



food insecurity:

when people must live with hunger
and fear starvation

The state of

food insecurity in the world

1999

food insecurity:

when people must live with hunger
and fear starvation

The state of

food insecurity in the world

1999

About this report

This is the first edition of *The State of Food Insecurity in the World*. It provides the latest estimates of the number of chronically hungry people in the developing world and introduces the first comparable estimates ever made of the number of people who go hungry in the industrialized countries and countries in transition.

This and subsequent editions of *The State of Food Insecurity in the World* will serve as regular progress reports on global and national efforts to reach the goal set by the World Food Summit in 1996 – to reduce the number of undernourished people in the world by half by the year 2015. The report provides the first data

available on progress and reversals during the 1990s and highlights countries that have achieved the greatest gains or suffered the most severe setbacks over the past two decades.

In addition, the report analyses some of the underlying factors that contributed most to gains and setbacks in these countries and examines the impact of short-term “shocks”, such as war, natural disaster or financial crisis. It also looks at national efforts to identify population groups particularly prone to food insecurity and malnutrition. And it probes the differences in our understanding of hunger and nutritional status that result from comparing data

about food access with analysis of data about weight and height of young children. Finally it draws lessons from what has been learned thus far and offers some pointers for the way ahead.

The State of Food Insecurity in the World draws on FAO’s ongoing work programme to monitor and analyse food insecurity and the nutritional status of people worldwide. This work represents part of FAO’s contribution to the Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) initiative that is being established at global and national levels (see box).

Food Insecurity and Vulnerability Information and Mapping Systems

In order to take effective action to reduce hunger, stakeholders and decision-makers need reliable, detailed information about the extent of the problem and the people it affects. The World Food Summit mandated the establishment of a Food Insecurity and Vulnerability Information and Mapping Systems programme to provide that information. The FIVIMS initiative draws on many existing information systems, such as crop forecasting and early warning systems, household food security and nutritional information systems, and vulnerability assessment and mapping systems.

FIVIMS operates on both national and global levels. Nationally, it provides a link for existing information systems that gather and analyse relevant data, ranging from health and climate to markets and household food security. Globally, it is being coordinated by an inter-agency working group (IAWG), with FAO as its secretariat. The IAWG supports the national-level systems and is working to establish a common database and information exchange network. Its members include United Nations agencies, bilateral aid agencies and international or non-governmental organizations.

The immediate objectives of FIVIMS are to:

- increase attention to food security issues;
- improve the quality of food security-related data and analysis;
- promote donor collaboration on food security information systems at country level;
- encourage better action programmes on poverty and hunger;
- improve access to information through networking and sharing.

IAWG-FIVIMS membership



Australian Agency for International Development (AUSAID)
Canadian International Development Agency (CIDA)
German Agency for Technical Cooperation (GTZ)
United States Agency for International Development (USAID)
Food and Agriculture Organization of the United Nations (FAO)
International Fund for Agricultural Development (IFAD)
International Labour Organisation (ILO)
United Nations Department of Economic and Social Affairs (UNDESA)
Office of the Coordinator for Humanitarian Affairs (OCHA)
United Nations Development Programme (UNDP)
United Nations Environment Programme (UNEP)
United Nations Children’s Fund (UNICEF)
United Nations Population Fund (UNFPA)
World Bank (WB)
World Food Programme (WFP)
World Health Organization (WHO)
World Meteorological Organization (WMO)
Administrative Committee on Coordination/Subcommittee on Nutrition (ACC/SCN)
International Food Policy Research Institute (IFPRI)
Centro Internacional de Agricultura Tropical (CIAT)
Helen Keller International (HKI)
Save the Children Fund (SCF/UK)
World Resources Institute (WRI)

Contents

- 4 **Foreword**
 - Towards the World Food Summit target

- 6 **Undernourishment around the world**
 - 6 Counting and locating hungry people
 - 10 Progress and setbacks in developing countries

- 11 **Nutritional status and vulnerability**
 - 11 Well-being of young children
 - 13 Incidence of malnutrition in vulnerable areas
 - 15 Vulnerable people – who and why
 - 16 Profiles of vulnerability
 - 18 Environmental potential and constraints

- 20 **Dynamics of change**
 - 20 Factors that bring about change
 - 21 Economic growth spurs improvements in food security status for most Asian nations
 - 22 Mixed picture of progress and setback characterizes Latin America and the Caribbean
 - 23 War-ravaged Afghanistan loses ground while Morocco leads good performers
 - 24 Several West African nations register gains but problems grow worse elsewhere in Africa
 - 25 Recent shocks: floods, drought, war and financial collapse threaten progress

- 28 **The way ahead**
 - Meeting the challenge

- 29 **Tables**

Towards the World Food Summit target

Three years ago, leaders from 186 countries gathered in Rome and made a solemn commitment – to halve the number of hungry people by the year 2015. Is the world living up to the promise it made at the 1996 World Food Summit?

New estimates for 1995/97 show that around 790 million people in the developing world do not have enough to eat. This is more than the total populations of North America and Europe combined. The “continent” of the hungry includes men, women and children who may never reach their full physical and mental potential because they do not have enough to eat – many of them may even die because they have been denied the basic human right to food. This state of affairs is unacceptable.

Yes, the number of undernourished people has decreased by 40 million since 1990/92, the period to which the estimates of 830 to 840 million cited at the Summit refer. But we cannot afford to be complacent. A closer look at the data reveals that in the first half of this decade a group of only 37 countries achieved reductions totalling 100 million. Across the rest of the developing world, the number of hungry people actually increased by almost 60 million.

The current rate of progress – an average reduction of around 8 million a year – falls squarely within the trajectory of “business as usual”. If the pace is not stepped up, more than 600 million people will still go to sleep hungry in the developing countries in 2015. To achieve the Summit goal, a much faster rate of

progress is required, averaging reductions of at least 20 million a year in the developing world.

Hunger is often associated with developing countries. While that is true, this report provides statistical evidence that the problem is not limited to developing countries. For the first time, FAO presents aggregate estimates of the number of undernourished in developed countries. The resulting figure, 34 million people, confirms that even developed countries are confronted with the challenge of overcoming food insecurity. Although many of these 34 million people live in countries that have been undergoing major political and economic transition in the 1990s, pockets of hunger are to be found in all parts of the world.

It is my conviction that there is no reason not to have a hunger-free world some time in the next century. The world already produces enough food to feed the people who inhabit it today. And it could produce more. However, unless deliberate action is taken at all levels, the chances are that hunger and malnutrition will continue in the foreseeable future.

But, before effective action can be taken, we need to know who the hungry and vulnerable are, where they live, and why they have not been able to improve their situations. The numbers are 790 million in developing countries, and 34 million in developed countries, but we must put faces on the numbers.

Whether it is the victims of civil conflict or herders who suffer because their pastureland is disappearing, whether it is the urban poor living on national welfare or the

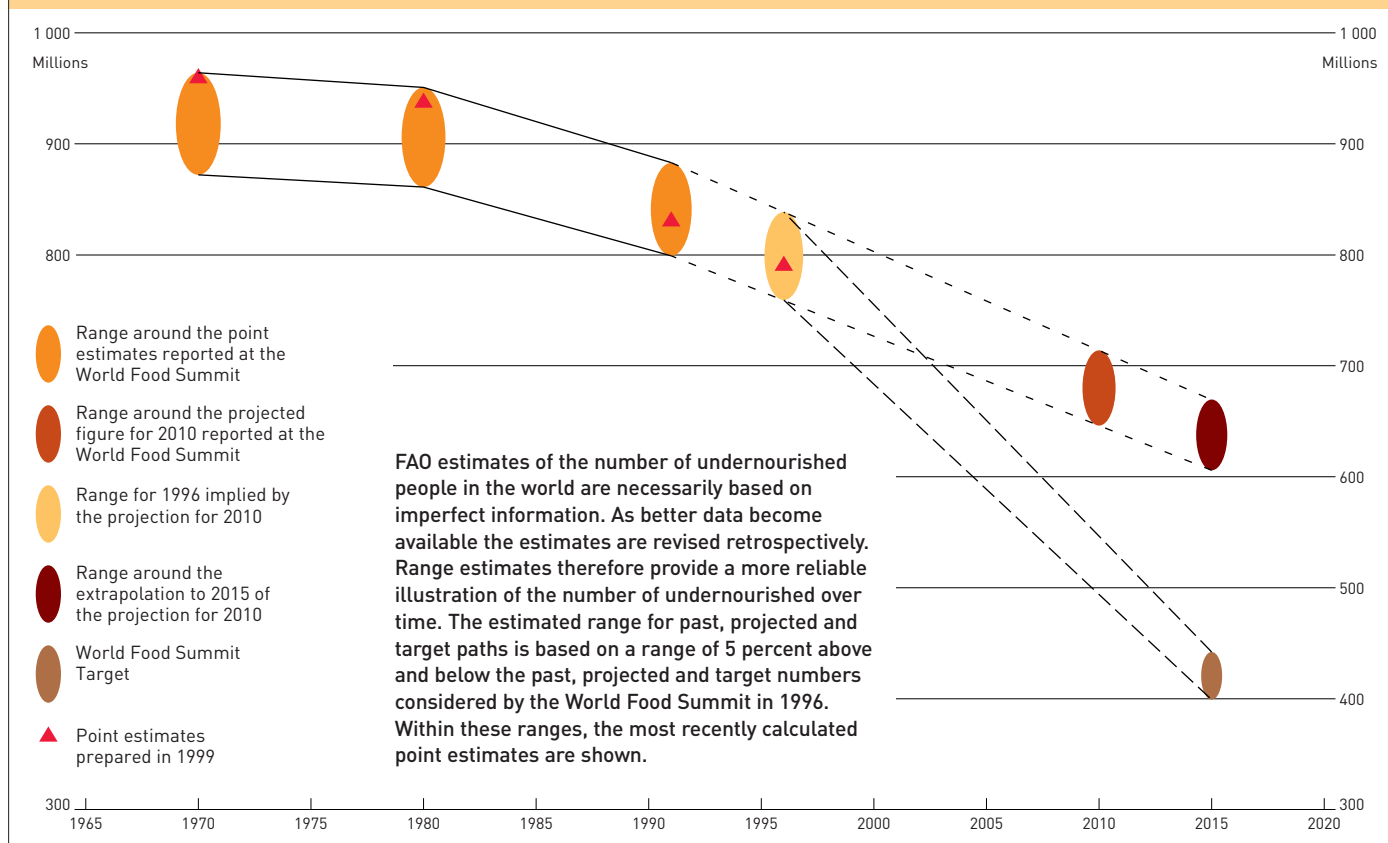
geographically isolated ethnic minorities, we cannot forget that they are human beings, with individual needs and aspirations. In poor villages and neighbourhoods across the world, the scene is the same: people working from sunrise to sunset dealing with harsh climates, tired earth and the effects of fragile economies, labouring constantly to provide for themselves and their families – striving for little more than enough food to keep themselves alive.

That is why we must focus not only on abstract global numbers but on the faces and places that make up those numbers. In calculations and predictions that use variables of population growth, output rates, declining resource bases, political changes, devastation from diseases or the effects of natural and manmade disasters, we must always remember that we are talking about people – individuals who, given the chance, have the potential to make significant contributions to the world around them. But in order to reach their potential, they need and deserve a life free from hunger.

New technologies allow us to link national information systems and establish global networks, to examine an entire ocean or one drop of water, to punch buttons and create graphs and flow charts that show us instantly and clearly the kind of progress being made. Knowledge not only gives us power, it gives us insight and direction. With the establishment of the Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) initiative, we are expanding our ability to gather, analyse and share knowledge



Number of undernourished in the developing world: observed and projected ranges compared to the World Food Summit target



that can guide future initiatives to increase access to food for all.

The work of FIVIMS is essential as we enter the new millennium. We must devise and put into action policies and programmes to enable governments, international and non-governmental organizations, communities and individuals to overcome the obstacles that stand in the way of what should be a birthright for every one of the 6 000 million people on this planet – enough to eat.

As we have seen, the progress being made against hunger in the world is uneven. It is clear that there is no global formula for success. The success must come from specific

actions undertaken and goals set at the local, national and regional levels, where individuals will be able to see the impact of their involvement.

In the absence of new investment and policy efforts at all levels, current technological and socio-economic trends are likely to continue. The number of undernourished people may continue to decline ... but only slowly and only in some regions of the world. Deliberate and targeted measures and new investments are fundamental to improve the trend.

The reduction to 790 million hungry people in the developing countries is a beginning. Our stated goal is to reduce that number, at the minimum,

to around 400 million by 2015, as well as to reduce by half or more the number of 34 million hungry in developed countries. But as we work towards the goal, we must remain aware that we cannot stop when we reach it. Because, even that number is far too big. Even one hungry person is one too many.

Jacques Diouf
Director-General
FAO

Undernourishment around the world

Counting and locating hungry people

Almost 800 million people in the developing world do not have enough to eat. Another 34 million people in the industrialized countries and countries in transition also suffer from chronic food insecurity. If all the world's undernourished people were gathered together, the population of the hungry would dwarf that of every other continent except Asia.

The hunger of these people is not a transitory condition. It is chronic. It is debilitating. Sometimes it is deadly. It blights the lives of all who are affected and undermines national economies and development processes where it is found on a large scale, as is the case across much of the developing world.

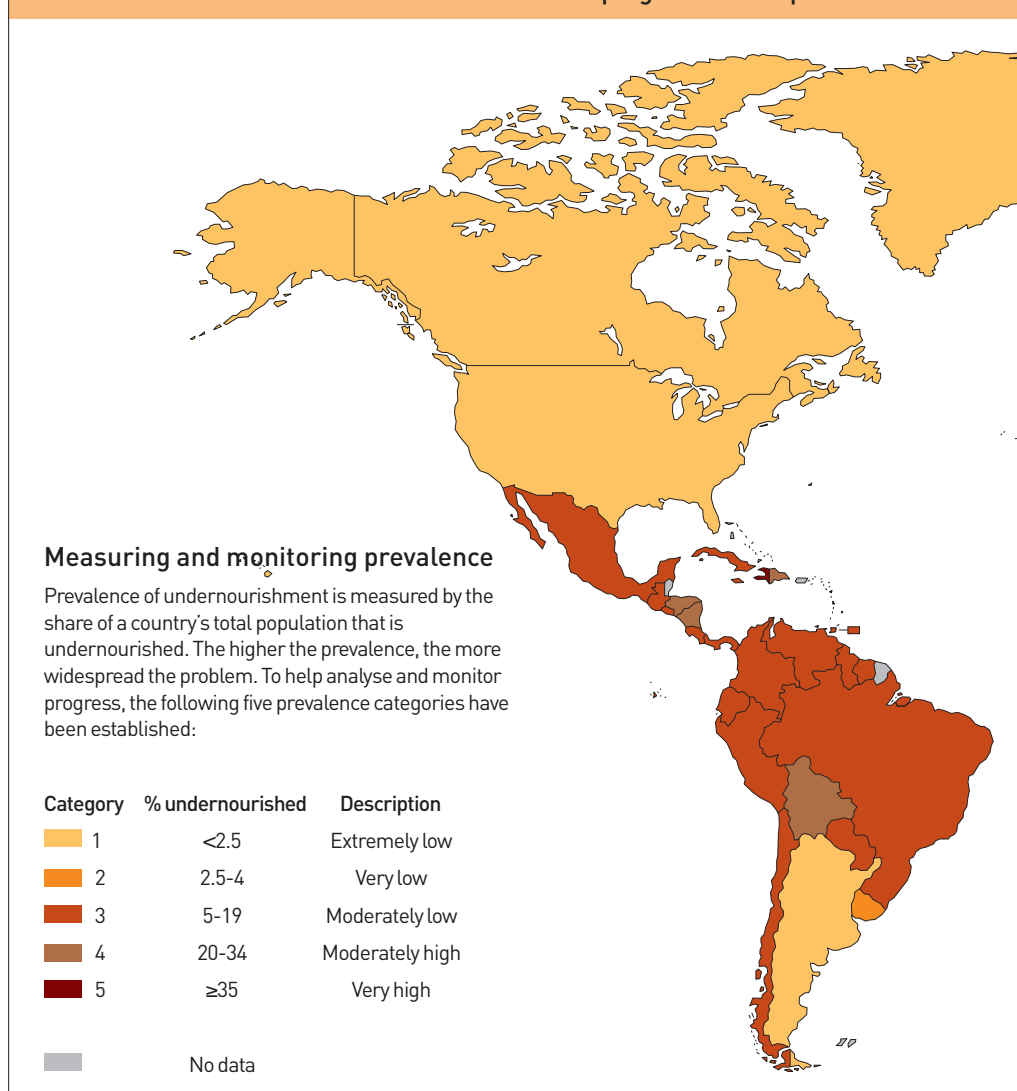
The figures, tables and map in this section depict the scale of the problem worldwide at the turn of the millennium. They also show changes that have taken place in 98 developing countries between 1990/92 and 1995/97, the most recent period for which information is available.

