patterns towards a growing preference for foreign foods. Ignorance, certain cultural practices and food habits contribute to problems of poor diet and undernourishment, especially of children and pregnant and lactating women. But poverty must be regarded as the most critical factor in the food and nutritional insecurity of the vast majority of the African people. Food consumption has become inextricably linked to income and employment opportunities owing to major social changes, including education and urbanization, that have taken place in Africa over the past several decades. As a result, the number of people who can produce all the food they need has decreased while the people who must buy their food has increased. As the conditions of food production have deteriorated and devaluation and removal of food subsidies have forced prices up, both food-deficit farmers and the urban poor have faced seriously reduced nutritional standards. With their low purchasing power and exchange entitlements, they have been forced to reduce their consumption of food, particularly protein. Even then, many such poor households spend up to two thirds of their income on food. Many endure chronic hunger and malnutrition despite their increasing efforts to engage in small trading, cottage industries and other non-farm activities.

Food aid has responded to the dire emergency needs of millions of affected people, especially the most vulnerable children and nursing mothers. In some cases food aid has been used to promote rehabilitation of infrastructure, generate income and protect food entitlements, as has happened in food-for-work and cash-for-food programmes in several countries. But there are real concerns about the heavy reliance of African Governments on imported food in general and on food aid in particular. They undermine the chances of attaining food self-sufficiency and have deleterious effects on small food producers and on the food and nutrition security of the poor. Food aid undermines local food production by undercutting prices and enlarging exogenous tastes. Thus, it reinforces the misalignment between domestic tastes and local food production goals. For example, imported wheat and rice which are fast overtaking local staples such as millet, sorghum, cassava and sweet potatoes cannot be easily produced in adequate quantities because of ecological, technical and economic constraints, especially in sub-Saharan Africa.

Food aid can also be addictive and can be used to free recipient Governments from their urgent responsibilities to develop and support the productive capacities and enhance the entitlements of the poor, especially in the rural areas. At present, nearly 90 per cent of food imports go to the socially powerful and vocal urban dwellers, thus underscoring the socio-political dimensions of the food and nutrition problem. At the same time, food aid deepens Africa's dependency in the world economic system while it enables donor countries to dispose of their food surpluses without depressing their own domestic markets and incurring the wrath of their powerful agricultural constituencies and lobbies. In this regard, it is instructive that Africa can receive large quantities of food relief transported and distributed at considerable cost, but never enough assistance to acquire agricultural inputs or equipment and materials to rehabilitate health, water and educational facilities, which are equally necessary for sustainable food and nutrition security and development. It is a measure of the distortions in the world political economy of food that a few industrialized countries spend some \$50 billion in farming subsidies and surplus food storage payments while they provide less than \$8 billion in agricultural assistance to countries with a high potential to increase their production. Thus it has been pertinently observed that in Africa "it is often twice as expensive to bring one ton of once-and-for-all food relief to a remote rural family as to help it to produce its own food of the same amount annually over several years".⁴⁹

The cumulative impact of the above conditions has been the increase in nutritional disorders among the African people. The number of severely hungry and undernourished people rose from 80 million in 1972-1974 to more than 150 million in 1984. Even before the drought emergency erupted in 1983, the trends in employment, incomes, food production and distribution were such that the United Nations estimated that 26 per cent of the African population was undernourished or malnourished and that Africa had replaced South-East Asia as the region with the highest level of dietary deficiency. As high as 35 per cent of pre-school children in Africa suffered from acute protein energy deficiency or wasting compared with 16 per cent in Asia and 4 per cent in Latin America.⁵⁰ The implications of such drastic conditions for the development of healthy people and their creative and productive capacities are stark.

This is why African Governments have made agriculture, particularly food production, the first priority for the region's development strategy as articulated in the Lagos Plan of Action, Africa's Priority Programme for Economic Recovery 1986-1990 and the United Nations Programme of Action for African Economic Recovery and Development 1986-1990. The region must move with determination from emergency food relief management and survival strategies to a new production approach which involves rural transformation and the enhancement of poor people's entitlements and meaningful participation in all aspects of development. In this regard, there are good indications that by 1988 more than 90 per cent of African countries were according the necessary high priority to food and agriculture. Some 60 per cent of them were allocating 20 to 25 per cent of their public investment to the sector, which is a remarkable improvement since 1982, when the regional average allocation was 7 per cent.⁵¹ As a specific illustration of the change, Zimbabwe doubled credit to small farmers from a 17.4 per cent share in 1982/83 to a 34.7 per cent share in 1985/86. It has also removed legal, pricing and procedural obstacles which discriminated against women, who make up the majority of small producers.⁵² In another example, the Government of Cameroon, which has increased its budgetary allocation to agriculture from 23.7 per cent in 1981 to over 26 per cent in 1988, has supported a very successful rural development project emphasizing food production and well-targeted technical and financial interventions to promote the incomes and living standards of women and poor producers.⁵³ Increases in producer prices for both export and domestic consumer crops in 1983-1986 have also been reported in such countries as Burundi, Côte d'Ivoire, Nigeria, Sierra Leone, Uganda and the United Republic of Tanzania, where the effect has been the narrowing of the income gap between the average wage earner and the farmer.⁵⁴

B. The critical health situation

The health sector has been one of the worst affected in Africa's social deterioration. Granted there are serious limitations in aggregate national social statistics, but there are still a number of sensitive indicators that reveal the poor and unsatisfactory health status of the people of the region and particular social groups. Life expectancy, though improving, is still the lowest in the world, at 51 years. In 1985, 30 countries representing 60 per cent of the member States of ECA had a life expectancy at birth of less than 50 years. Only three member States, namely, Mauritius, Sao Tome and

Principe and Tunisia, had a life expectancy at birth of more than 60 years.⁵⁵ Although there have been moderate declines in recent years, mortality levels, especially for children, are quite high by world standards and in comparison with other developing regions (see table A.1). The deaths of children under five years reached most disturbing levels during the 1983-1985 emergency. The United Nations Children's Fund (UNICEF) recorded infant mortality rates (IMR) of 100 to 150 per 1,000 live births in all but 13 ECA member States. In 1984, 9 of the 10 countries in the world with the highest under-five mortality rates (U5MR) of over 250 per 1,000 live births were found in Africa. In 1985, 27 member States had U5MR of between 178 and 304.⁵⁶ Maternal mortality rates in Africa are also unacceptably high. In 1985 the region lost as many as 11 mothers per 1,000 live births compared with 5 in Latin America.⁵⁷