That information highlights the fact that progress has been made. On a global scale, the gains have been sufficient to bring the total number of undernourished people in the developing world below the 800 million figure cited at the World Food Summit in 1996.

The gains are encouraging, but far from satisfactory. More detailed analysis confirms that the momentum is too slow and the progress too uneven to achieve the goal set by the Summit and reduce the total to around 400 million by the year 2015. In fact, the number of hungry people is growing in many parts of the world.

Small increases or decreases in the number of undernourished people from one year to the next may simply reflect transitory conditions that claim our attention but do not touch the fundamental problem. Significant, lasting change in the number is the appropriate indicator of progress or setbacks in banishing chronic hunger from our world.

Prevalence of undernourishment in both developing and developed countries



Measuring and monitoring prevalence

Prevalence of undernourishment is measured by the share of a country's total population that is undernourished. The higher the prevalence, the more widespread the problem. To help analyse and monitor progress, the following five prevalence categories have been established:

Category	% undernourished	Description
1	<2.5	Extremely low
2	2.5-4	Very low
3	5-19	Moderately low
4	20-34	Moderately high
5	≥35	Very high
	No data	

A note on methodology – how the numbers are calculated

Chronic food insecurity is represented by estimates of the number of people whose food intake does not provide enough calories to meet their basic energy requirements – i.e. the undernourished. Measurements of nutritional status or undernutrition, on the other hand, are based on information about people's actual physiological condition.

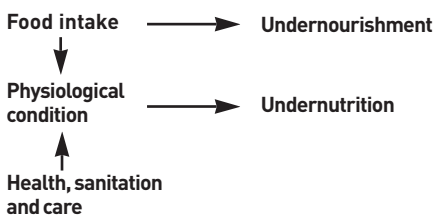
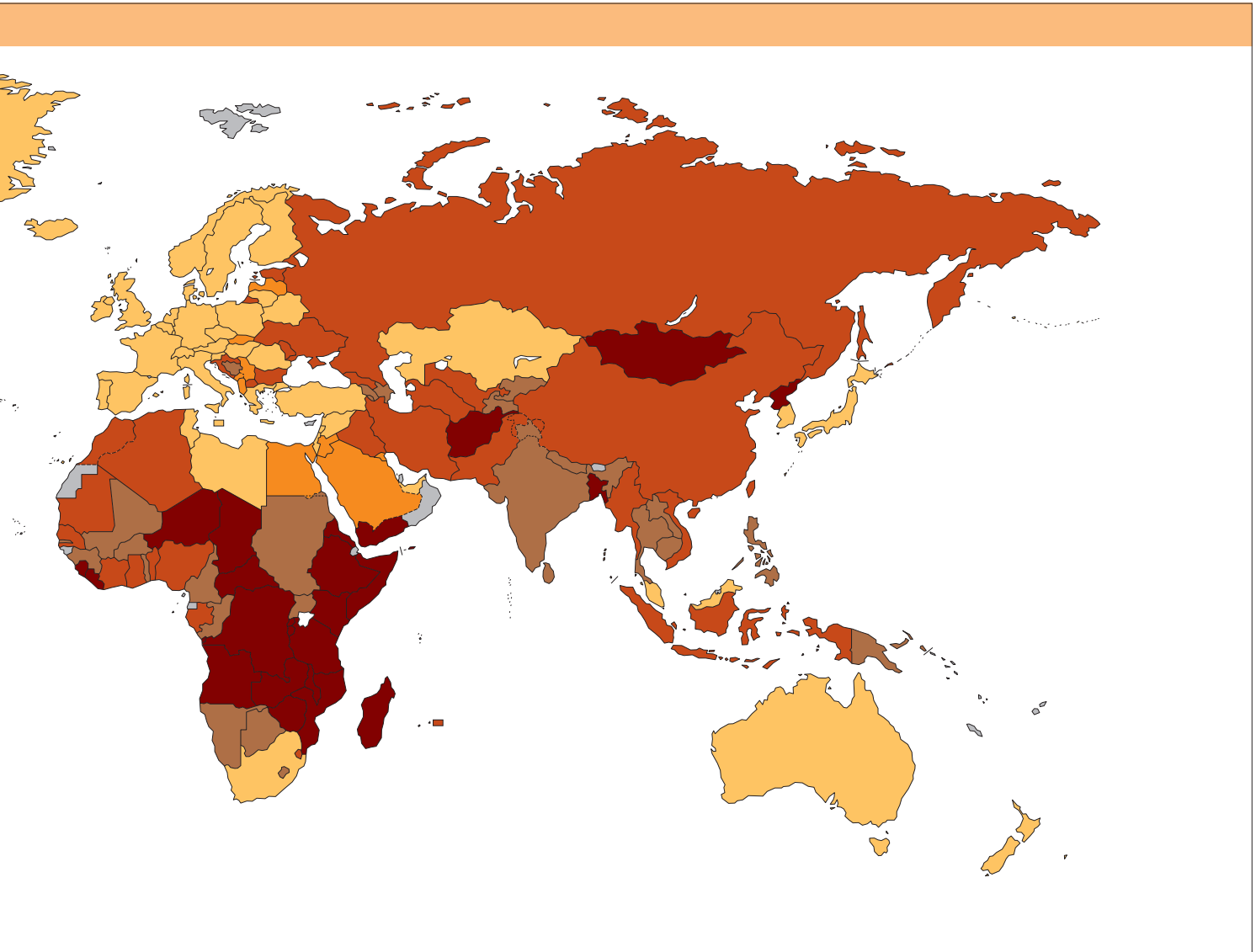
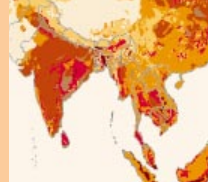
In practice, these are two distinct and useful measures derived from very different analytical approaches.

1. **Undernourishment** is estimated from existing

data about numbers of people and the amount of food available to them.

2. **Undernutrition** is determined from data about people's weight, height and age. Ratios calculated from these measurements indicate the outcome not only of inadequate food intake but also of poor health and sanitation conditions that may prevent people from deriving full nutritional benefit from what they eat.

The two approaches are complementary, as illustrated:



The numbers cited in this section refer to estimates of undernourishment based on a few commonly available types of information:

- food production, trade and stocks;
- figures for total population and distribution by age and gender;
- data on consumption distribution.

The method is described in detail in *The Sixth World Food Survey*, published by FAO in 1996. Very briefly it relies on:

1. calculating the total number of calories available from local food production, trade and stocks;
2. calculating an average minimum calories requirement for the total population based on the number of calories needed by different age and gender groups and the proportion of the population each group represents;
3. dividing the total number of calories available by the number of people in the country;
4. factoring in a coefficient for distribution to take account of inequality in access to food;
5. combining this information to construct the

distribution of the food supply within the country. This gives the percentage of the population whose food intake falls below the minimum requirement;

6. multiplying this percentage by the size of the population to obtain the number of undernourished people.

These calculations produce an estimate of the number of people in each country whose average calorie intake falls below the minimum required to keep the body going and perform light activity. Adding these numbers together yields a global estimate of the total number of undernourished people.

Undernourishment around the world

Counting and locating hungry people

An overwhelming majority of the undernourished people in developing countries live in Asia and the Pacific. This region is home to 70 percent of the total population of the developing world. And it accounts for almost two-thirds (526 million) of the undernourished people as well. India alone has more undernourished people (204 million) than all of sub-Saharan Africa combined. With India's neighbours added in, the South Asian subregion accounts for more than one-third of the world total (284 million). Another 30 percent (240 million) live in Southeast and East Asia, more than 164 million in China.

Sub-Saharan Africa is home to almost a quarter of the developing world's hungry people. The problem varies in severity across the continent. Although West Africa has the largest total population of any of the African subregions, it has the fewest undernourished. By contrast, East Africa, with a slightly smaller total population, has more than twice as many undernourished people. The numbers in Central and Southern Africa are also proportionately larger, although both have much smaller total populations.

As these figures suggest, in addition to looking at the numbers of people afflicted by hunger, it is also important to consider the proportion of the population affected on a national and regional basis. This analytical approach spotlights areas where problems are most severe. It also helps identify groups of countries that may share common problems and common priorities for action.

Overall, more than a quarter of the world's

Undernourishment in developed countries

First estimates indicate that around 34 million undernourished people live in the industrialized countries and countries in transition. More than three-quarters of them – 26 million – are concentrated in the countries in transition of Eastern Europe and the area of the former USSR. The remaining 8 million live in industrialized countries.

The proportion of undernourished people is very low or extremely low in all industrialized countries and 12 of the 27 countries in transition. But significantly higher rates exist in 15 of the countries in transition, mainly those belonging to the area of the former USSR and the former Federal Republic of Yugoslavia. Prevalence categories for all developed countries are shown in the map on page 6.

Undernourished in developed countries, 1995/97 (millions)

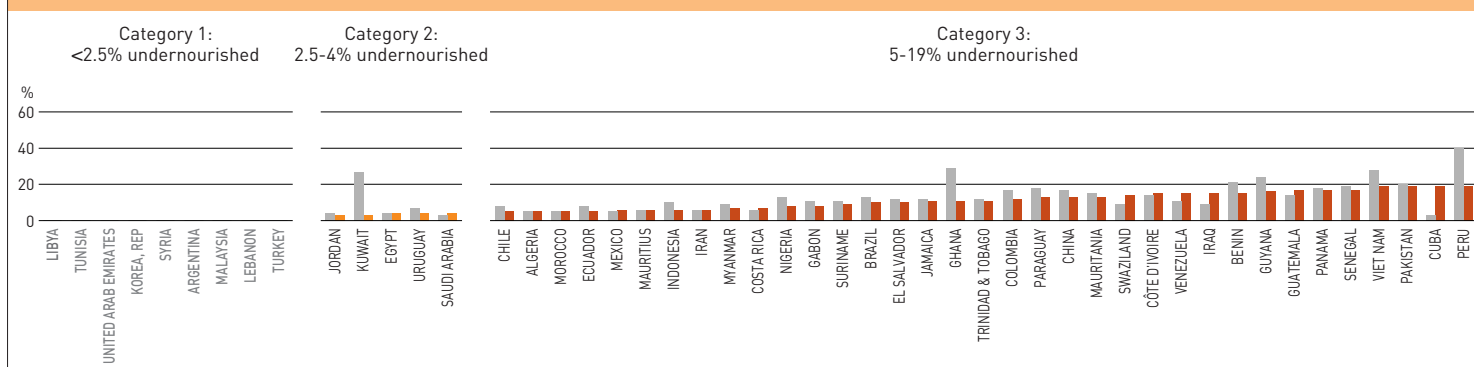
REGION	TOTAL POPULATION	UNDERNOURISHED (%)	NUMBER OF PEOPLE
Industrialized countries	876	<2.5	8
Countries in transition	413	6	26
of which: Eastern Europe	121	4	4
Former USSR	292	7	22

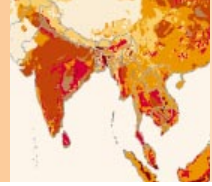
chronically hungry people live in countries where the prevalence of undernourishment is very high (35 percent or more). And in all but three of these countries, the proportion and number of hungry people have been increasing for some time.

The problem is especially severe in Central, East and Southern Africa. Almost half (44 percent) of the 340 million people living in the 26 countries of these subregions are undernourished. Only six countries elsewhere in the world have such high prevalence rates – Afghanistan, Bangladesh, Haiti, the Democratic People's Republic of Korea, Mongolia and Yemen.

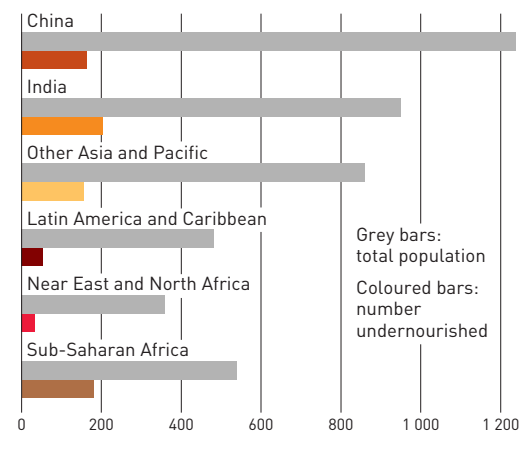
Around 570 million undernourished people – almost three-quarters of the world total – live in countries where the prevalence of hunger is neither very low (below 5 percent) nor very high (above 35 percent). While Asian countries are about equally divided between the "moderately low" (5-19 percent) and "moderately high" (20-34 percent) categories, most countries in Latin America and the Caribbean fall in the former. Six million undernourished people live in countries where the prevalence is very or extremely low, mainly in the Near East (see chart below).

Proportions of undernourished in developing countries, by category, 1990/92 and 1995/97

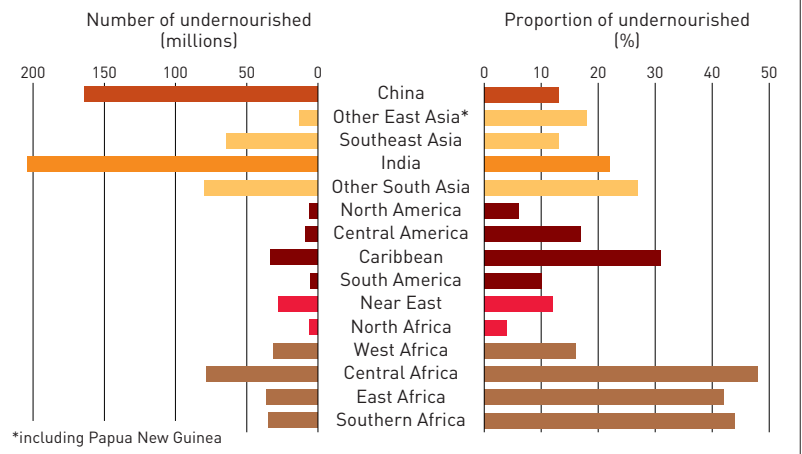




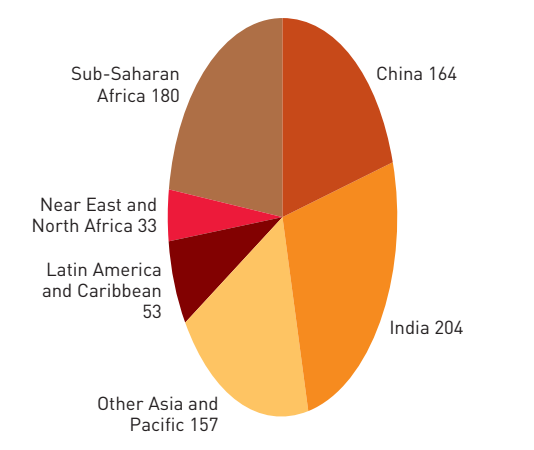
Total population and number of undernourished, by region, 1995/97 (millions)



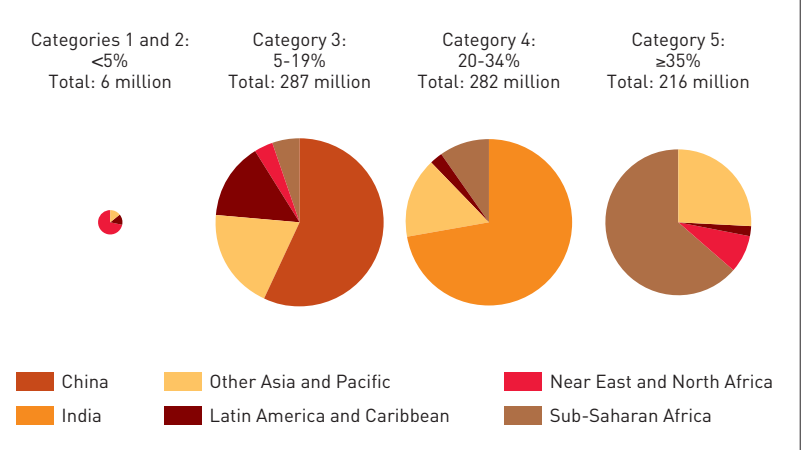
Number and proportion of undernourished, by region and subregion, 1995/97



Number of undernourished, by region, 1995/97 (millions)



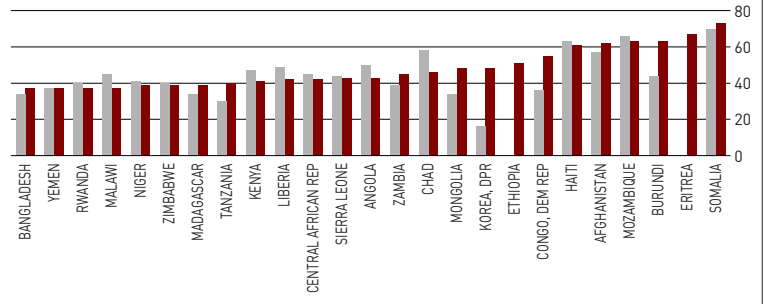
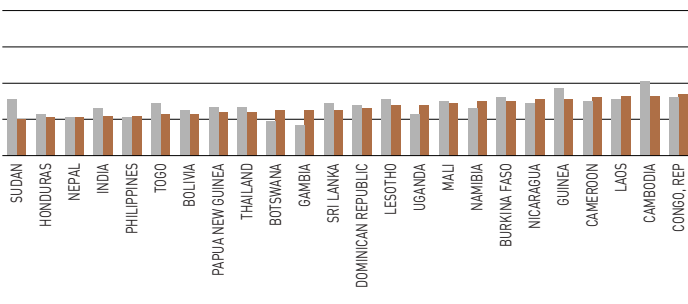
Number of undernourished by prevalence category and by region, 1995/97



Grey bars: 1990/92 Coloured bars: 1995/97

Category 4: 20-34% undernourished

Category 5: ≥35% undernourished



Undernourishment around the world

Progress and setbacks in developing countries

According to the most recent data available, the number of undernourished people in the developing world has been reduced to 790 million, 40 million less than the number estimated at the time of the World Food Summit in 1996. The decline in the percentage of people who are undernourished is also significant – from 20 percent in the 1990/92 reference period used at the Summit to slightly less than 18 percent in 1995/97.

These gains do not appear to be either transitory or anomalous. In fact, they are consistent with a steady downward trend, as confirmed by a look at the figures for 1979/81, when almost 920 million people went hungry, amounting to around 30 percent of the population of the developing world.

But the pace of progress has not been fast enough to reach the goal of around 400 million by 2015 set by the Summit. In fact, if the present trend continues, with reductions of approximately 8 million a year

in the ranks of the undernourished, the total in 2015 will be 638 million. That figure would represent no more than the “business-as-usual” outcome that was branded as unacceptable by the Summit.

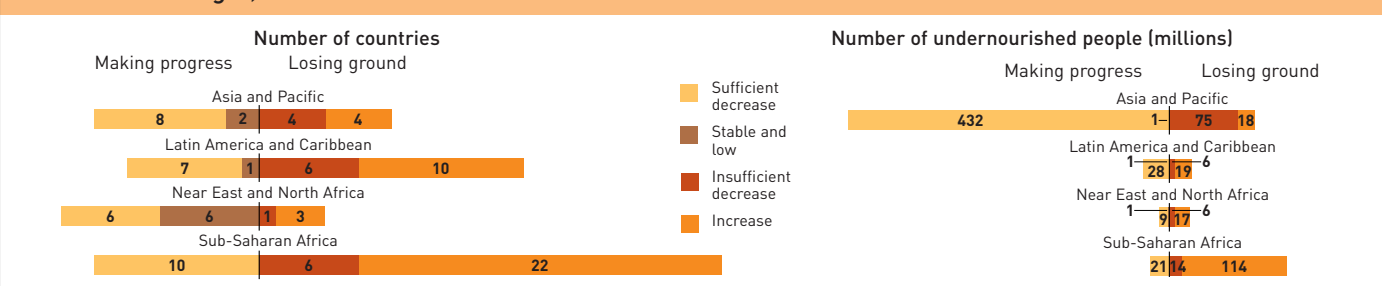
Progress in combating hunger has also been very uneven. Between 1991 and 1996, the proportion of the population going hungry increased in 27 countries, including many of those where the problem was already most severe. In another 32 countries, the proportion either remained steady or shrank too slowly to offset growth in the total population. Only 37 countries succeeded in bringing down the proportion rapidly enough to reduce the absolute number. Because this group included several large countries, its reduction of 97 million outweighed the increase of 59 million among the other countries, resulting in a net reduction of about 40 million for the developing world as a whole.

Over the longer period, between 1980 and 1996, only 40 countries reduced hunger quickly and steadily enough to meet the

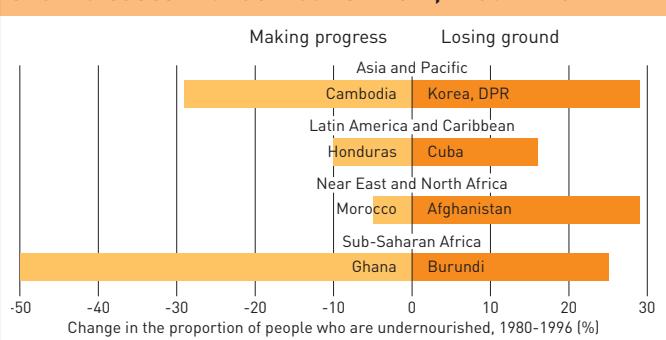
Summit target. Several of these already had very low or insignificant levels of chronic hunger to begin with. But past performance has not been sufficient in 56 countries.

The prospects are not all bleak, however. Many countries, including several of the large countries that dominate global totals, have registered steady improvements. And some have scored remarkable gains. Led by five countries from West Africa, 13 countries decreased the proportion of hungry people in their populations by more than one percentage point a year over the 16-year period. Valuable lessons can be learned from their experiences as well as from the hardships that have beset countries where the proportion of undernourished soared over the same period. A detailed examination of factors contributing to progress and problems in the countries that registered the largest changes in each of the four regions that make up the developing world can be found in the section entitled Dynamics of change.

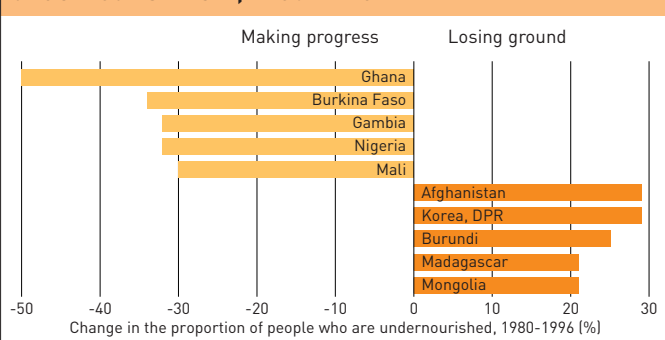
Undernourishment in countries where hunger is decreasing either fast enough or insufficiently to reach the World Food Summit Target, 1980-1996



Countries in each region with the largest reductions and increases in undernourishment, 1980-1996



Countries with the largest reductions and increases in undernourishment, 1980-1996



Nutritional status and vulnerability

Well-being of young children

The data and maps on undernourishment presented earlier in this report tell us where people have the most difficulty obtaining sufficient food. But they do not indicate where children's nutritional status has been most severely damaged by a combination of inadequate food intake and other factors, such as high incidence of diarrhoea and other diseases that prevent proper digestion of the food consumed.

That information can only be obtained by weighing and measuring children systematically (see note below).

Information available from countries that have conducted anthropometric surveys shows that an alarmingly high proportion of children in the developing world suffer the effects of undernutrition. According to data obtained from surveys conducted between 1987 and 1998, two out of five children in the developing world are

stunted, one in three is underweight and one in ten is wasted.

The numbers vary considerably among regions. In South Asia, half the children under five are underweight, compared with 33 percent in Africa and 21 percent in East and Southeast Asia. The incidence is lowest in Latin America and the Caribbean. With the highest incidence of undernutrition and a very large population of children under five, South Asia accounts for almost half of all the world's underweight and stunted children. These figures indicate that far more children in South Asia than elsewhere in the world do not reach the weights and heights that are considered to represent healthy growth.

Measuring nutritional status

As indicated in the Note on methodology (page 6), measurements of undernourishment are based on estimates of food intake. But to measure malnutrition it is necessary to use anthropometric indicators that tell what is happening to people's bodies (see panel at right for definitions).

Estimates of food intake and anthropometry have different objectives, and each has advantages and limitations. Anthropometric data are currently used primarily to measure the nutritional status of young children. Three different measures of undernutrition are commonly used: wasting, stunting and underweight. Nutritionally deprived children are those who are significantly smaller compared to commonly used uniform standards for child growth.

By contrast, in this report prevalence of undernourishment is measured for a total population by comparing food intake data with country-specific food need standards. These are determined on the basis of energy requirements of each sex-age group, taking into account sex-age specific heights within the population.

Anthropometric data are obtained through surveys whose frequency and timing vary from country to country. As a result, these data must be used cautiously in making comparisons between countries and time periods. Food intake measurements, on the other hand, rely on data that are more readily available, recent and fully comparable across countries. So they can be used effectively to obtain a snapshot of current conditions, even though they do not capture the full array of factors determining nutritional status.

Commonly used terms

food insecurity low level of food intake, which can be transitory (when it occurs in times of crisis), seasonal, or chronic (when it occurs on a continuing basis)

undernourishment chronic food insecurity, in which food intake is insufficient to meet basic energy requirements on a continuing basis

vulnerability presence of factors that place people at risk of becoming food insecure or malnourished

malnutrition physiological condition resulting from inadequacy or imbalance in food intake or from poor absorption of food consumed

- **undernutrition** result of prolonged low level of food intake and/or poor absorption of food consumed. Manifestations include wasting, stunting or underweight, reduced cognitive ability, poor health status and low productivity

- **micronutrient deficiency** lack of essential vitamins and minerals resulting from unbalanced food intake and specific problems of absorption of food consumed

- **overnutrition** result of excessive food intake

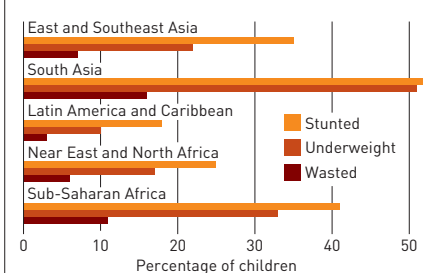
anthropometric based on human body measurements

- **wasting** low weight-for-height, generally the result of weight loss associated with a recent period of starvation or severe disease

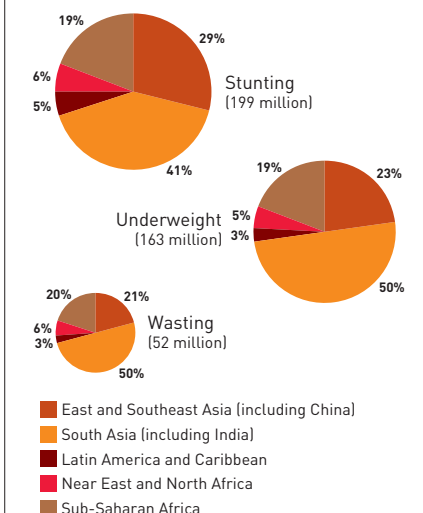
- **stunting** low height-for-age, reflecting a sustained past episode or episodes of undernutrition

- **underweight** low weight-for-age, reflecting a current condition resulting from either inadequate food intake, past episodes of undernutrition or poor health conditions

Undernutrition among children under five in developing countries



Children suffering from undernutrition, by region



Nutritional status and vulnerability

Well-being of young children

In addition to measurements of children's height and weight, other indicators of health and sanitary conditions can help identify and respond to nutritional problems. Table 2 (page 30) presents three indicators of nutritional status and three indicators of health conditions for developing countries, based on the most recent information available. The nutritional indicators used are percentage of children under five years old who were wasted, stunted or underweight at the time of the most recent survey. The health indicators are life expectancy at birth, the mortality rate for children under five and the percentage of the population with access to adequate sanitation.

The occurrence of high levels of all these indicators together obviously indicates severe health and nutritional problems. Conversely, when all indicators

are low, the situation is much more benign. And, indeed, the performance of individual countries bears this out. Among the approximately 80 countries that have been examined, nine achieved excellent scores for all indicators. In all nine countries, the prevalence of undernourishment, as estimated based on food availability and access, was also moderately or very low. At the other end of the scale, 16 countries scored very badly on all six indicators. All 16 also suffered from moderately high or very high prevalence of undernourishment.

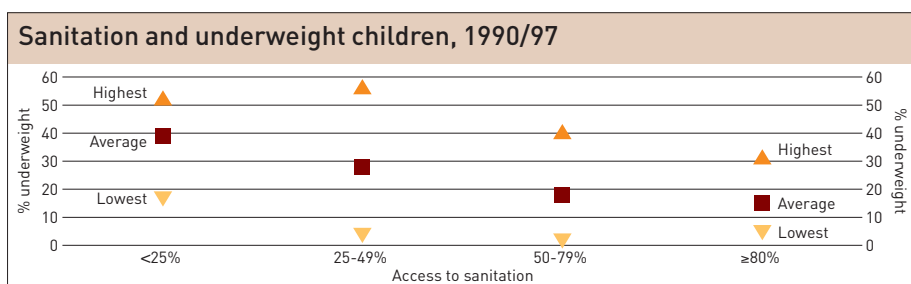
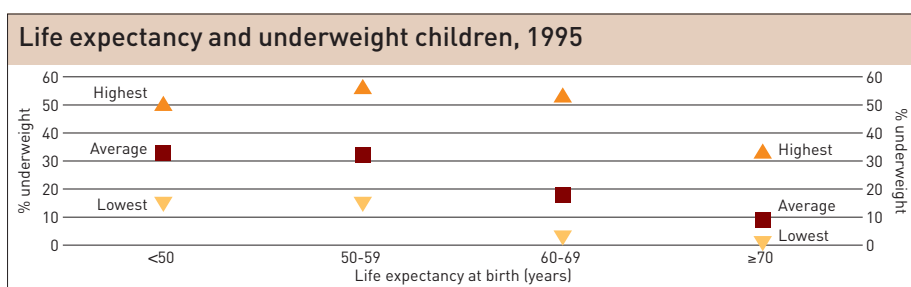
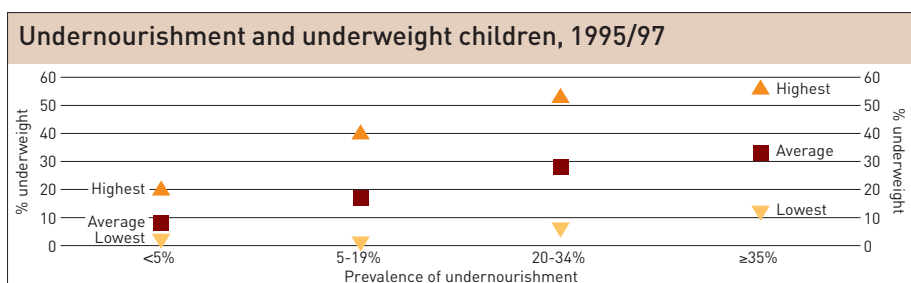
In general, the impact of food intake, health conditions and care practices on children's nutritional status can be understood best by analysing levels and changes in relevant indicators for individual countries over time. This is not possible however, since the in-depth surveys required to monitor nutritional status, health and sanitary conditions are

conducted infrequently. Therefore, the results presented here are necessarily limited to cross-country comparisons that suggest how factors such as food intake and health conditions affect nutritional status.

The graphs on this page show how the nutritional status of children is associated with indicators for food intake, health status and sanitary conditions of the population as a whole. The percentage of children younger than five who are underweight has been selected as the indicator of nutritional status. Prevalence of undernourishment has been used as the indicator of food intake, life expectancy as the indicator of overall health status, and percentage with access to adequate sanitation as the indicator of sanitary conditions.