Most of the deaths of the children were caused by vaccine-preventable diseases such as neonatal tetanus, measles and whooping cough, as well as diarrhoea and malnutrition. The maternal deaths were mostly caused by ignorance, poverty and lack of access to necessary services. The incidence and prevalence of child-killing or disabling diseases as well as vector-borne and sanitation-related diseases such as malaria, trypanosomiasis, onchocerciasis and cholera seem to have been aggravated in the mid-1980s. Debilitating and endemic diseases that had been eliminated or brought under considerable control in the 1960s and 1970s re-emerged in several countries. They include malaria, yellow fever, yaws and worm infestations among primary-school children. By the end of 1987, moderate to severe epidemics of communicable diseases including cholera, meningitis, yellow fever and rift-valley fever had hit 32 African countries, including Mali, Mauritania, Nigeria, the Sudan, Uganda, the United Republic of Tanzania and Zaïre. In some cases there were hundreds of fatalities. The deplorable health situation in southern Africa caused or aggravated by *apartheid* and destabilization policies is analysed in section V below. With respect to acquired immunodeficiency syndrome (AIDS), a total of 7,338 AIDS cases had been reported in 36 countries by 1987. Most of the cases (96 per cent) were reported in 12 countries: 5 in Central Africa, 3 in East Africa, 2 in southern Africa and 2 in West Africa.⁵⁸

High levels of malnutrition in children led to the high mortality rates and considerable stunted growth in many countries undergoing structural adjustment in the early 1980s. On the average, 43 per cent of children under 5 years of age suffered from moderate to severe malnutrition. A survey of 19 countries showed that 14 per cent of children born in 1982-1983 were below normal weight (2.5 kg) at birth. In Ghana the proportion of children whose weight-for-age was below the Harvard standard was 47 per cent in 1983. In Kenya 28 per cent of rural children were reported to be physically stunted in 1982.⁵⁹ Many of these indicators showed serious retrogressions from earlier achievements in the 1970s and reflected the deepening deprivation and poverty in the continent in the 1980s.

Some of the common diseases in Africa are associated with the unsatisfactory conditions of housing, water supply and sanitation facilities. The economic and ecological crisis as well as political conflicts have destroyed substantial shelter stock, especially in the rural areas, and reinforced the strong trends of rural-urban migration and rapid urbanization. Consequently, as noted earlier, cities have grown by leaps and bounds and the enormous pressure of demand for housing and ancillary facilities has frayed the urban fabric and plunged many cities into crises of unprecedented dimensions. For instance, in Ethiopia the Government estimates that annual urban housing requirements are 15 times the actual capacity.⁶⁰ Services in capital cities are specially strained. For example, 10 African countries (Angola, Benin, Guinea, Kenya, the Libyan Arab Jamahiriya, Mozambique, Senegal, Togo, Uganda and the United Republic of Tanzania) have 83 per cent of their urban population concentrated in their capitals. In another 13 countries at least one third of the population lives in a single city.⁶¹ The result is extreme overcrowding, with a substantial proportion of these urban residents living in densities of four to seven persons per room. The majority of urban dwellers face acute shortages of rooming and apartment units. In 1981, before the crisis reached its climax, between 30 and 70 per cent of the urban population could not afford conventional low-cost housing.⁶² The worsening situation has been manifested in the massive growth of inner city slums and unregulated buildings in peri-urban areas. Some estimates indicate that some 60 per cent of the urban population now live in such deprived areas in poor housing. Markets and workplaces in these areas have particularly unhygienic environments.

The health and general quality of life of citizens in human settlements depend to a large extent on the levels and quality of water supply and sanitation facilities. In 1983, three years after the International Drinking Water Supply and Sanitation Decade (1981-1990) began, only 38 per cent of the

TABLE A.4. WATER SUPPLY AND SANITATION COVERAGE FOR 36 AFRICAN COUNTRIES, 1985
(population in thousands)

	Population surveyed		Water supply		Sanitation	
	Thousands	Percentage	Population served (thousands)	Percentage	Population served (thousands)	Percentage
Urban	98 032	26	74 336	78	37 305	73
Rural	278 537	74	68 096	25	33 855	25

Source: "Key issues concerning the implementation of the Mar del Plata Action Plan in Africa" (E/ECA/CM.14/10), table 2 (data from WHO).

African population was served by a convenient water supply and about 29 per cent by sanitation facilities. Typically, the coverage was concentrated in the urban centres; some rural areas had less than 15 per cent service in drinking water and less than 5 per cent coverage in waste disposal facilities. Table A.4 summarizes the situation in 1985 when the World Health Organization (WHO) made a mid-decade review of the International Drinking Water Supply and Sanitation Decade. For 36 African countries for which data were reported, the distribution of the total population was 26 per cent urban and 74 per cent rural. However, 78 per cent of the urban dwellers had access to safe drinking water and 73 per cent had sanitation facilities. On the other hand, 75 per cent of the rural population had neither access to safe and adequate drinking water nor provision for sanitation. In any case, the exceptionally high rates of urban population growth, especially in the poorer urban zones, make it very unlikely that the percentage of service coverage will increase appreciably by 1990 or that the Decade goals can be achieved by most African countries. A further complication is that of financing. Domestic finances are scarce and international financing for these essential human and developmental needs is extremely limited. As an indication of the latter, World Bank lending for water supply and sewerage projects in 1985-1987 was lowest in sub-Saharan Africa at 9.8 per cent, compared with 15.4, 16.4 and 17.1 per cent for South Asia, East Asia and the Pacific, and Latin America and the Caribbean, respectively.⁶³ Most of the loans were for urban services, since the long-deprived rural areas have limited scope for bankable projects in conventional cost-benefit terms.

Financial constraints and the skewed and unequal patterns of distribution of social services constitute major problems in the attainment in Africa of the objectives of the United Nations Declaration on Social Progress and Development. Health care resources and facilities in nearly all countries are inadequate and have deteriorated during the crisis of the 1980s. Fragmentary evidence shows some slight improvements in the ratios of physician to population and nurse to population—these were 1:23,000 and 1:2,400, respectively, in 1981. But there is no necessary correspondence between such improved ratios of physicians, nurses and hospital beds to populations and the enhanced well-being or life expectancy of the majority of the people unless there are adequate supplies of essential drugs, equipment and logistic support as well as substantial improvements in income levels and distribution patterns. In the majority of cases 60 to 70 per cent of physicians work in urban areas where only 20 per cent of the population live. In one case, 60 per cent of all doctors in 1985 were concentrated in the capital city, which had only 20 per cent of the hospital beds.⁶⁴ The health care systems are urban-biased, largely hospital and overwhelmingly oriented to curative rather than preventive measures. As such, hospital facilities absorb over 60 per cent of the health budget of most countries and serve the needs mostly of the socially and economically powerful. This aggravates existing social inequalities. For some 39 countries for which data are available only 30 to 50 per cent of the populations were covered by health services.