For each graph, countries have been grouped according to categories indicating whether prevalence of undernourishment or occurrence of adverse health conditions is low, medium, high or very high (along the horizontal axis). The highest level, lowest level and average for the percentage of children under five who are underweight are shown vertically for the countries in each category. For example, the graph comparing the prevalence of undernourishment with that of underweight children shows that among countries where 35 percent or more of the population are undernourished, on average, one-third (33 percent) of the children are underweight, with levels for individual countries ranging from a low of 12 percent to a high of 56 percent.

As might be expected, the graphs show that children's nutritional status tends to be better in countries where people get more to eat, live longer and have better sanitary facilities. The fact that high percentages of children are underweight even in some countries where prevalence of undernourishment is low or access to sanitary facilities is very high confirms that nutritional status is determined by a combination of many different factors. Improved understanding of the interplay among these factors requires more systematic data collection and more sophisticated analysis. Developing these tools represents a high priority challenge for FIVIMS.





Incidence of malnutrition in vulnerable areas

Most hungry and malnourished people around the world are likely to be found in vulnerable areas – locations where environmental, economic and other factors expose them to a high risk of impoverishment and food insecurity. But the specific factors that determine vulnerability vary from one location to another. In order to understand

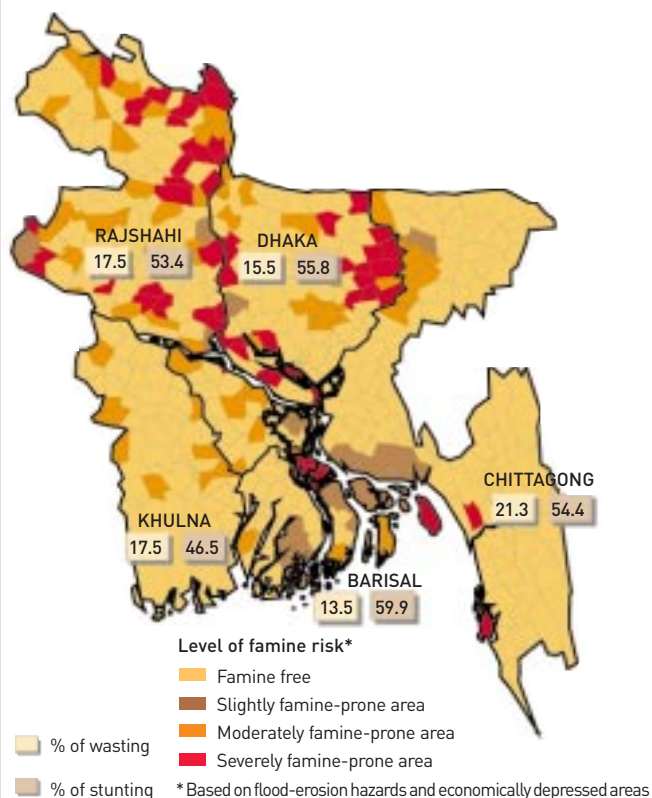
these differences and adopt suitable responses, vulnerable areas must be analysed at national and subnational levels. With advances in technology that make it possible to map information at the level of states, counties or districts, an increasing number of countries are undertaking this work. Results for four countries that have used different criteria to determine their

vulnerable areas are shown in the maps on these pages. The maps also present information about the incidence of severe stunting among children under five. The strong association between vulnerability and child malnutrition shows up very clearly, as do the differences between countries with different levels of undernourishment nationwide.

Bangladesh – food insecurity in an agrarian nation

Poverty and malnutrition remain endemic in Bangladesh, an overwhelmingly agrarian country where most rural households do not own land and few other opportunities to earn an income exist. At barely 2 000 calories per person per day, food availability falls short of meeting basic requirements. Some areas of the country still face the risk of famine.

Overall, the rate of undernourishment is very high (37 percent), as is the prevalence of underweight, stunting and wasting among children. Rates are high throughout the rural areas that are home to 80 percent of the Bangladeshi population. More than 60 percent of rural households are functionally landless and there is very little income diversification. The level of vulnerability is aggravated by floods during the annual monsoon season, cyclones and drought.



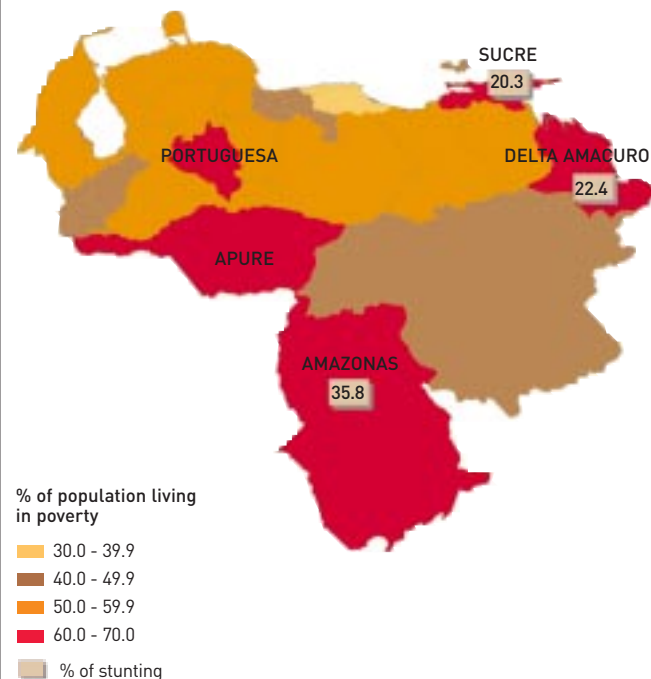
Source: BARC-GIS Project, BGD/95/006, Bangladesh Agricultural Research Council/UNDP/FAO, 1999

Venezuela – widespread poverty despite oil income

With substantial income from oil production, Venezuela is a highly urbanized country with enough food available to meet requirements. But poverty remains widespread, affecting almost half the population. And up to one-third of the children in some impoverished rural states show signs of repeated or prolonged periods of undernutrition.

On a national scale, a moderately low 15 percent of Venezuela's population are undernourished and rates of stunting, wasting and underweight among children are all low. As the map indicates, however, between 20 and 36 percent of children suffer from stunting in several states in the south and east of the country where around two-thirds of the population fall below the poverty line.

Rising unemployment and high inflation have exacerbated the nutritional problems of the rural poor and especially indigenous people. More in-depth analysis is needed to identify pockets of poverty and malnutrition in the cities where around 85 percent of Venezuela's population live.



Source: INN-SISVAN, 1996; MINFAMILIA, 1995

Nutritional status and vulnerability

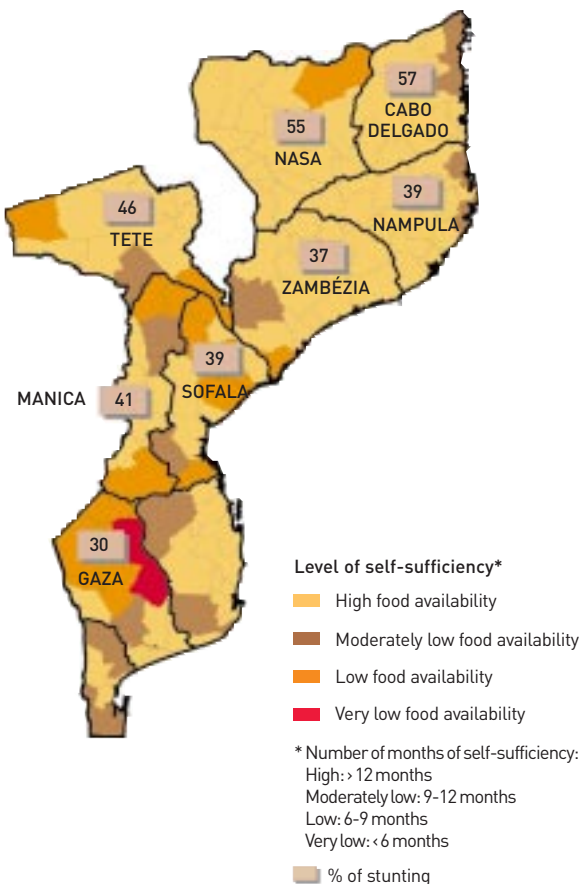
Incidence of malnutrition in vulnerable areas

Mozambique – signs of hope despite high malnutrition

Despite signs of recovery since the end of decades of war, Mozambique remains one of the world's poorest countries. Its endemic poverty is reflected in very high levels of undernourishment (63 percent of the population) and food availability that falls far below requirements at under 1 800 calories per person per day. Proportions of children who are stunted and underweight are also high.

Mozambique remains overwhelmingly rural and agricultural, with two-thirds of the population living in the countryside and three-quarters depending on agriculture for their livelihoods. Measures to decrease vulnerability have focused on rural areas and have been coupled with short-term assistance to displaced people and other vulnerable groups.

Although levels of stunting are above 30 percent in 8 of Mozambique's 10 provinces, the map reveals significant differences between the north and south of the country. Curiously, the northern region, where more food is available, shows the highest levels of stunting. At least in part, this reflects the lingering effects of the warfare that ravaged these regions in particular. In the semi-arid south, where self-sufficiency in food production is chronically low, coping mechanisms based on income diversification, animal production and remittances have contributed to lower levels of stunting.

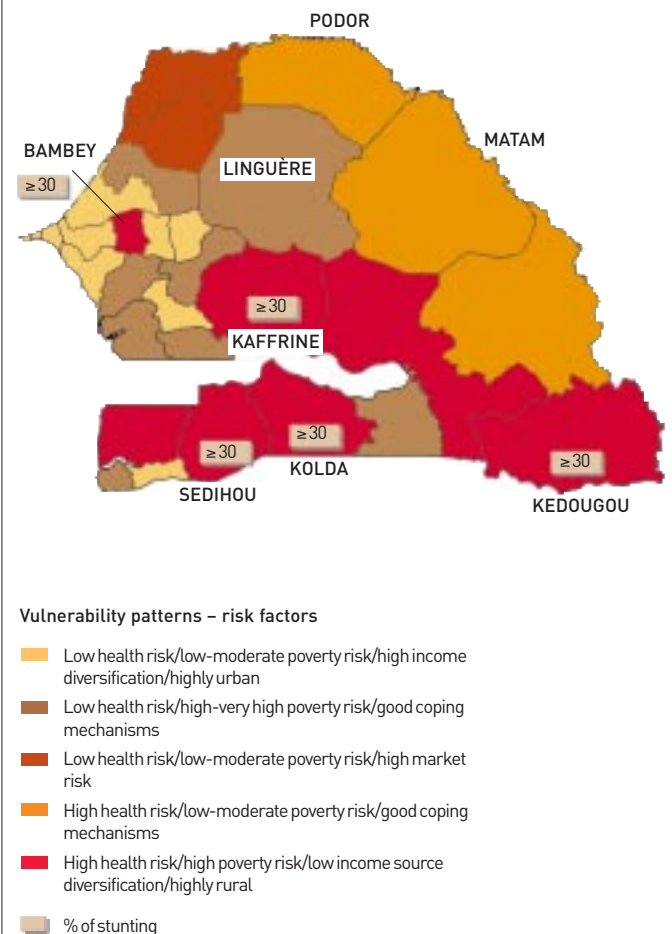


Source: WFP/VAM, 1997-98; IDS, 1997

Senegal – adequate food supply, but some areas at risk

Although Senegal is one of the most urbanized countries in Africa, three-quarters of the population still depend on agriculture for their livelihoods. For the nation as a whole, undernourishment is moderately low and food availability is adequate to meet requirements. But medium to high levels of underweight, stunting and wasting still prevail among children nationwide. In some rural areas characterized by poor health conditions, declining agricultural productivity, widespread poverty and low income diversification, one-third or more of all children under five suffer from stunting.

The highest prevalence of stunting is found in several highly rural and remote districts of the country. Two other rural districts – Podor and Matam in the northeast – exhibit significantly lower levels of stunting, despite being high risk areas for drought and health problems. Improved child nutrition is explained in part by the use of irrigated perimeters to cushion against drought, as well as remittances from family members living outside the district. Similarly, despite a high poverty rate, semi-nomadic herders in Linguère district achieve a relatively food secure situation through use of livestock products and millet production.



Source: UNICEF, 1996; WFP/VAM, 1996

Vulnerable people – who and why

Monitoring the number of undernourished people provides a way to gauge how much progress has been made and how much remains to be accomplished. It keeps attention focused on the target. But knowing the number is not enough to guide action. For that, more specific information is needed about the groups of people who are at high risk of food insecurity and the factors that create this risk.

Empirical vulnerability analysis has evolved substantially in the past decade. Much of the effort to date has focused on finding ways to identify specific geographic areas where vulnerable

and food-insecure people are most likely to be found. The maps displayed on the previous two pages are examples of results that can be obtained by using country-specific criteria to highlight zones requiring special attention.

But in the end it is the condition of people that counts. To find out who is vulnerable, and why, the FIVIMS secretariat has begun to compile a database on vulnerable groups, based on a thorough review of recent literature and results from intensive, interdisciplinary brainstorming sessions carried out by participating countries. A summary of results obtained as of mid-1999 is given below and on the following page.

Survey finds severe hunger in 800 000 US households

National and subnational surveys can gather useful details about who the undernourished and vulnerable are, where they live, and what factors are contributing to their condition. The United States of America was one of the first developed countries to conduct such a survey.

The United States Government attached a Food Security Supplement to the Current Population Survey that it carries out annually. The Supplement asked questions such as: "In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?" The results showed that 4.2 million American households suffered from some hunger for at least part of the year. Households suffering from severe hunger where children were involved or adults were more seriously affected numbered around 800 000.

Because the survey focused on households rather than individuals, it did not yield an estimate of the number of undernourished people in the United States. But it did help identify the following vulnerable groups:

- the homeless;
- poor children;
- some female-headed households, African-American and Hispanic households, and those living in central city areas;
- the working poor;
- some legal immigrants subject to eligibility restrictions on assistance;
- some single-person households, e.g. able-bodied adults without dependants who may lose eligibility for benefits;
- some elderly and HIV-infected individuals;
- some residents in rural areas and communities;
- American Indians, Alaska Natives and others who live in remote areas;
- migrant and seasonal farm workers.

Vulnerable groups identified through the FIVIMS process

Victims of conflict

- internally displaced people
- refugees
- landless returnees
- landmine disabled
- war invalids
- war widows and orphans

Migrant workers and their families

- migrant herders tending herds of others
- migrant labourers seeking seasonal work
- female-headed households left behind by migrant male labourers

Marginal populations in urban areas

- school dropouts
- unemployed
- rickshaw and motorcycle taxi drivers
- recently arrived migrants
- people living in slums in urban periphery
- dockworkers and porters
- construction workers
- workers in the informal sector
- homeless people
- orphans
- street children
- people living alone on small fixed incomes or without support (elderly, pensioners, widows and widowers, divorcees, invalids, handicapped people)
- beggars

People belonging to at-risk social groups

- indigenous people
- ethnic minorities
- illiterate households

Some or all members of low-income households within vulnerable livelihood systems

- subsistence or small-scale farmers
- female-headed farming households
- landless peasants
- agricultural labourers
- fishers
- nomadic pastoralists
- sedentary herders, small-scale livestock producers and agro-pastoralists
- forest dwellers
- peri-urban small-scale agricultural producers and market gardeners
- day or contract labourers

Dependent people living alone or in low-income households with large family size

- elderly
- women of childbearing age, especially pregnant and nursing mothers
- children under five years old, especially infants
- disabled and ill

Nutritional status and vulnerability

Profiles of vulnerability

Victims of conflict: Returnees in Guatemala

In a country just emerging from decades of civil conflict, refugees and internally displaced people are now returning to areas they had been forced to abandon. Some returnees received food and other assistance. But many received no support and found their houses destroyed and their land occupied. They had to start from scratch and were unable to obtain sufficient food to meet their minimum daily needs.

The regions they returned to are characterized by slash-and-burn agriculture on small parcels of land that are increasingly overexploited. Land tenure is a major issue and basic services are almost non-existent. Productivity is low and declining as the land becomes more and more degraded. Residents and returnees alike now belong to a highly vulnerable group.



Dependent people in large, low-income households: Urban poor in Auckland, New Zealand

Pacific Island immigrants, Maori and other poor people in New Zealand's largest city, Auckland, have been identified as one of the country's significant vulnerable groups. They rely mainly on the national welfare system for their basic livelihood, although many supplement this with income from the black market or other illegal sources. Many of them live in crowded conditions, with two or more extended families often occupying a single home. With little money available for food, they tend to consume unbalanced diets that are high in calories but lacking other essential nutrients. So their nutritional status is generally poor, even when the quantities of food consumed are adequate.