For the majority of the people the most effective approach would seem to be primary health care (PHC), with its strong orientation to equity, community participation and low-cost but effective health technologies. WHO has estimated that to achieve health for all Africans by the year 2000, the additional annual per capita expenditure would be \$16.20 if the conventional hospital system is used but only \$2.60 if the PHC approach is adopted.⁶⁵ By 1987 some 41 countries were at various stages of implementing PHC at district level but all faced shortages of human, material and financial resources. Economic recession, external indebtedness, heavy debt-service burdens and structural adjustment rigidities have forced nearly all Governments to impose drastic and disproportionate cuts on their social sector budgets, especially for health and education. Already, public expenditures on health in Africa were the lowest in the world, with some countries allo-

ating as little as 1 to 2 per cent of their national budgets to the sector. The expenditure cuts affected imported drugs, supplies, equipment, transport and other operating costs more than they did manpower. Therefore, existing health facilities have been rendered even more ineffective. For example, per capita health expenditure in Kenya fell by 24 per cent between 1980 and 1985. In Ghana the fall was 80 per cent from 1974 to 1982. Liberia's allocation for drugs fell by 35 per cent from the 1981/82 fiscal year to 1982/83. In the Sudan the share of the social services in current expenditure plunged from 31 per cent in 1980 to 18 per cent in 1984. In Madagascar, Senegal and Somalia per capita social expenditure fell by 44, 48 and 62 per cent, respectively, between 1980 and 1986.⁶⁶ For the region as a whole the share of health and education in recurrent government expenditures, which stood at 25.2 per cent in 1986, declined to 23.1 per cent in 1987 and was expected to fall further to 19 per cent in 1988.⁶⁷

The consequences of the social sector cuts in non-labour costs and introduction of cost recovery, which the majority of the people with low purchasing power could ill afford, have been the worsening of the health status of the poor and vulnerable, a more than one third decline in clinic attendance, the decay of health infrastructure, the demoralization of health personnel and a catastrophic exodus of doctors and other qualified health manpower from the continent. Clearly, African Governments facing natural and financial droughts must make difficult choices, but priorities and political will are of utmost importance. Good health status and the social well-being of the majority of the population do not flow automatically from economic growth. A determined social policy that insists on the primary and central position of the human being in development is required to attack the fundamental distortions and wastage manifested in mass poverty, poor health and illiteracy. Some recent studies have shown how the right priorities and appropriate social policies are attempting to reverse certain aspects of the social deterioration. For example, among the poorest African least developed countries, Mauritania's per capita income of \$470 is nearly twice that of the United Republic of Tanzania at \$290 or that of Togo at \$230, but the latter two countries have some of the lowest mortality rates. Sierra Leone's per capita income of \$320 is 2.1 times that of Burkina Faso at \$150 but the former had the lowest life expectancy at birth of 36 years and the highest infant mortality rate of 171 per 1,000 live births among the African least developed countries in 1986.⁶⁸ On the other hand, in the midst of the drought emergency in 1984 Burkina Faso mounted an immunization campaign against three of the country's major diseases, yellow fever, meningitis and measles, at minimal per capita cost and through the use of community action. As a result 70 per cent of the nation's children under 14 years were protected. The momentum has been extended to the provision of community health workers for all 7,500 villages in a programme of "one village one health post". Senegal, another least developed country, used community mobilization and traditional communications networks and political leadership to raise its level of full child immunization from 10 per cent in 1985 to nearly 70 per cent in 1988.⁶⁹

Apart from the least developed countries of Africa, some other countries have also taken notable measures of social action. After its war of independence, Zimbabwe reduced its recurrent expenditure for defence and administration from 44 per cent in 1980 to 28 per cent in 1984 while increasing the share of preventive health care from 7.6 per cent to 14 per cent of the overall health budget, which itself had increased in real terms by 13 per cent between 1983 and 1984 in spite of structural adjustment.⁷⁰ Algeria made spending cuts in all ministries in 1987/88, except in the Ministry of Health. However, hospital spending has been deliberately held back while the country is undertaking a major community health campaign in immunization, oral rehydration therapy (ORT) and clean water supply to every family. The targets are full clean water supply by the end of 1988, a 50 per cent reduc-

tion of child death and the saving of the lives of 40,000 children a year through immunization before the end of 1989 and universal knowledge of ORT by the end of 1990. In its current national development plan, 1985-1989, Algeria made the social sector only second to industry in budgetary allocation. Total investment for housing, health, education and leisure was raised from 18.4 per cent in 1980-1984 to 32 per cent of total government expenditure, compared with a 38 per cent share for industry. Similarly, Egypt has mounted campaigns in ORT and immunization, which has cut its massive diarrhoeal dehydration child death rate of 100,000 per year by 50 per cent, and is expected to reach full immunization of 80 per cent of its children before the end of 1988.⁷¹

Improvements in the African social situation, economic productivity and the attainment of sustainable development depend critically on the nutrition, health, educational enlightenment and, as appropriate, productive employment of children, women and the poor. Children who are "wasted" and miss the one-in-a-life chance of developing their brains and bodies before the age of 5 cannot attain their full human potential in adulthood. As UNICEF puts it: "Sacrificing the growth of today's children for the growth of tomorrow's economy makes neither economic sense nor human sense."⁷² The physical and mental damage done to hundreds of thousands of Africa's children, adult women and men, especially in the rural and poor urban areas, by long-standing hunger and malnutrition, poverty and unequal development, economic crisis, drought and adjustment policies represents a massive loss in investments and a tragic burden for the future. Accordingly, there is an urgent need for rethinking health development in Africa, particularly in its preventive and intersectoral aspects. There must be a framework of integrated social and economic planning, in which human welfare priorities and concerns of equity, participation and efficiency are carefully weighed. It is noteworthy that several regional efforts are being made in this regard. The 1987 OAU Declaration on Health as a Foundation for Development in Africa and the "Bamako Initiative" to promote primary health care through community-level self-financing mechanisms of procurement and management of the distribution of essential drugs with particular benefit for women and children may be mentioned. In addition, ECA and WHO have consolidated their collaboration and established a Joint ECA/WHO(AFRO) Technical Group to consider and advise on relevant intersectoral policies and strategies. The African Development Bank has recently increased its cooperation with WHO and is allocating 15 per cent of its fifth replenishment of \$2.5 billion to the African Development Fund to health and educational development in Africa for 1988-1990.⁷³

IV. DECELERATION IN EDUCATION AND LITERACY

Education became one of the hallmarks of social progress of African independence from the 1960s, when total school enrolments grew faster in sub-Saharan Africa than in any other developing region. From 1960 to 1976 the annual average growth rates for all levels were 6.2 per cent compared with 5.9 for Latin America and 4.2 per cent for Asia. The primary school population increased from 36 to 63 per cent of the age group; the secondary from 3 to 13 per cent; and the number of university students grew from virtually zero to 1 per cent.⁷⁴ There was also a remarkable growth in adult literacy, which rose from a very low level of 9 per cent in 1960 to 40 per cent in 1982. In 1960 only one country, Mauritius, had an adult literacy rate of more than 50 per cent. By 1986, the region as a whole had reached that benchmark, with 21 countries exceeding that rate. These countries were Algeria (52 per cent), Ghana (55 per cent), Cameroon (57 per cent), Tunisia (57 per cent), Uganda (59 per cent), Sao Tome and Principe (61 per cent), Kenya (63 per cent), Zaire (63 per cent), the Congo (64 per cent), Ethiopia (64 per cent), Gabon (65 per cent), Seychelles (68 per cent), Swaziland (69 per cent), the Libyan Arab Jamahiriya (71 per cent), Madagascar (71 per cent), Lesotho (75 per cent), Botswana (76 per cent), Zimbabwe (76 per cent), Zambia (78 per cent), the United Republic of Tanzania (83 per cent) and Mauritius (84 per cent).⁷⁵

Trends in enrolment were also very positive between 1970 and 1980 when Africa maintained high annual rates of growth of 7.3 per cent for the primary, 11.9 per cent for the secondary and 13.1 per cent for the university levels. The share of girls and women in total enrolment increased at all levels from 1960 to 1980. Their enrolment ratios went up from 24.5 to 53.2 per cent at the primary, 11.3 to 34.1 per cent at the secondary and 0.3 per cent to 5.3 per cent at the university levels.⁷⁶ However, the proportion of girls and women in overall post-primary education was and still is quite low, considering that females constitute a little more than half the region's population.

African Governments have made heavy overall investments in education, allocating an average of a 20 to 30 per cent share of their national budgets to the sector. From 1975 to 1980, regional per capita expenditure for education rose from \$18 to \$41. There was a tremendous expansion of schools and educational facilities in nearly all countries before 1980. Besides strong political pressures from the top in the early post-independence period to develop and accelerate education, there was conviction in the universally accepted view that education, training and functional literacy prepare young people and adults to realize their potential, gain social and economic mobility and generally assume useful roles in society. Education in all its forms was a major element in human capital stock formation and Africa made notable progress in that regard.

Unfortunately, the formal educational systems inherited from the colonial régimes had certain fundamental weaknesses and problems, which militated against many of the socially desired goals, and the independent nations found it very difficult to change them. To begin with, the systems became very élitist and extremely costly the higher up one went on the ladder from primary school to university. Social inequalities were perpetuated by concentrating the bulk of secondary and higher institutions of learning in urban centres, where they received better resource endowments and allocations. Then there was the very serious problem of the relevance of the content of education to the cultures and the world of work in Africa. There was, and still is in many instances, a high foreign content and orientation in curricula, which made them irrelevant if not injurious to the critical concerns of Africa's cultural identity and self-reliant, self-sustaining development. The colonial emphasis on producing clerks, subordinate administrators and teachers, and the early post-independence stress on leadership and bureaucratic training, led most countries to concentrate on the humanities, arts, bible knowledge and a few behavioural sciences where the employment demand was easily saturated. There was not sufficient emphasis on scientific, agronomic, medical and technical education, which is so crucial for the mastery of the difficult African environment and the production of food and other outputs to meet the basic needs of the fast-growing populations.

The above weaknesses resulted in a situation in which the ensuing benefits from education did not prove commensurate with the enormous investments made in the two decades before 1980. There is considerable wastage, manifested in the high levels of unemployed lawyers and men and women with an arts education, the brain-drain and continuing high illiteracy rates among disadvantaged women and rural dwellers, despite their numerical strength and overwhelming contributions to the economic development of the region. The social inequalities and élitism embedded in the educational systems are also sources of social and political conflicts. Traditionally, it had been the few privileged higher educated, sometimes from particular ethnic groups or geographical areas, who had captured political and bureaucratic leadership and appropriated certain social benefits inaccessible to other segments of society.

This system of privilege was bolstered by investment patterns. As higher educational institutions were nearly all residential and heavily subsidized, the average annual cost per student in higher education in 1974, for example, was \$2,941 compared with \$50.4 for a pupil at the primary level. That is, for the cost of each higher-level student nearly 60 children, whose families could probably ill-afford the cost, could have gone to primary school.⁷⁷ By 1985 the first level of education accounted for 77.9 per cent of total enrolment, the secondary for 20.4 per cent and the tertiary for only 1.7 per cent. But in Kenya, for example, government expenditure per student per year in secondary and tertiary education was, respectively, 6 and 85 times higher than in primary education.⁷⁸ In Ghana, the Government estimated in 1987 that for every student in secondary school and university, 4 and 120 children, respectively, could be educated in primary school.⁷⁹ Donor agencies have helped to reinforce the inequalities and disproportionate educational investment. Thus, in 1983 most bilateral donors spent less than 4 per cent of their assistance on primary education and over 42 per cent on higher education. On a per capita basis, they spent only \$1.10 per primary school pupil and some \$575 per higher-level student.⁸⁰

By 1980 several countries had recognized the existing and emerging problems in the educational system and were taking steps to reform both its structure and content to make them correspond better to the needs of the people. But the economic crisis and structural adjustment requirements put a brake on the momentum of both educational reform and expansion and caused a rapid deceleration and deterioration. Despite the strong demographic pressure and high increases in the school-age population, the annual growth in the total number of students fell from 8.1 per cent in 1970-1980 to 3.9 per cent in 1980-1987. The decline was sharpest at the primary

level, where the annual growth rate plunged from 7.3 per cent to 2.6 per cent in the same periods. The corresponding percentages for the secondary level were from 11.9 to 8.5 and for the university level from 13.1 to 7.7. There was also a steeper decline in the growth of primary schools, for which the population pressure was greatest, than in secondary and university institutions. Non-formal education and literacy programmes also stagnated or declined. Table A.5 shows the slow rate of growth in literacy in the continent as a whole, despite the dramatic successes achieved by 40 per cent of the countries, as noted earlier. By 1986 some of the poorest least developed countries including Benin, Burkina Faso, Chad, the Gambia, Mali and Somalia had literacy rates ranging from 6 to 16 per cent.