Migration from the islands has been spurred by degraded land, repeated flooding, lack of disaster insurance and efforts to eliminate cultivation of illegal crops. But recent changes in urban rental subsidies and a crackdown on the black market economy are making conditions even more difficult for those who flee to the city.



Marginal urban population groups: Pensioners in Baku, Azerbaijan

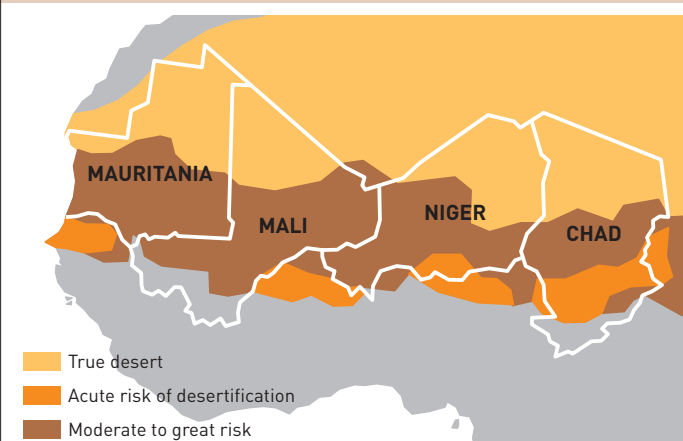
Pensioners and invalids in Azerbaijan's capital city, Baku, depend mainly on monthly stipends for survival. The purchasing power of already modest pensions has been shrinking steadily because of inflation, and payments are often delayed. Many able-bodied pensioners have taken on low-paying work or turned to begging to supplement their pensions.

With meagre incomes and high levels of health expenditure, this group is at high risk of undernourishment and malnutrition. For invalids with no relatives, isolation and lack of mobility may compound the risk. In addition, many elderly people suffer from a lack of interest in food that may further increase their vulnerability.





Poor households in vulnerable livelihood systems: Pastoralists in Sahelian zones



The environment in the arid Sahel region of West Africa has always been harsh. As populations grow, pastoral people who have traditionally managed to eke out a living with their herds are finding it increasingly difficult to obtain an adequate supply of food. Their vulnerability is partly the result of environmental factors, including insufficient or erratic rainfall, lack of water points and encroachment of the desert, and partly of human factors, such as environmental degradation, declining quality of pastures and lawlessness.

The combination of population pressure and environmental constraints leaves little to cushion people against hunger when severe drought or flooding hits or when food reserves are depleted by consecutive seasons of bad harvests. Although often seen as a sign of vulnerability, rural exodus may also represent the most important coping strategy available to people living in this highly stressed part of the world.

Migrant workers and their families: Seasonal migrants in Benin



Households headed by women because the men migrate seasonally in search of work constitute an important vulnerable group throughout much of Africa. In Benin, many northern men migrate south during the cropping season to work as agricultural labourers. The women who remain behind produce food around the home and engage in petty trading, raise small livestock and produce local beer. The land they farm is often degraded, and they lack the knowledge and technologies to reclaim it.

Although they act as heads of households while the men are absent, the women generally have limited decision-making authority. In addition, household resources are often diverted from food to other uses. Priority is often given to making beer from sorghum and money brought back by migrant husbands is often spent on prestige purchases. This can result in some family members not getting enough to eat.

At-risk social groups: Isolated minorities in Viet Nam



Minorities living in remote mountainous regions of Viet Nam are considered particularly vulnerable. They are geographically isolated and live in areas where productivity is limited by erosion, environmental degradation, and forest fires and other natural disasters.

Because of their isolation, these mountain people are also cut off from knowledge of more advanced technologies and end up working with very limited tools and techniques. Not surprisingly, they have difficulty producing adequate food to meet their needs and frequently must depend on government support programmes. Their high birth rate is also putting increasing pressure on their limited resources and fragile environment.

Nutritional status and vulnerability

Environmental potential and constraints

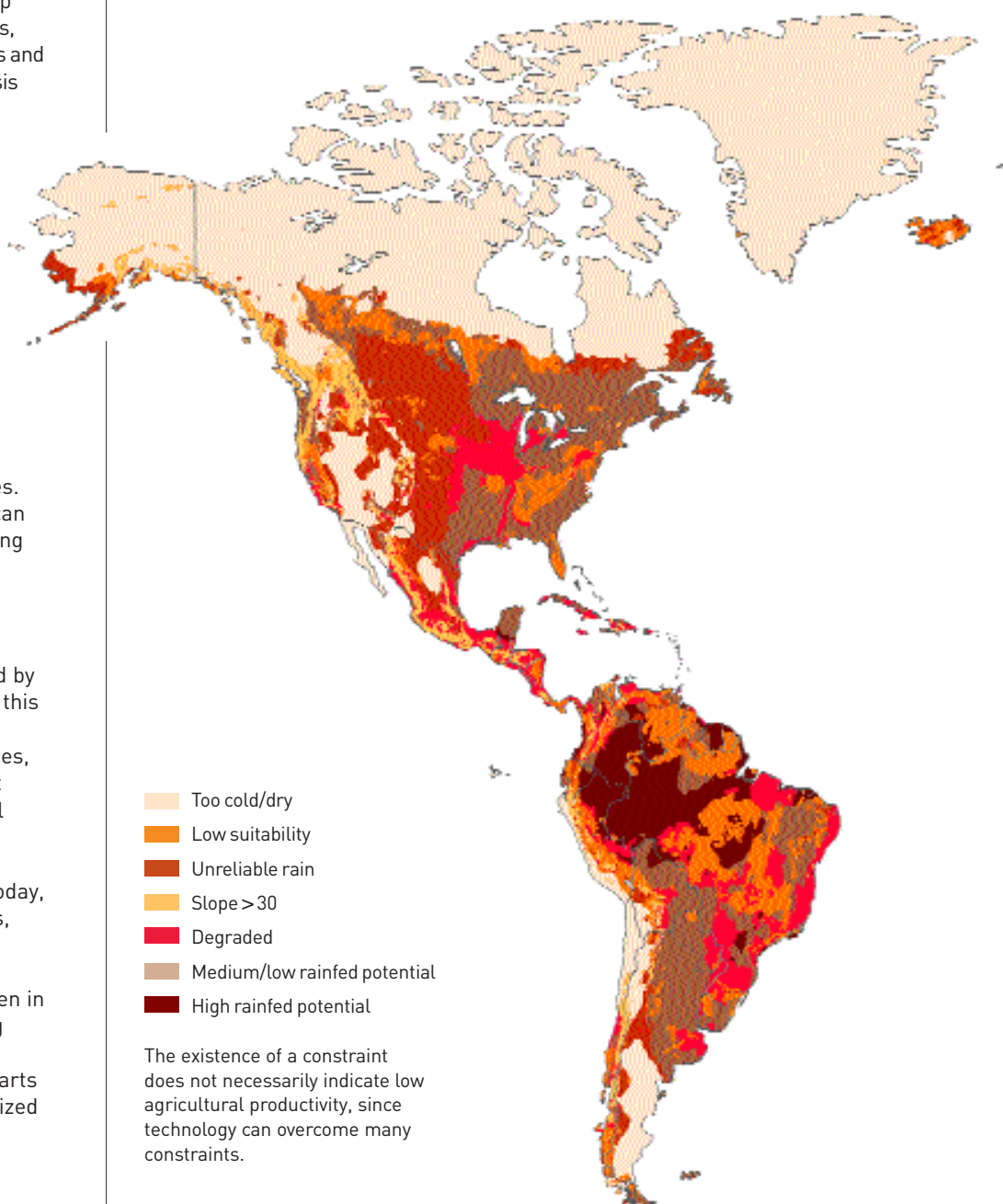
Many environmental factors – some natural, some the consequence of human activities – can limit agricultural potential and create vulnerability. Those shown on the map include extremely dry or cold climates, poor soil, erratic rainfall, steep slopes and severe land degradation. A full analysis would also need to incorporate other human factors such as pollution and landmines.

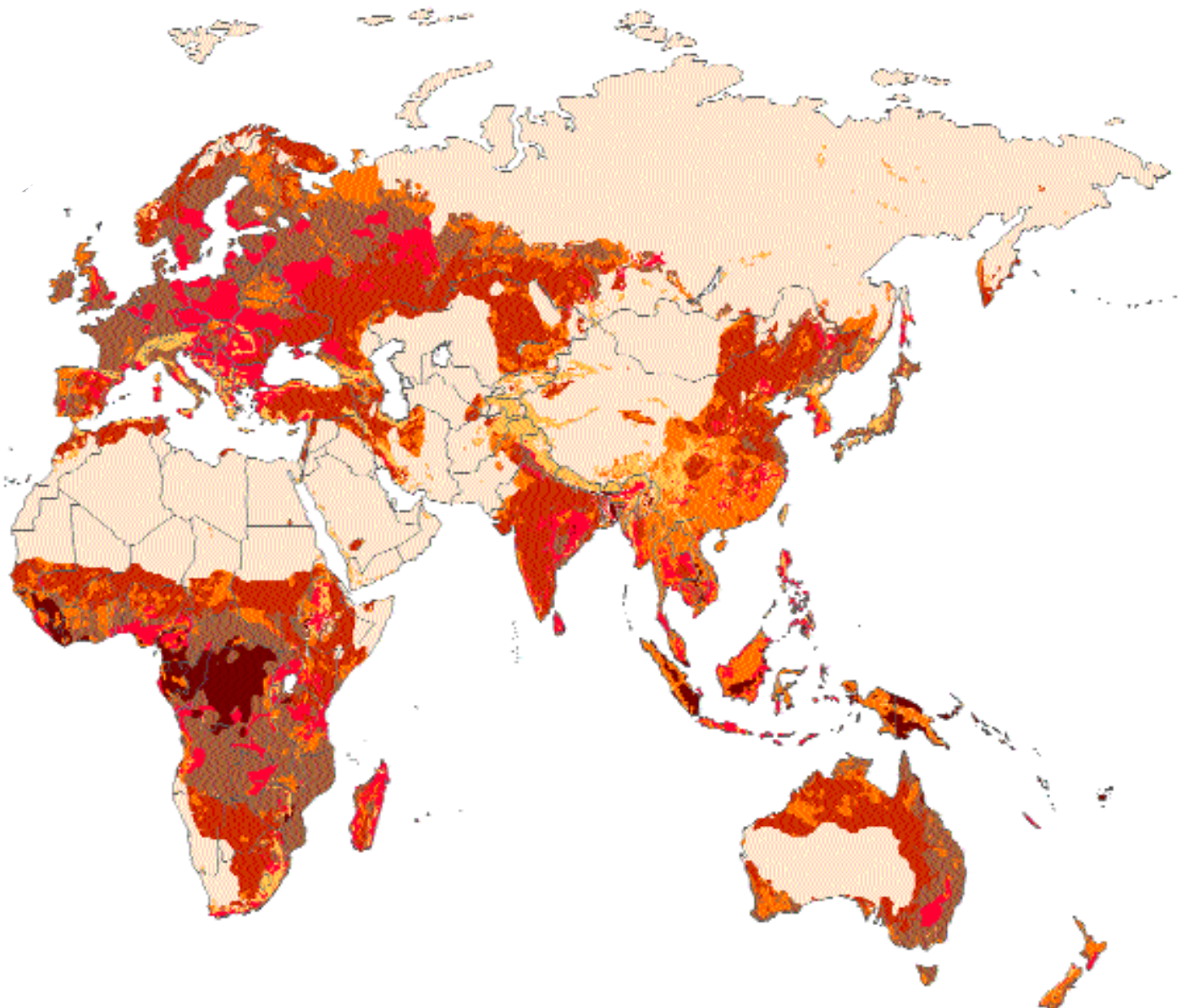
Interestingly, zones where rainfall is erratic typically have good agricultural potential. This is because the highest variability in rainfall occurs in high rainfall areas, which are often conducive to agriculture. In fact, worldwide, many of the most fertile soils and favourable climates are located in areas subject to environmental extremes, such as tropical cyclones. In such areas, storms and floods can wash away a season's harvest, along with the fertile topsoil, unless precautions are taken.

People have naturally tended to concentrate in the areas with high production potential, characterized by beneficial climate and soils. Often this concentration of people has led to overexploitation of natural resources, which, combined with the inherent rainfall variability of high-potential areas, has resulted in land degradation. Indeed, many areas where land is severely degraded today, such as the East African highlands, were once highly suitable for agricultural activity.

So environmental risks exist even in areas shown on the map as having medium or high potential for agricultural production. In many parts of the world, most often industrialized countries, these risks are being successfully managed through investment and use of appropriate technologies. Where this is not the case, people's livelihoods may be adversely affected, leading to vulnerability and food insecurity.

Major environmental constraints and opportunities for agricultural production





Dynamics of change

Factors that bring about change

Analysis of progress in reducing hunger rarely reveals startling changes from one year to the next. Occasionally a major shock of nature or history – such as a cyclone, economic slump or war – may trigger a food security crisis (see pages 25-27). But the impact of such events tends to be transitory, reflected in a sharp spike in the numbers that does not alter the long-term trajectory. Reaching the World Food Summit target will require successful efforts to change the long-term trends and to understand the many factors that determine them.

Conditions vary considerably from one place to another and so do the combinations of factors that leave particular population groups vulnerable to poverty and hunger. Usually many different demographic, environmental, economic, social and political elements are involved. In the follow-

up to the World Food Summit, considerable effort has gone into developing effective methods and indicators to monitor these factors. Some preliminary results of this effort are presented in this section by focusing on eight countries that have registered particularly significant changes in prevalence of undernourishment since 1980.

The data in the tables below and the case studies on the next four pages highlight two countries in each of the four regions in the developing world – the country where the prevalence of hunger has been reduced most rapidly and the one that has suffered the worst setbacks. Graphs accompanying each country profile compare the average daily food supply in 1980 with that in 1996 and show how much of what people ate each year came from domestic production, trade and drawdowns from food stocks.

The tables below present several other

indicators that provide insight into the conditions and trends that affect food security in each of the eight countries. Annual population growth rates and the degree of urbanization show demographic trends. Amount of degraded land indicates the environmental condition of an important productive resource, while cropped area and growth in yields show what people have done with this resource. The food production index and the growth in GDP indicate how the economy has performed and give a first indication of the ease or difficulty that people are likely to face in obtaining access to the food they need. Within a country, access to markets is strongly affected by access to paved roads. Share of the main food group in the diet is an indicator of dietary diversity and nutritional well-being, while access to safe water and the rate of illiteracy suggest the extent to which basic needs are being met.

Key indicators in countries with the largest decreases in proportion of undernourished in each region, 1980-1996

	CAMBODIA	HONDURAS	MOROCCO	GHANA
Population growth, 1980-1996 (% per annum)	3	3.1	1.9	3.3
Urban population, 1996 (%)	21	44	53	36
Cropped area, 1980 / 1996 (% of total area)	11.4 / 21.0	15.7 / 18.2	17.7 / 21.5	15.2 / 19.1
Severely degraded land, 1990/92 (% of total area)	49.8	89.1	61.1	8.5
Cereal yields, change per hectare, 1980-1997 (% per annum)	2.4	0.8	0.6	4.3
Principal staple food yields, change per hectare, 1980-1997 (%)	(rice) 64	(maize) 25	(wheat) 25	(cassava) 39
Food production index 1980 (1989/91 average = 100)	58	90.5	59.4	74.3
Food production index 1996 (1989/91 average = 100)	128.7	115.8	114	149.8
GDP increase, 1980-1996 (% per annum)	5.99	2.67	3.91	2.27
Major food group as % of diet, 1995/97	78	48	62	48
Paved roads, 1994/96 (% of total)	7.5	20.3	50.7	24.5
Access to safe water, 1990/96 (% of population)	13	87	52	65
Illiteracy rate, 1996 (% of population)	...	30	56	36

Key indicators in countries with the largest increases in proportion of undernourished in each region, 1980-1996

	KOREA, DPR	CUBA	AFGHANISTAN	BURUNDI
Population growth, 1980-1996 (% per annum)	1.6	0.8	1.7	2.7
Urban population, 1996 (%)	62	76	20	8
Cropped area, 1980 / 1996 (% of total area)	15.8 / 16.6	30.0 / 40.1	12.3 / 12.4	42.4 / 39.5
Severely degraded land, 1990/92 (% of total area)	17.2	48.3	12.5	80.1
Cereal yields, change per hectare, 1980-1997 (% per annum)	-2.2	-2.6	0	1.5
Principal staple food yields, change per hectare, 1980-1997 (%)	(maize) -56	(rice) -19	(wheat) 4	(cassava) -7
Food production index 1980 (1989/91 average = 100)	68.7	84.9	127.3	79.3
Food production index 1996 (1989/91 average = 100)	59.1	61.7	109.3	98.4
GDP increase, 1980-1996 (% per annum)	...	...	...	1.63
Major food group as % of diet, 1995/97	62	38	81	30
Paved roads, 1994/96 (% of total)	6.4	53.6	13.3	7.1
Access to safe water, 1990/96 (% of population)	13	95	15	52
Illiteracy rate, 1996 (% of population)	63	4	69	58



Economic growth spurs improvements in food security status for most Asian nations

A period of rapid economic growth has resulted in major gains in food security across most of Asia and the Pacific. Cambodia, where the proportion of undernourished dropped from 62 to 33 percent between 1980 and

1996, led the way. Many other countries in the region also showed strong reductions, including China, India, Indonesia, Myanmar, Nepal, Pakistan and Viet Nam. Undernourishment increased in only two countries – Mongolia and the

Democratic People's Republic of Korea. In the latter, it rose from 16 to 48 percent. The financial crisis may have blunted progress in some countries (see page 27) but the overall trend remains positive.