TABLE A.5. LITERACY RATE
(Percentage)

Subregion	Both sexes		Males		Females	
	1982	1986	1982	1986	1982	1986
North Africa	39	44	52	59	27	30
West Africa	31	38	43	50	21	31
Central Africa	47	57	64	69	33	44
East and southern Africa	48	63	59	74	37	49
Total Africa	40	50	53	61	29	39

Source: ECA statistical data base.

Budgetary retrenchment under the crisis and structural adjustment led to a sharp decline in regional per capita expenditure from \$41 in 1980 to \$28 in 1985. The most severe cuts were made in capital expenditures and recurrent expenditures for books, paper, supplies, furniture, equipment for the science laboratories, the number of which had started to increase in the late 1970s, and for repair and maintenance. Many educational institutions had fallen into disrepair and the cost of rehabilitating them had become prohibitive for many countries. Cost recovery schemes were imposed on parents and guardians, who had to pay for hitherto subsidized textbooks, supplies, food and even school furniture. With the very high increases in the prices of consumer items, many children of poor and low-income families were forced to go without essential supplies. Some poor children were also withdrawn from school to help generate incomes in diverse ways for their impoverished families. Female children appeared to have suffered more in this situation. The results were socially disastrous as well as demoralizing for parents, teachers and students, especially in the rural areas. Many frustrated teachers whose salaries were undercut by devaluation, inflation and high consumer prices left their countries. Thus, Ghana lost some 4,000 and Zaire some 7,000 teachers in the early 1980s.

The quality of education declined as many graduates at all levels came out poorly prepared to improve their own lives or contribute productively to the development of their societies. The retrogression and wastage of the potential of children were reflected in the fact that 40 per cent of children of school age did not attend primary school in 1984, compared with 30 per cent in 1980. Drop-out rates increased, especially among girls, and world wide, Africa had the highest attrition rates in primary schools from 1982. Repetition of classes by children was also high, ranging from 20 to 30 per cent in some countries including Angola, Burundi, Cameroon, Chad, the Congo, Gabon, Guinea-Bissau and Togo. Factors identified for such poor performance included poverty, malnutrition, ill-health and poor school infrastructure.⁸¹

Educational reform to improve the quality and efficient utilization of trained human resources as well as the equitable distribution of educational opportunities remain some of the most difficult challenges facing African Governments today. This is why the urgent necessity to plan and reconstruct the human resources base has been emphasized in the Lagos Plan of Action and made one of the four critical priorities of Africa's Priority Programme for Economic Recovery 1986-1990 and the United Nations Programme of Action for African Economic Recovery and Development 1986-1990. Some countries, including Ghana, have undertaken educational reform programmes as part of their overall economic recovery and structural adjustment programmes. These involve restructuring and diversification of the existing systems and the provision of special grants for the poor and heavy community involvement and contributions to increase access to education for disadvantaged groups.

An evaluation of the implementation of Africa's Priority Programme for Economic Recovery 1986-1990 and the United Nations Programme of Action for African Economic Recovery and Development 1986-1990 in 1987-1988 showed that some 60 per cent of the countries surveyed had begun to take action to reorient their educational systems to the needs of development; 83 per cent were increasing their efforts in mass literacy and adult functional education and some 70 per cent had devised special programmes to assist small farmers, women and youth.⁸² It is recognized that if the majority of the people are left illiterate or poorly educated, their absorption capacities for modern development ideas and technologies will be limited. Efforts at employment promotion, some of which were noted in section II above, have aimed at reducing educational disenchantment and the dependence on outside expertise. However, few positive results have been registered so far in attempts to reverse the brain-drain because of the continuing socio-economic uncertainties and political instabilities. The need for changes in socio-political conditions are also urgent to enhance the chances of democratization and the ability of the people, particularly the disadvantaged, to claim and defend their lawful rights in their societies.

V. THE SOCIAL IMPACT OF APARTHEID, DESTABILIZATION AND REGIONAL CONFLICTS

A. The impact of apartheid and destabilization policies

According to the 1985 Report on the World Social Situation "apartheid constitutes, in the contemporary world, the extreme form of racism and racial discrimination, in that a complete system of rules and society is based on it".⁸³ It has been condemned by the United Nations General Assembly as a crime against humanity and vigorously denounced by the Organization of African Unity. The apartheid system is based on violence and repression, which destroys lives and disrupts normal social and economic development not only of the majority black people in South Africa but extends boldly and unconscionably to Namibia and nine neighbouring and front-line African States in southern Africa.

Apartheid and the destabilization policies of the South African régime has thus turned southern Africa into a most vulnerable zone of conflict and war with grave social, economic and political consequences. To the enormous losses in human lives destroyed in war, prisons or exile must be added the economic costs of war damage to production and infrastructure, extra defence spending and the support to growing numbers of refugees, widows and orphans. Recent estimates for such losses for nine Member States affected (Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, the United Republic of Tanzania, Zambia and Zimbabwe) for the period 1980 to 1986 are \$25-30 billion or the equivalent of the total production of the southern African region in 1985. The extra defence costs imposed on the recurrent budgets of the Governments affected include \$1,250 million for Angola or 25 per cent of that least developed country's GDP, \$60 million for Botswana, \$250 million to \$275 million for Mozambique (also a least developed country losing 12 per cent of its GDP), \$125 million to \$150 million for Zambia and \$500 million for Zimbabwe.⁸⁴

These tremendous costs are debilitating to the fragile economies of the countries. But the costs in human misery are equally appalling. Apartheid harassment and repression force continuous streams of refugees to flee from South Africa and Namibia and the relatives they leave behind are not able to live in peace. Except for white women, women in South Africa and Namibia suffer the greatest constitutional, economic, social and cultural repression and bear enormous social burdens under apartheid.⁸⁵ Some 3 million male migrant workers from independent African States exist under atrocious and socially repressive conditions in labour camps and settlements. As part of its destabilization policies, South Africa either expels or threatens to expel hundreds of such workers from time to time, only to compound the problems of unemployment in such countries as Botswana, Lesotho, Mozambique and Swaziland. This contributed to the very large number of 13.5 million unemployed persons recorded in East and southern Africa in 1987, the highest in all the subregions of Africa.

The armed conflicts in Angola and Mozambique, which involve directly or indirectly the apartheid régime have caused serious difficulties in food production and supply, displaced millions of people and dangerously strained the socio-cultural fabric of these societies. In Mozambique 100,000 people were estimated to have been killed by the Mozambique National Resistance between 1975 and 1988. Children have been the most helpless victims. In 1986 alone 140,000 children were estimated to have died in Angola and Mozambique as a direct or indirect result of war and destabilization. More than 200,000 Mozambican children have also been

orphaned, abandoned or in some way traumatized by the conflicts. Besides these human damages, substantial health and educational infrastructure in the two countries has been destroyed. Over 40 per cent of primary schools and rural health posts in Mozambique have been destroyed since 1982, and nearly one third have been wrecked or abandoned. Thus, millions of children and adults have been denied access to basic education and health services. Malnutrition and diarrhoea in Angola and Mozambique have reached alarming levels, but medical and technical assistance is thwarted by the wars and inadequate funds. Consequently, the death rate of children under five years of age has reached a record 325 per 1,000 in both countries.⁸⁶

B. Regional conflicts

The precarious social situation in Africa has been further aggravated by political conflicts and tensions arising from the tenuous state of democracy and socio-cultural homogeneity within the States as well as disputes over ex-colonial, problem-ridden boundaries between States. Most African countries are characterized by the pluralistic nature of their societies, urban bias in their development policies and political subordination and marginalization of women and rural communities in general. The major aspects of the development process, including decision-making, planning and the distribution of benefits, are highly centralized and rarely democratic. The participation of the people and accountability of power and authority are also very weak in the modern political structures. Under such circumstances, social consensus is difficult to achieve and minor disputes have a tendency to degenerate into conflicts, especially when power and ethnic interests are involved. The pervasive nature of poverty and language barriers which lead to mutual ethnic suspicions also fuel many conflicts in the region.

Arising from such causes, Africa has witnessed many intermittent and some continuous conflicts within and between individual member States. All subregions have been affected in recent times but the most serious conflicts have occurred in Central, East, North, southern and West Africa. About one third of the countries have experienced political strife in the past decade. The recurring or continuous conflicts in the Horn have had particularly devastating effects on human lives and national economies. The conditions of political instability have also contributed to the brain-drain and are at the root of the very considerable refugee problem.

The social fabric of societies has been rent asunder, family and household units broken up, food production and distribution disrupted and limited health services directed towards treating the war injured or maimed. Again the basic needs of children, women and the poor suffer most. Military engagements in the region reflect a breakdown of social order and create further social problems with the death and displacement of people. Since most of the wars and conflicts occur in rural zones where the people are powerless to intervene, the destruction of farm lands, crops, livestock and human settlements often constitute irreparable losses for the poor owners. Regional political conflicts also seriously infringe the human rights of many affected citizens. Finally, regional conflicts and their attendant military expenditures divert scarce financial resources to socially non-productive ends and deny such sectors as health, education and social services badly needed resources. It has been rare in the period of crisis and adjustment austerity for Governments to trim their defence budgets, even though the silent wars and emergencies of poverty, hunger, malnutrition, poor health and literacy are more dangerous to the well-being of their peoples.

C. Refugees and displaced persons

Refugees in Africa, now numbering some 4 million, have been some of the worst victims of *apartheid*, destabilization and regional political conflicts. Their situation worsened in the first half of the 1980s when their number was even higher at 5 million or half the world's total. The problem of displaced persons is often, though not primarily, caused by political conflicts. Their numbers are a little more difficult to estimate since they stay within their national boundaries. But there may be as many as 10 million in the region whose plight is still unresolved.

The influxes and concentrations of both refugee and displaced persons are highest in the Horn of Africa and Central, East and southern Africa. Most of them live in rural areas of the least developed countries where resources and development opportunities are already limited. For example, according to the Office of the United Nations High Commissioner for Refugees (UNHCR), by the middle of 1988, Angola had 95,660 Namibian, South African and Zairean refugees; Ethiopia had 700,000 Somalis and Sudanese; Somalia had 840,000 refugees, mainly Ethiopians; Sudan had 759,000 Chadians, Ethiopians, Ugandans and Zaireans and the United Re-

public of Tanzania had 266,200 refugees, mainly from Burundi, Rwanda and Zaire.

While African countries under the leadership of OAU, and the United Nations system and the international community under the leadership of UNHCR have undertaken continuous efforts to relieve the immediate hardships of refugees and displaced persons and to find permanent solutions to their plight, a major responsibility lies with individual African Member States to find viable solutions to their internal social and political problems, which lie at the root of this regional human tragedy. Inestimable costs are sustained by all affected countries, whose scarce resources must be used to support the survival of thousands of people who could otherwise be creative and productive for their own societies, and enhance the overall social situation of the continent. Africa's recovery and socio-economic transformation urgently require peace, stability and the total eradication of *apartheid*. The role of the international community in achieving this goal cannot be underestimated.

VI. CONCLUSIONS

The 1980s have seen a reversal of many trends towards social advancement in Africa, hence the weakening of the implementation of the Declaration on Social Progress and Development. Social conditions deteriorated in most countries and substantial gains made in health, education, employment and social integration in the first decade and a half of independence were either lost or seriously eroded. By the mid-1980s there was a threat of a complete systemic breakdown of the social and economic order of the continent when economic recession and an unprecedented drought emergency shook the fragile foundation of most countries. Distorted patterns of social development and distribution were further aggravated when famine, hunger and malnutrition decimated populations. Mass poverty became even more generalized and unemployment and underemployment increased. The social frustrations and misery were intensified in many countries where Governments adopted stringent financial stabilization and structural adjustment measures to restore some macro-economic balances. The neglect of the human dimension in these measures caused an intolerable deterioration in the human capital stock of the region, which had been so painfully built up in the early years of independence.