Cambodia – reaping the dividends of peace

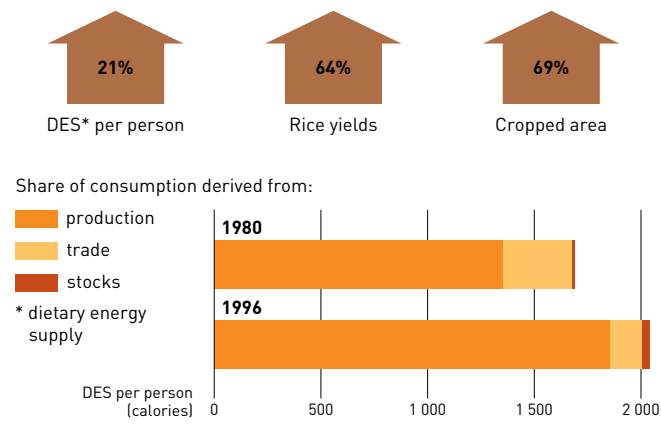
More land is being farmed, more food is being produced and many fewer people are going hungry in Cambodia, as the country rebounds from decades of conflict. Between 1980 and 1996, farmers almost doubled the area on which they were growing crops. Yields of rice, Cambodia's main staple food, shot up by 64 percent. Pork, beef and poultry production expanded rapidly. Because of the gains in food production, Cambodians are eating substantially better, even though the population has continued to grow rapidly and food imports have declined.

Despite this recent progress, however, Cambodia remains a very poor country, and many of its people still suffer from food insecurity. Even after a 21 percent jump since 1980, Cambodians' average food intake in 1996 is scarcely enough to meet the minimum daily requirement. More than one-third of all households fall below the poverty line. The country's poverty is reflected in the lack of diversity in people's diets. Almost 80 percent of the average daily calorie intake comes from rice.

Decades of war and civil strife left traditional irrigation systems in ruins. Many fields had been abandoned to landmines. The peace settlement in 1979 opened the door for recovery; an economic reform programme introduced in 1992 brought inflation under control. Farmers responded by increasing the area cultivated, expanding rice production and diversifying into crops and animal products for export.

Programmes to remove landmines and rehabilitate irrigation systems are continuing. A programme has also been put in place to reduce poverty by creating jobs for vulnerable groups.

Key indicators, 1980-1996



DPR Korea – a bitter harvest

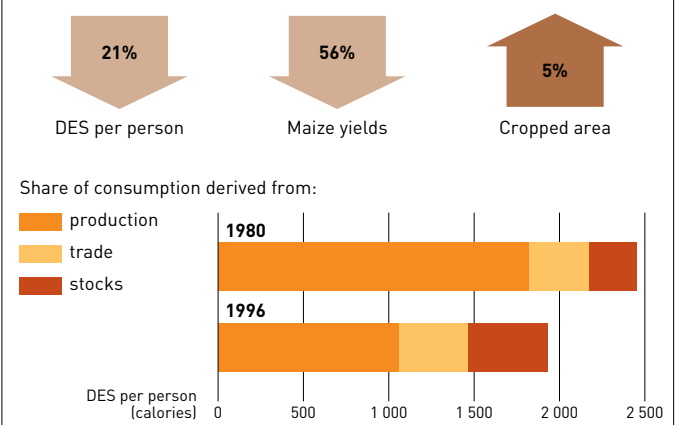
The Democratic People's Republic of Korea has been hit hard during the 1990s by floods, drought and the collapse of its special trading relationships with China and the former USSR. The impact has been devastating both to food production and to the nutritional status of the population. Total cereal production plummeted to less than half its 1980 level, while the proportion of undernourished people soared to almost half the population.

Rapid economic deterioration left the country without either the cash or creditworthiness to finance needed food imports. Massive food aid was provided, but logistical problems made it difficult to reach all people in need. The crisis strained the national Public Distribution System to the breaking point. The System sells fixed rations of rice and maize to city residents and to people who work on state-run farms and enterprises in the countryside. As crops failed and imports dwindled, reserve stocks held by the System proved far from sufficient to fill the gap. Rations were cut drastically and many people reduced consumption significantly.

The country's collapse came on the heels of a period of rapid economic growth. With limited arable land and a short growing season, gains in food production had been achieved through high-input agriculture. When the country was suddenly cut off from access to spare parts, fertilizers, pesticides and pumped water, yields started to fall sharply. Then, starting in 1995, two years of heavy storms and flooding, followed by a severe drought, devastated large tracts of agricultural land.

The country is now trying to revive agricultural production by introducing improved seed varieties and double-cropping methods, rehabilitating irrigation systems, and improving soil fertility.

Key indicators, 1980-1996



Dynamics of change

Mixed picture of progress and setback characterizes Latin America and the Caribbean

Both the levels and the trends of undernourishment vary considerably in Latin America and the Caribbean. In most South American countries, levels are already low or rapidly declining. In Central America,

on the other hand, levels are increasing in several countries, although Honduras did register the strongest gains in the region by bringing its prevalence of undernourishment down from 31 percent to 21 percent. In the Caribbean, Cuba's

setback, with the share undernourished rising from 3 to 19 percent, was in many ways typical of several of its island neighbours, which have experienced increases in undernourishment since 1980.

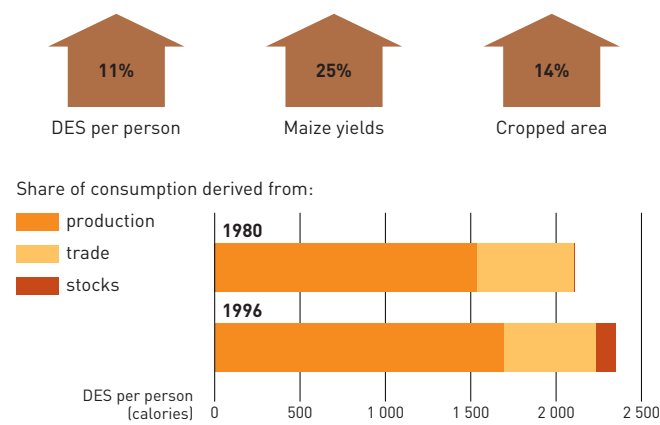
Honduras – economic growth helps reduce hunger

Steady economic growth, coupled with an effective aid programme for its poorest citizens, has helped Honduras reduce by almost one-third the proportion of its population suffering from undernourishment. Increases in food production, imports and stock drawdowns all contributed to putting more food on Honduran tables. Maize production nearly doubled between 1980 and 1996. Much of the increase was consumed not by people but as feed for the booming cattle industry. Maize consumption by people actually declined slightly. Vegetable oils and sugar accounted for most of the increase in food intake, with consumption of meat and beans also increasing somewhat.

Since Honduras adopted a far-reaching structural adjustment programme in 1988, the country's economy has been growing at an annual rate of 2.7 percent. The increased prosperity has helped bring safe water to 87 percent of the population and raise the literacy rate to 70 percent. Direct aid to the poor is provided through the Honduran Social Investment Fund, which has reached many of the most deprived. A ration programme supplies coupons to help schoolchildren, mothers and elderly people buy food and other necessities.

Despite its recent gains, Honduras faces difficult challenges. Economic growth has not eliminated wide disparities in wealth and income. Poverty and food insecurity remain relatively widespread. About half of the Honduran population is rural. And in the countryside, nearly 40 percent live in extreme poverty, with many working as agricultural labourers on large estates. Commercial agriculture offers good possibilities for growth, but the challenge of achieving a more equitable distribution of the benefits remains.

Key indicators, 1980-1996



Cuba – loss of trading partner erodes food security

Cuba has seen its economy shrink and levels of undernourishment rise since losing its most important trading partner with the break-up of the former USSR. With much of its agriculture geared to producing commodities for export (primarily sugar and tobacco), Cuba had succeeded in reducing undernourishment to very low levels while relying on trade for more than half of its food.

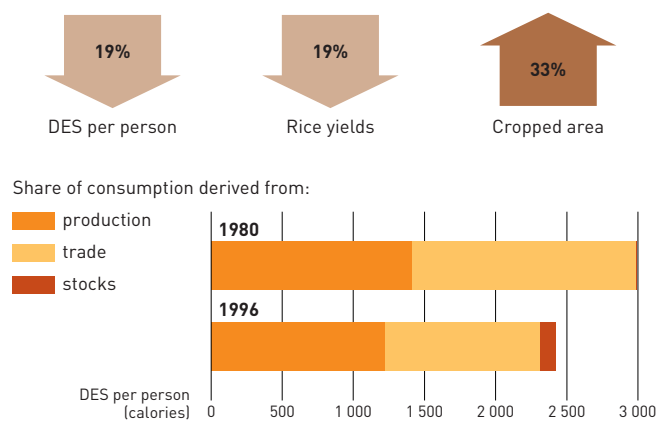
With the end of Cuba's special trading relationship with the USSR, daily food intake dropped by more than 500 calories per person, mainly because of a steep decline in food imports. Yields for major food crops also dropped because of a lack of imported fertilizer, but Cuba managed to produce nearly comparable quantities by growing food on more land.

The economic decline has increased the number of people relying on subsidies while reducing productivity and food intake for many workers and their families. Continued restrictions on trade with the United States of America add to the country's economic difficulties.

Despite its recent problems, Cuba remains relatively prosperous and well-fed compared to other countries in the Caribbean and Central America. More than half the country's roads are paved and 95 percent of the population have access to safe water.

Since 1993, the Cuban Government has given priority to increasing food production and restructuring industry. Signs have begun to emerge that the new economic model is taking hold and labour markets are recovering. But the transition process is far from complete.

Key indicators, 1980-1996





War-ravaged Afghanistan loses ground while Morocco leads good performers

Most countries in the Near East and North Africa have already achieved very low levels of undernourishment. Indeed the region accounts for 10 of the 14 developing countries where

undernourishment affects less than 5 percent of the population. Morocco's decline, from 10 to 5 percent, represented the best progress among this group of good performers. Significant increases occurred only in Afghanistan, where

the proportion of people who are undernourished shot up from 33 percent in 1980 to 62 percent in 1996, and in Iraq, where the share rose from 4 to 15 percent over the same period.

Morocco – thriving economy boosts food security

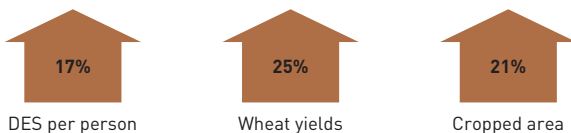
With substantial mineral wealth and an established position as a centre for trade and commerce, Morocco has enjoyed steady economic growth that has reduced undernourishment to very low levels. Between 1980 and 1996 daily food intake increased from 2 723 to 3 186 calories, reaching levels comparable with some industrialized countries. The gains came almost equally from increases in food production and in trade. Production of cereals and potatoes more than doubled, spurred by substantial increases in both crop yields and the area under cultivation. Much of the increased production was used for feed, while imports grew to meet rising demand for food.

With the economy growing at almost 4 percent per year, Morocco has become increasingly urban. Improvements in transportation, sanitation and education have been particularly marked in the cities.

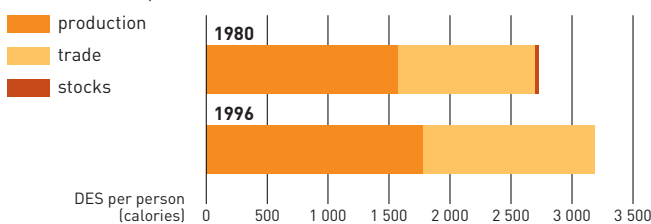
However, almost half the population remains in rural areas, where poverty and vulnerability persist, particularly among traditional small-scale farmers and herders. Barely half the population has access to safe water and 56 percent remain illiterate. Environmental problems also loom. Water for agriculture and grazing lands is scarce and 61 percent of the land is severely degraded.

To eradicate remaining pockets of hunger, action will need to be taken to introduce more sustainable agricultural practices and to generate jobs and income in urban areas.

Key indicators, 1980-1996



Share of consumption derived from:



Afghanistan – war leaves little ground for crops

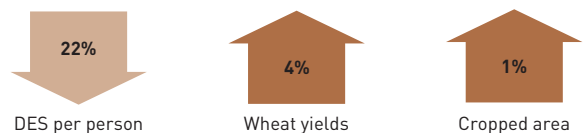
Food production and food security have both fallen victim to decades of warfare in Afghanistan. Production of cereals fell slightly while returning refugees helped swell the population by 25 percent between 1980 and 1996. As a result, average daily food intake fell from 2 186 calories to 1 710 calories, significantly below minimum requirements. Two-thirds of the country's provinces are now food-deficit areas; but the war-torn economy cannot generate imports to fill the gap.

Afghanistan's problems are unusual in a region where levels of undernourishment are generally low. But they are typical of many war-torn countries facing complex humanitarian emergencies. More than 40 percent of the country's arable land is riddled with landmines and cannot be farmed. Thousands of people who used to make their living from farming have migrated to towns and cities, joining the ranks of a new, impoverished urban underclass. Only 15 percent of the population have access to safe water and some 70 percent are illiterate. Intermittent fighting and restrictions on movement continue to disrupt efforts to rebuild the country.

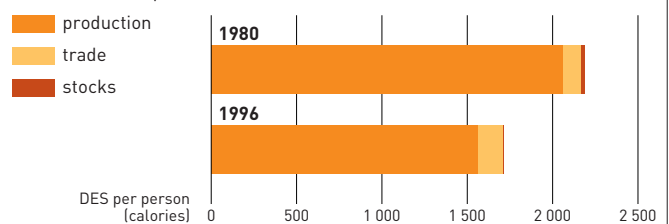
One in every 50 Afghans has been a landmine casualty. Every day, mine blasts kill or maim another 10 people, a third of them women and children. Many who have been disabled by war injuries or mines are no longer able to work. Their dependent status puts additional pressures on other family members who must feed and care for them.

Large volumes of food aid remain far from sufficient to satisfy the minimum needs of such a large number of undernourished. Until peace is restored, there can be little hope of any lasting solutions.

Key indicators, 1980-1996



Share of consumption derived from:



Dynamics of change

Several West African nations register gains but problems grow worse elsewhere in Africa

With Ghana leading the way, eight countries in West Africa reduced hunger significantly between 1980 and 1996. Indeed the five countries worldwide that scored the biggest gains were all from this subregion.

The picture was very different in Central, East and Southern Africa, however. There, the proportions and numbers of undernourished people generally increased. Burundi suffered the largest increase, with the proportion of

undernourished people rising from 38 percent to 63 percent between 1980 and 1996. But 13 other countries in Central, East and Southern Africa also showed large increases.