The above review of the critical social situation in Africa has highlighted some major aspects and given indicative examples from a few countries to illustrate the issues. The serious and intolerable social situation requires the immediate attention of all African Governments and the international community, in accordance with the appeal of the Economic and Social Council in its resolution 1987/39. While short-term measures would be necessary to relieve the immediate hardships of many poor families and communities in food, health care and incomes, the basic problems are structural and embedded in policy misorientations. Therefore, they require fundamental long-term solutions that would transform the socio-political as well as the economic structures. Since the problems outlined earlier are interrelated, their solutions must be found in an integrated framework of social and economic planning, in which the needs of the majority of the people, including women and the poor, would be of central concern. There must be a rethinking of social development so that its vital developmental aspects are highlighted in planning. This has been called for in the Khartoum Declaration. The urgent implementation of that Declaration will go a long way to reconstruct Africa's social order.

Although difficult to achieve, a holistic approach towards socio-economic transformation in Africa must be made an unflinching long-term goal. It would require a new development ethos which would not only place all people at the centre of development, as contributors and beneficiaries, and ensure their equitable participation and social justice in an increasingly democratic process, it would also mean a fundamental change towards internally oriented development policies and strategies so that internal, rather than external, demands, resources and capacities would be the driving force for development.

NOTES

¹ General Assembly resolution 2542 (XXIV).

² ECA, "The African social situation, 1982-1987" (E/ECA/CM.14/16, March 1988).

³ A/S-11/14, annex I.

⁴ OAU/ECM/2XV/Rev.2; transmitted to the Preparatory Committee of the Whole for the Special Session of the General Assembly on the Critical Economic Situation in Africa as document A/AC.229/2, annex.