Ghana – economic growth fuels rapid gains

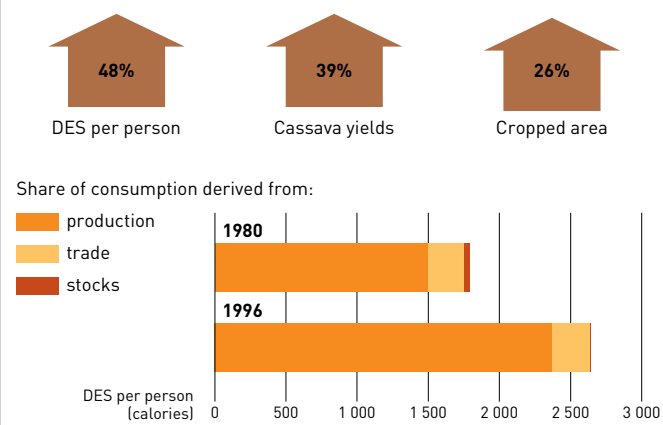
Buoyed by a strong economy and dramatic increases in the yields of staple food crops, Ghana reduced undernourishment more rapidly than any other country in the world between 1980 and 1996. Average food intake soared from 1 790 calories per day to more than 2 600 calories. The gains came entirely from increased food production, with imports remaining virtually unchanged. The introduction of improved varieties of cassava helped boost yields of this main staple by almost 40 percent. Yields of yams, maize and rice also improved dramatically, and the vigorous economy encouraged farmers to increase the area under crops by more than 25 percent.

Overall, the economy grew at an annual rate of 2.3 percent. The increased prosperity brought marked improvements in sanitation, health and education. The proportion of the population with access to safe water increased from 35 to 65 percent. Illiteracy was reduced substantially, from 57 to 36 percent.

Ghana's period of rapid growth was sparked by reforms to invigorate the economy after a long period of decline. A special Programme to Mitigate the Social Costs of Adjustment and other social programmes helped protect vulnerable groups from possible negative effects of the reforms.

Despite Ghana's remarkable progress, almost one-third of the population remains poor, and 10 percent live in pockets of extreme poverty in rural areas. These high levels of poverty mean that food insecurity and vulnerability persist. Continued economic growth and increased opportunities for off-farm employment will be crucial to maintain the rate of progress.

Key indicators, 1980-1996



Burundi – population growth and conflict

Undernourishment has increased sharply and food production has fallen as Burundi struggles to cope with rapid population growth, severe land degradation and simmering civil conflict. Average daily food intake tumbled between 1980 and 1996 from 2 020 calories to 1 669 calories, far below minimum requirements. Production of cassava, sweet potatoes and beans, the mainstays of the Burundian diet, also declined.

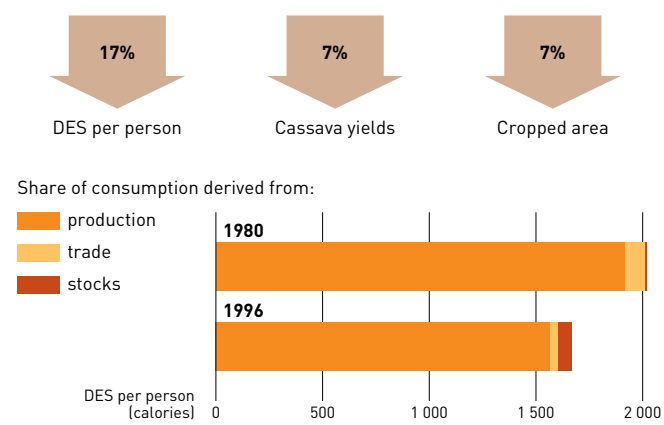
With an annual growth rate of 2.7 percent, Burundi's population has been expanding far faster than its economy, resulting in a negative growth rate per person. Burundi's weak economy and geographic isolation have left the country overwhelmingly rural (with more than 90 percent of the people living in the countryside) and almost completely dependent on domestic food production.

The rapid pace of population growth has strained the country's limited land resources to the breaking point. More than 80 percent of Burundi's fragile, mountainous land is severely degraded. Both the area being cultivated and crop yields have been falling.

Burundi's production problems have been compounded by poorly developed transport and marketing facilities. In addition, civil conflict has disrupted production and further restricted trade opportunities.

Burundi's physical isolation constitutes a major barrier to trade and has obstructed growth of non-agricultural sectors. But the spiral of population growth, environmental degradation and falling agricultural productivity dictates that solutions to Burundi's food security problems must be found outside agriculture.

Key indicators, 1980-1996





Recent shocks: floods, drought, war and financial collapse threaten progress

The most recent global estimates for the number of hungry people in the world are based on data through the end of 1997. Since then, a series of environmental, economic and political shocks have disrupted agricultural production, driven millions of people from their homes and fields and swelled the ranks of the poor in places as farflung as Honduras, Indonesia and Kosovo.

FLOODS AND DROUGHT TAKE TOLL ON LIVES AND CROPS

In 1998, weather patterns associated with El Niño parched crops in some regions, drowned them in others, and hammered Central America with the devastating winds and rain of Hurricane Mitch.

More than 9 000 people died and nearly 3 million were left homeless when Mitch cut across Central America between 26 October and 1 November. Floodwaters and mudslides swept away buildings and roads. Fields of maize, beans and sorghum were laid waste. Honduras and Nicaragua were hardest hit, with Honduras losing more than half its staple maize crop. Losses in coffee and other export crops added up to an estimated US\$ 480 million. The region faced both an immediate humanitarian

crisis and a long-term threat to food security.

The international response was swift and effective. The UN Office for the Coordination of Humanitarian Affairs (OCHA) sought US\$ 150 million for relief and rehabilitation. The World Food Programme (WFP) responded immediately with food aid. FAO organized the distribution of seeds, fertilizers and hand tools to help farmers in the hardest-hit rural communities feed their families as soon as possible.

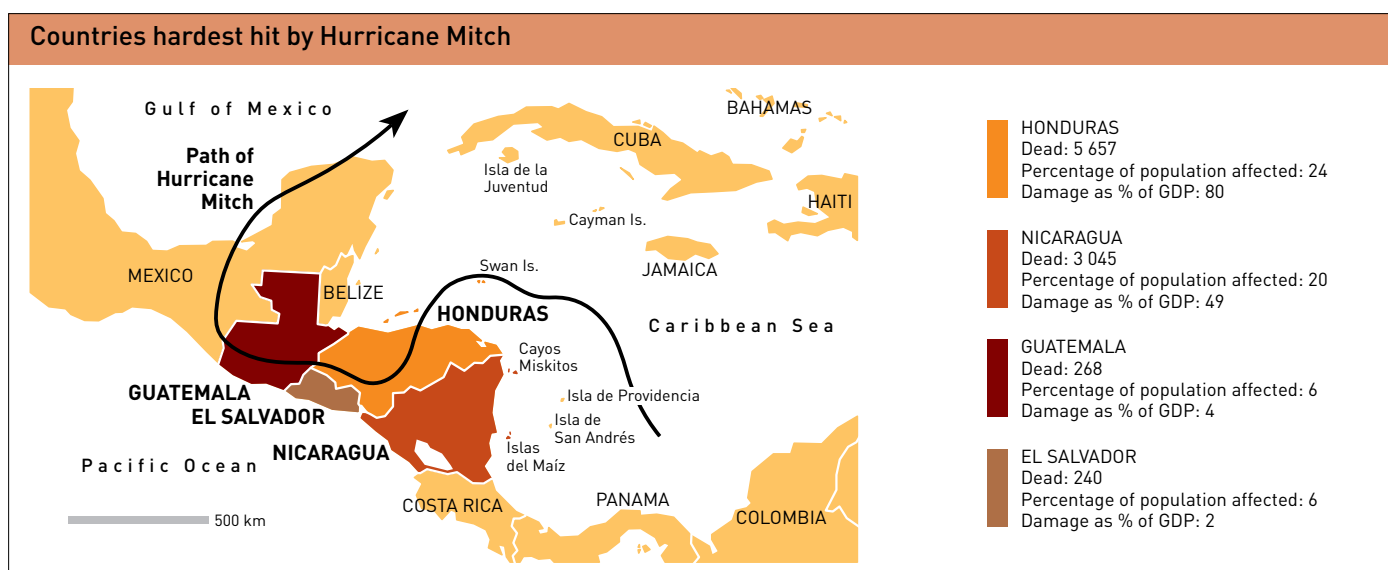
Work has now begun on rebuilding the agricultural sector. Improved farming practices are being introduced that will reduce environmental degradation and vulnerability to future disasters. Hurricane Mitch could not have been avoided. But manmade factors greatly increased its destructive impact. The most deadly mudslides swept down slopes denuded by deforestation and cultivation of marginal lands. Flooding was aggravated by poor watershed management. The most affected countries are attempting to address structural problems that contributed to the disaster by examining land tenure practices, supporting reforestation projects and providing training in watershed management.

International financial institutions have made commitments to provide up to US\$ 5 300 million over the next four years. While more deeply rooted economic problems are likely to persist, the recovery programme should prevent increases in food insecurity and vulnerability throughout the region.

Even as hope takes root in Central America, however, severe flooding in several countries of East and Southeast Asia and a withering drought in the Near East have threatened to set back recent progress toward the World Food Summit goals.

For the Near East region as a whole, production of cereals in 1999 is expected to fall 16 percent below the previous harvest. But the losses from the worst drought in decades will be far greater in Iran, Iraq, Jordan and Syria.

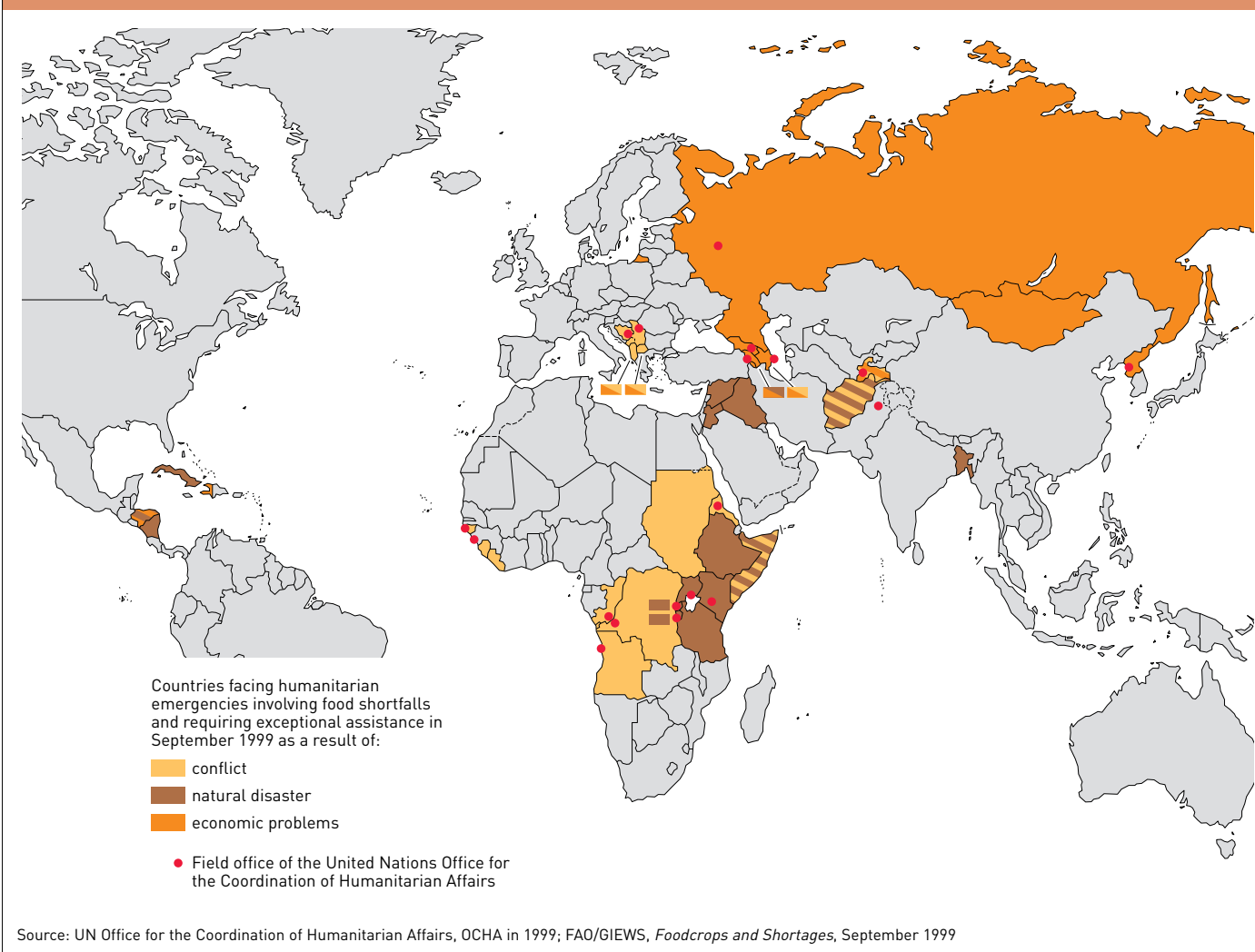
Several thousand farmers, small-scale herders and landless rural households who have lost their means of livelihood will require assistance to tide them over until next year. As in Central America, however, there is currently no evidence to suggest that these setbacks will be more than transitory in either Asia or the Near East.



Dynamics of change

Recent shocks: floods, drought, war and financial collapse threaten progress

Locations facing humanitarian emergencies, 1999



United Nations consolidated inter-agency humanitarian assistance appeals, 1998-1999

Region	AS OF JULY 1998			AS OF JULY 1999		
	Appeals US\$ (millions)	Pledges US\$ (millions)	Needs covered (%)	Appeals US\$ (millions)	Pledges US\$ (millions)	Needs covered (%)
Africa, Asia, Middle East*	1 560	506	32	1 298	348	27
Southeastern Europe**	516	271	53	1 098	372	34
Total	2 076	777	37	2 396	720	30

* Including newly independent states ** Including only Former Yugoslavia in 1998

Source: OCHA

WAR AND COMPLEX EMERGENCIES STRAIN AID RESOURCES

From Angola in Southwestern Africa to Kosovo in Southeastern Europe, many parts of the world ravaged by war and civil strife face complex emergencies requiring many types of humanitarian assistance. (The map above shows these countries, plus others requiring exceptional food assistance.) The long-simmering conflict that boiled over in Kosovo in the spring of 1999 attracted the most international attention and involvement. This conflict created enormous human suffering and



laid waste much of the province's productive infrastructure. But the outpouring of humanitarian aid has been more than sufficient to stave off hunger for at least a year. Whether levels of undernourishment will increase after the aid is withdrawn will depend on the success of rehabilitation and recovery programmes currently being designed and put into operation.

The situation in Angola is much more troubling. There, renewed fighting has driven nearly 2 million people from their homes. Many have fled from the countryside into besieged cities and towns where they must depend on airlifts of food aid for survival. As of mid-year, food distributions were able to meet only 60 percent of the needs and FAO experts warned of a catastrophe, with the threat of mass starvation among displaced people.

Not counting Southeastern Europe, 14 countries and one sub-region faced complex humanitarian emergencies in 1999. The total requested under OCHA appeals for such emergencies increased by 20 percent over 1998. But the total amount of humanitarian aid pledged as of July 1999 has declined slightly and a far higher percentage is going to Southeastern Europe. Inevitably, that means less is available to meet essential human needs elsewhere. Afghanistan, Angola, Guinea-Bissau, Sierra Leone, Somalia, Sudan and Uganda are all countries where substantially lower percentages of total needs have been covered this year than in 1998. In these countries, the spread of undernourishment is inevitable.

FINANCIAL CRISIS UNDERMINES ASIAN PROGRESS

When several Asian banking systems collapsed in 1997 there were fears that poverty and food insecurity would soar in Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand and that their "tiger economies" would take years to recover. These countries had achieved impressive economic success and succeeded in reducing poverty substantially over two decades. When

financial systems collapsed throughout the region, many of these gains were reversed. Businesses closed and large numbers of office and shop workers lost their jobs.