- ⁵ A/AC.229/2, annex, para. 15.
- ⁶ Figures, unless otherwise indicated, are derived from ECA, "Beyond recovery: ECA-revised perspectives of Africa's development, 1988-2008" (E/ECA/CM.14/31, March 1988); and the report of the Secretary-General containing the mid-term review of the United Nations Programme of Action for African Economic Recovery and Development 1986-1990 (A/43/500 and Corr.1).
- ⁷ See International Labour Organisation/Jobs and Skills Programme for Africa (ILO/JASPA), "Recent trends in employment, equity and poverty in African countries", paper prepared for the International Conference on the Human Dimension of Africa's Economic Recovery and Development, Khartoum, 5-8 March 1988; and ILO/JASPA, *African Employment Report 1988* (Addis Ababa, 1988).
- ⁸ For the origins of the misconception and slowly changing perceptions in Africa, see ECA, "Social policies and programmes in the context of Africa's economic recovery and accelerated development" (ECA/SD/87/2.1/a), paper submitted to the United Nations Interregional Consultation on Developmental Social Welfare Policies and Programmes, Vienna, 7-15 September 1987.
- ⁹ See ECA, Report of the Scientific Round Table on the Climatic Situation and Drought in Africa (E/ECA/CM.10/23, March 1984); note by the Secretary-General transmitting the Special Memorandum on Africa's Economic and Social Crisis (E/1984/110); and FAO, *African Agriculture: The Next 25 Years*, Synthesis Report (Rome, 1986), p. 10.
- ¹⁰ United Nations publication, Sales No. E.88.XIII.3, table 15.
- ¹¹ ILO/JASPA, *African Employment Report 1988* . . . , p. 6.
- ¹² See E/ECA/CM.10/14, annex II.
- ¹³ See ECA, "The implications of structural adjustment and stabilization programmes on long-term growth and development in African least developed countries" (E/ECA/LDCs.7/Exp.6/4, March 1987); and ECA, "The development and utilization of human resources: the case of the African least developed countries" (E/ECA/LDCs/Exp.7/4, April 1988).
- ¹⁴ See S. C. Nana-Sinkam, "Problems of macro-economic stabilisation and/or structural adjustment policies in Africa: the fate of the poor and rural sector during adjustment transition", *Rural Progress*, vol. VII, No. 2 (Addis Ababa, Economic Commission for Africa, 1988), pp. 4-21; and Tony Hodges, "Structural adjustment reports from the field: Ghana's strategy for adjustment with growth", *African Recovery*, vol. 2, No. 3 (August 1988), pp. 16-20 and 27.
- ¹⁵ ILO/JASPA, *African Employment Report 1988* . . . , pp. 14-17.
- ¹⁶ See A/43/500, sect. V; and Tony Killick, "Africa's commodity dilemma", *African Recovery*, vol. 2, No. 3 (August 1988), pp. 5-7.
- ¹⁷ For a summary of the IMF report, see *African Recovery*, vol. 2, No. 3 (August 1988), p. 9.
- ¹⁸ "African common position on Africa's external debt crisis", adopted by the Assembly of Heads of State and Government of the Organization of African Unity, at its third extraordinary session (Addis Ababa, 30 November-1 December 1987); reproduced in A/42/874, annex II.
- ¹⁹ Tony Hodges, "Senegal: Nine years of adjustment", *African Recovery*, vol. 2, No. 3 (August 1988), pp. 22-26.
- ²⁰ Tony Hodges, "Structural adjustment reports from the field . . .", pp. 19-20, 27.
- ²¹ For an up-to-date and comprehensive analysis of the trends in sub-Saharan Africa, see ILO/JASPA, *African Employment Report 1988* . . . , chap. I.
- ²² ECA, "Beyond recovery: ECA revised perspectives of Africa's development, 1988-2008" (E/ECA/CM.14/31), p. 115.
- ²³ *Ibid.*, p. 23.
- ²⁴ Idriss Jazairy, "How to make Africa self-sufficient in food", *Development*, Special Issue entitled "Africa: recovery and development", 2/3 (1987); p. 51.
- ²⁵ ILO/JASPA, *African Employment Report 1988* . . . , pp. 18-21; and ILO/JASPA, *Impact of Recession in African Countries: Effects on the Poor, Synthesis Report* (Addis Ababa, 1985), pp. 74-75.
- ²⁶ ILO/JASPA, *African Employment Report 1988* . . . , p. 20.
- ²⁷ Nigeria, National Manpower Board, *Report of Graduate Employment Tracer Study*, 1986, Manpower Studies No. 24 (Lagos, 1988); cited in ILO/JASPA, *African Employment Report 1988* . . . , pp. 20-21.
- ²⁸ See International Fund for Agricultural Development (IFAD), "Human resources, structural adjustment and the development of smallholders and the rural poor", paper prepared for the International Conference on the Human Dimension of Africa's Economic Recovery and Development, Khartoum, 5-8 March 1988, p. 4.
- ²⁹ *International Migration*, vol. XXIV, No. 1 (March 1986), cited in ECA, "Progress in the areas of employment generation, productivity enhancement and co-operation in the use of high-level manpower" (E/ECA/PAMM/HRP/TC/88/9, December 1987), p. 14.
- ³⁰ For a recent assessment, see African Centre for Applied Research and Training in Social Development (ACARTSOD), *Social Security Systems in Africa*, Research Series No. 2 (Tripoli, 1986).
- ³¹ See Ali Abdel Gadir Ali, "Structural adjustment programmes and human misery in Sudan" (ECA/ICHD/88/8), paper prepared for the International Conference on the Human Dimension of Africa's Economic Recovery and Development, Khartoum, 5-8 March 1988.
- ³² ILO/JASPA, *African Employment Report 1988* . . . , p. 25.
- ³³ Horace Campbell, "The budget and the people: reflections on the 1984 budget in Tanzania", *African Development*, vol. 10, No. 1/2, (Dakar, Council for the Development of Economic and Social Research in Africa, 1985), pp. 82-83.
- ³⁴ Neva S. Makgetha, "Theoretical and practical implications of IMF conditionality in Zambia", *Journal of Modern African Studies*, vol. 24, No. 3, (1986), p. 402.
- ³⁵ Tony Hodges, "Structural adjustment reports from the field . . .", p. 27.
- ³⁶ ILO/JASPA, *African Employment Report 1988* . . . , pp. 12-13.
- ³⁷ J. D. Rogers, *Patterns of Rural Development and Impact on Employment and Incomes: Synthesis Report*, ILO/JASPA (Addis Ababa, 1985), pp. 39 and 60.
- ³⁸ Lesotho, Ministry of Agriculture, *Agricultural Development in Lesotho: Policies and Strategies* (Maseru, 1986), p. 2; cited in ECA, "The development and utilization of human resources . . ." (E/ECA/LDCs/Exp.7/4), p. 7.
- ³⁹ ILO/JASPA, *Youth Employment and Employment Programmes in Africa: The Case of Botswana* (Addis Ababa, 1986), pp. 40-41.
- ⁴⁰ See Amartya Sen, *Poverty and Famines* (Oxford and New York, Oxford University Press, 1981) and *Food, Economics and Entitlements* (Helsinki, WIDER/UNU, 1986), WPI.
- ⁴¹ See ECA, *ECA and Africa's Development 1983-2008: A Preliminary Perspective Study* (Addis Ababa, 1983), pp. 7-8; and ILO/JASPA, *African Employment Report 1988* . . . , p. 32.
- ⁴² IFAD, "Human resources, structural adjustment . . .", p. 1.
- ⁴³ ECA, "The development and utilization of human resources . . ." (E/ECA/LDCs/Exp.7/4), p. 40.
- ⁴⁴ See Ali, "Structural adjustment programmes . . ." (ECA/ICHD/88/8), p. 8.
- ⁴⁵ See A/43/500 and Corr.1.
- ⁴⁶ See A/43/430, annex I.
- ⁴⁷ See "Africa's submission to the Special Session of the United Nations General Assembly on Africa's Economic and Social Crisis" (A/AC.229/2), annex.
- ⁴⁸ A/43/500, para. 248.
- ⁴⁹ Jazairy, *loc. cit.*, pp. 50-51.
- ⁵⁰ *Living Conditions in Developing Countries in the mid-1980s: Supplement to the 1985 Report on the World Social Situation* (United Nations publication, Sales No. E.85.IV.3), pp. 36-37; and *1985 Report on the World Social Situation* (United Nations publication, Sales No. E.85.IV.2), p. 27.
- ⁵¹ See A/43/500 and Corr.1.
- ⁵² See ECA, "The African social situation, 1982-1987" (E/ECA/CM.14/16), p. 15.
- ⁵³ IFAD, "Human resources, structural adjustment . . .", p. 7; and Johan Modeley, "Bringing progress to African agriculture", *Development and Co-operation* (Bonn), No. 4/1987, pp. 14-15.
- ⁵⁴ ILO/JASPA, *African Employment Report 1988* . . . , pp. 27-29.
- ⁵⁵ *Survey of Economic and Social Conditions in Africa, 1985-1986* (United Nations publication, Sales No. E.88.II.K.1), Statistical Annex, table 1.
- ⁵⁶ UNICEF, *Annual Report 1985*, pp. 26-27, *Annual Report 1986*, pp. 28-29, and *Annual Report 1987*, pp. 28-29.
- ⁵⁷ WHO, *Evaluation of the Strategy for Health for All by the Year 2000: Seventh Report on the World Health Situation*, vol. 1, *Global Review* (Geneva, 1987), table 1.

⁵⁸ WHO/Regional Office for Africa, "The work of WHO in the African region in 1987: succinct report of the Regional Director" (AFR/RC38/3, July 1988), pp. 2 and 33-35.

⁵⁹ See G. Cornia and others, eds., *Adjustment with a Human Face*, vol. 1, *Protecting the Vulnerable and Promoting Growth* (New York and Oxford, Oxford University Press, 1987); UNICEF, *The State of the World's Children 1987* (New York, Oxford University Press, 1987); and ILO/JASPA, *African Employment Report 1988* . . . , pp. 32-34.

⁶⁰ See Teshome Mulat, "The human crisis at the country level: Ethiopia's initiatives to sustain the human dimension in spite of the economic crisis" (ECA/ICHD/88/7), paper prepared for the International Conference on the Human Dimension of Africa's Economic Recovery and Development, Khartoum, 5-8 March 1988, p. 12.

⁶¹ D. C. Okpala, "Human settlements in Africa's development", *Rural Progress* (ECA), vol. VI, No. 2 (1987).

⁶² ECA, "Shelter: housing the low-income group in Africa (ST/ECA/HUS/2), p. 11.

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⁶⁵ See WHO/Regional Office for Africa, *Final Report of the Thirty-fifth Session of the WHO Regional Committee for Africa* (Brazzaville, 1985), p. 119.

⁶⁶ See G. Cornia and others, *op. cit.*; UNICEF, *The State of the World's Children, 1987* . . . , and ILO/JASPA, *African Employment Report 1988* . . . , pp. 34-35.

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