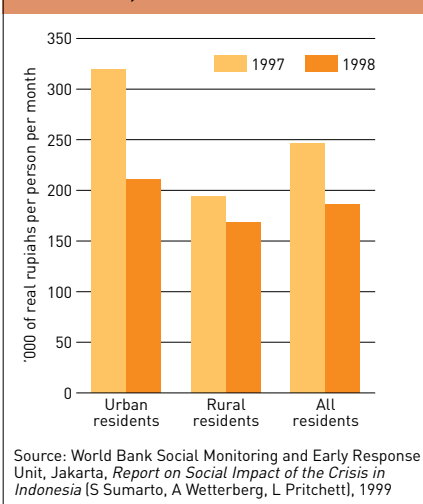
The shock waves proved less destructive than first feared, however. By the beginning of 1998, after dramatic falls in their exchange rates and purchasing power, most of the affected countries started to show signs of at least partial recovery. Although poverty and hunger undoubtedly increased somewhat throughout the region, for most countries the crisis was short-lived.

Indonesia has been the exception. In just one year, the fourth most populous country in the world saw its currency fall to one-fifth its previous value. The inflation rate soared to 50 percent and food prices rocketed. At the same time, the worst drought in 50 years was followed by excessive rains during the dry season. Bad weather and reduced use of imported fertilizers and pesticides caused a slump in local rice production. Imports increased, but not enough to make up the shortfall.

Job losses and inflation hit urban residents particularly hard. A household survey conducted by the World Bank and the Ford Foundation found that urban households spent 34 percent less per person in 1998 than they had in 1997. In rural households, expenditures declined by only 13 percent. In many cases, families that had been poor before the crisis actually benefited from increased business in the informal sector. But the newly unemployed had to sell off assets and deplete their savings in order to cope. As the crisis deepened, many hard-hit families turned to relatives in the countryside for help, particularly in Java. This increased the pressure on those who still had jobs and assets, but now had to feed a growing number of dependants.

The impact of the economic collapse on nutritional status showed up quickly. Most households continued to consume normal quantities of rice, but

Changes in household spending in Indonesia, 1997-1998



cut back on more expensive foods, such as meat, fish and eggs. Reduced consumption of foods rich in protein and micronutrients led to sharp increases in the numbers of wasted children and anaemic mothers.

Current estimates suggest that the proportion of Indonesians who are undernourished almost certainly doubled from 6 percent of the population in 1995/97 to 12 percent in 1999. And the current figure could be as high as 18 percent. This means that the economic crisis has added 10 to 20 million people to the ranks of the undernourished in Indonesia alone.

Recovery has begun. But it will take time for Indonesia to create the conditions needed to bring undernourishment back to the levels of before the crisis and continue on the path of progress towards the Summit target. The task has been complicated by events in East Timor, where tens of thousands of people were driven from their homes following the referendum on independence. Humanitarian assistance was mobilized, but if the conflict exacerbates political and economic instability in Indonesia, there is a grave risk that the food security situation could get worse before it gets better.

The way ahead

Meeting the challenge

It is clear that there is no single prescription for combating hunger. Policies and strategies must address both the causes and effects of food insecurity in order to build an appropriate framework for concrete action. In societies at peace, poverty and marginalization are the root causes of hunger. Where there is no peace, physical destruction and the displacement of people are additional causes.

Action is needed most urgently in countries where chronic food insecurity is most prevalent or is increasing. These are very poor countries whose populations are predominantly rural and largely dependent on agriculture for a living. They require economic and technical innovations to improve their agricultural productivity as well as specific policies to ensure that food is more affordable for the entire population.

However, these measures alone will not suffice. In a world where 4 400 million people live in developing countries and one-third survive on less than US\$ 1 a day, other basic human needs must be fulfilled. Concerted efforts are required to ensure that everyone has access to health and education services, safe drinking water, basic sanitation facilities and adequate housing.

At the other end of the spectrum, in countries where the percentage of hungry people is already low, the challenge is to find effective ways to

benefit the most destitute. These people are usually marginal participants in the mainstream market economy. They can only be reached by carefully targeted poverty alleviation programmes, supported by the judicious use of social safety nets.

In all cases, it is imperative that efforts concentrate on improving the health and nutrition of children. Investments in children are known to produce the highest returns over time in both economic and humanitarian terms. It is often the children in food-insecure households who suffer the most from hunger. The recent improvement seen in Asia is encouraging, but we should also be aware of the deterioration in many African countries where undernutrition of children is increasing.

While the main focus of action must be chronically hungry and vulnerable people, immediate humanitarian assistance is needed for those whose food security and basic livelihood have been affected by unexpected shocks from social, economic or natural disasters, to prevent them from falling into chronic food insecurity.

Until now, individual countries have dealt with these challenges in different ways and some have had more success than others. Now it is important to focus on practical country experiences, to analyse the reasons for the success of some and the failure of others, and to draw lessons from these cases.

As this report emphasizes, many of our estimates, while based on the best

available data, are still too imprecise to ensure successful action programmes. In order to better target policies and resources towards the hungry and the most vulnerable members of society, countries and local organizations are encouraged to use the inter-agency Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) to improve their own systems for collecting and analysing food security information.

One of the purposes of this, the first edition of *The State of Food Insecurity in the World*, is to encourage greater use of tools such as FIVIMS. This report is also meant to focus the attention of the world's leaders and opinion makers on the problem of undernourishment around the world and to spur development of innovative approaches to tackle it.

We have the tools to achieve the World Food Summit target of halving the number of undernourished globally by 2015. The next step is translating the goal into concrete objectives at the local, national and regional levels where people and their leaders can take action.

In the spirit of the Summit's call for the elimination of food insecurity around the world, it is not enough to meet the numerical target simply as a result of rapid progress in a few very large countries. This would be unfair to those living in many other countries. They also have the right to be free from the diminished lives and premature death that come from food insecurity.

Tables

Table 1: PREVALENCE OF UNDERNOURISHMENT in developing countries

Region, subregion, country	Total population 1996 (millions)	UNDERNOURISHED IN TOTAL POPULATION				Region, subregion, country	Total population 1996 (millions)	UNDERNOURISHED IN TOTAL POPULATION			
		Number of people 1995/97 (millions)	Proportion population 1979/81 (%)	Proportion population 1990/92 (%)	Proportion population 1995/97 (%)			Number of people 1995/97 (millions)	Proportion population 1979/81 (%)	Proportion population 1990/92 (%)	Proportion population 1995/97 (%)
DEVELOPING WORLD	4 428.2	791.5	29	20	18	Panama (3)	2.7	0.5	22	18	17
ASIA AND PACIFIC	3 047.8	525.5	32	21	17	SOUTH AMERICA	325.3	33.3	14	14	10
EAST ASIA	1 309.2	176.8	29	17	14	Argentina (1)	35.2	0.5	1	2	1
China (3)	1 238.8	164.4	30	17	13	Bolivia (4)	7.6	1.8	26	25	23
Korea, DPR (5)	22.6	10.8	19	16	48	Brazil (3)	161.5	16.2	15	13	10
Korea, Rep (1)	45.3	0.4	1	1	1	Chile (3)	14.4	0.7	7	8	5
Mongolia (5)	2.5	1.2	27	34	48	Colombia (3)	39.3	4.9	22	17	12
OCEANIA	4.4	1.1	31	27	24	Ecuador (3)	11.7	0.6	12	8	5
Papua New Guinea (4)	4.4	1.1	31	27	24	Guyana (3)	0.8	0.1	13	24	16
SOUTHEAST ASIA	483.6	63.7	27	17	13	Paraguay (3)	5.0	0.6	13	18	13
Cambodia (4)	10.2	3.4	62	41	33	Peru (3)	23.9	4.6	28	40	19
Indonesia (3)	200.4	11.5	26	10	6	Suriname (3)	0.4	0.0	17	11	9
Laos (4)	4.9	1.6	32	31	33	Uruguay (2)	3.2	0.1	3	7	4
Malaysia (1)	20.5	0.4	4	3	2	Venezuela (3)	22.3	3.3	4	11	15
Myanmar (3)	43.4	2.8	19	9	7	NEAR EAST AND NORTH AFRICA	360.2	32.9	9	8	9
Philippines (4)	69.9	15.6	27	21	22	NEAR EAST	227.4	27.5	10	10	12
Thailand (4)	59.2	14.3	28	27	24	Afghanistan (5)	20.3	12.7	33	57	62
Viet Nam (3)	75.1	14.1	33	28	19	Iran (3)	63.5	3.7	9	6	6
SOUTH ASIA	1 250.6	283.9	38	26	23	Iraq (3)	20.6	3.2	4	9	15
Bangladesh (5)	120.6	44.0	42	34	37	Jordan (2)	4.4	0.1	6	4	3
India (4)	950.0	204.4	38	26	22	Kuwait (2)	1.7	0.1	4	27	3
Nepal (4)	21.8	4.6	46	21	21	Lebanon (1)	3.1	0.1	8	2	2
Pakistan (3)	140.1	26.3	31	20	19	Saudi Arabia (2)	18.9	0.7	3	3	4
Sri Lanka (4)	18.1	4.6	22	29	25	Syrian Arab Rep (1)	14.6	0.2	3	2	1
LATIN AMERICA AND CARIBBEAN	481.3	53.4	13	13	11	Turkey (1)	62.3	1.0	2	2	2
NORTH AMERICA	92.7	5.1	5	5	6	United Arab Emirates (1)	2.3	0.0	1	2	1
Mexico (3)	92.7	5.1	5	5	6	Yemen (5)	15.7	5.7	40	37	37
CARIBBEAN	30.5	9.3	19	25	31	NORTH AFRICA	132.8	5.4	8	4	4
Cuba (3)	11.0	2.1	3	3	19	Algeria (3)	28.7	1.5	9	5	5
Dominican Rep (4)	8.0	2.1	25	28	26	Egypt (2)	63.5	2.5	8	4	4
Haiti (5)	7.7	4.7	47	63	61	Libyan Arab Jamahiriya (1)	5.1	0.0	0	1	1
Jamaica (3)	2.5	0.3	8	12	11	Morocco (3)	26.4	1.4	10	5	5
Trinidad & Tobago (3)	1.3	0.1	5	12	11	Tunisia (1)	9.1	0.1	2	1	1
CENTRAL AMERICA	32.8	5.6	20	17	17	SUB-SAHARAN AFRICA	539.3	179.6	37	35	33
Costa Rica (3)	3.7	0.2	8	6	7	CENTRAL AFRICA	74.3	35.6	36	37	48
El Salvador (3)	5.8	0.6	17	12	10	Cameroon (4)	13.6	4.3	20	30	32
Guatemala (3)	10.2	1.7	17	14	17	Cent Afr Rep (5)	3.4	1.4	22	45	42
Honduras (4)	5.8	1.2	31	23	21	Chad (5)	6.9	3.1	69	58	46
Nicaragua (4)	4.6	1.4	26	29	31	Congo, Dem Rep (5)	46.7	25.8	37	36	55
						Congo, Rep (4)	2.6	0.9	29	32	34
						Gabon (3)	1.1	0.1	13	11	8

NOTES: GENERAL

Figure in brackets [] denotes prevalence category, i.e. proportion of the population undernourished in 1995/97

- Category (1) <2.5% undernourished
- (2) 2.5 - 4% undernourished
- (3) 5 - 19% undernourished
- (4) 20 - 34% undernourished
- (5) 35% undernourished

Countries in **bold** are those with a population of 40 million people or more

NOTE: TABLE 1

NA Separated figures for Eritrea and Ethiopia are not available prior to 1995/97

SOURCES: TABLE 1

Total population UN World Population Prospects, 1998 Revision
Undernourished in total population FAO estimates

Tables

Table 1, cont.: PREVALENCE OF UNDERNOURISHMENT in developing countries

Region, subregion, country	Total population 1996 (millions)	UNDERNOURISHED IN TOTAL POPULATION				Region, subregion, country	Total population 1996 (millions)	UNDERNOURISHED IN TOTAL POPULATION			
		Number of people 1995/97 (millions)	Proportion population 1979/81 (%)	Proportion population 1990/92 (%)	Proportion population 1995/97 (%)			Number of people 1995/97 (millions)	Proportion population 1979/81 (%)	Proportion population 1990/92 (%)	Proportion population 1995/97 (%)
EAST AFRICA	185.7	77.9	35	45	42	Swaziland (3)	0.9	0.1	14	9	14
Burundi (5)	6.3	4.0	38	44	63	Zambia (5)	8.4	3.7	30	39	45
Eritrea (5)	3.3	2.2	NA	NA	67	Zimbabwe (5)	11.0	4.3	30	40	39
Ethiopia (5)	56.8	28.7	NA	NA	51	WEST AFRICA	199.5	31.1	40	21	16
Kenya (5)	27.8	11.4	25	47	41	Benin (3)	5.5	0.8	36	21	15
Rwanda (5)	5.6	2.1	24	40	37	Burkina Faso (4)	10.7	3.2	64	32	30
Somalia (5)	8.5	6.2	55	70	73	Côte d'Ivoire (3)	13.8	2.0	7	14	15
Sudan (4)	27.2	5.5	24	31	20	Gambia (4)	1.2	0.3	57	17	25
Tanzania, United Rep (5)	30.7	12.3	23	30	40	Ghana (3)	18.2	2.0	61	29	11
Uganda (4)	19.5	5.5	31	23	28	Guinea (4)	7.3	2.3	30	37	31
SOUTHERN AFRICA	79.8	35.0	32	45	44	Liberia (5)	2.2	0.9	22	49	42
Angola (5)	11.3	4.9	29	50	43	Mali (4)	10.2	2.9	59	30	29
Botswana (4)	1.5	0.4	28	19	25	Mauritania (3)	2.4	0.3	35	15	13
Lesotho (4)	2.0	0.6	26	31	28	Niger (5)	9.5	3.6	32	41	39
Madagascar (5)	14.2	5.6	18	34	39	Nigeria (3)	101.4	8.3	40	13	8
Malawi (5)	9.9	3.7	26	45	37	Senegal (3)	8.6	1.5	19	19	17
Mauritius (3)	1.1	0.1	10	6	6	Sierra Leone (5)	4.3	1.8	40	44	43
Mozambique (5)	17.9	11.3	54	66	63	Togo (4)	4.2	1.0	31	29	23
Namibia (4)	1.6	0.5	25	26	30						

Table 2: FOOD AVAILABILITY, HEALTH CONDITIONS AND NUTRITIONAL STATUS in developing countries

Region, subregion, country	FOOD AVAILABILITY AND DIET COMPOSITION			HEALTH AND SANITATION			NUTRITIONAL STATUS OF CHILDREN UNDER FIVE		
	Dietary energy supply (DES) per person 1995/97 (calories per day)	Share of main food group in total DES (a) 1995/97 (%)	Main cereal or starchy root consumed (b) 1995/97	Access to adequate sanitation 1990/97 (%)	Life expectancy at birth 1995 (years)	Under 5 mortality rate 1995 (per '000)	Underweight around 1995 (d) (%)	Stunted around 1995 (d) (%)	Wasted around 1995 (d) (%)
ASIA AND PACIFIC									
EAST ASIA									
China (3)	2840	59	rice	24	69	47	17	34	5
Korea, DPR (5)	1980	62	maize/rice	...	72	30	...	...	...
Korea, Rep (1)	3160	50	rice	100	72	9	...	...	...
Mongolia (5)	1920	48	wheat	86	65	74	12	26	2
OCEANIA									
Papua New Guinea (4)	2230	31	rice/wheat	83 (c)	57 (c)	95 (c)	30	43	6
SOUTHEAST ASIA									
Cambodia (4)	2050	78	rice	19	53	174	52	56	13
Indonesia (3)	2900	64	rice	59	64	75	34	42	13
Laos (4)	2060	78	rice	18	52	134	40	47	11
Malaysia (1)	2940	41	rice	94	71	13	20	...	...
Myanmar (3)	2850	78	rice	43	59	150	31	45	8
Philippines (4)	2360	49	rice	75	67	53	30	33	8

NOTES: TABLE 2

(a) Main food group is usually *cereals* or *starchy roots* and only exceptionally a different one.

Figures refer to the contribution of the entire cereal, starchy root or other food group.

High value indicates low diet diversification and vice versa

(b) Most important cereal(s) or starchy root(s) in total dietary energy supply in 1995/97

(c) Period other than the one specified in the column heading

(d) Refers to results of national surveys conducted from 1987 to 1998

... Data unavailable

SOURCES: TABLE 2

Food availability and diet composition FAO estimates

Health and sanitation UNICEF, *The State of the World's Children*, 1997 and 1999

Nutritional status of children under five Results of surveys compiled by WHO (Global Database on Child Growth and Malnutrition) and FAO (NutriDat)

Table 2, cont.: FOOD AVAILABILITY, HEALTH CONDITIONS AND NUTRITIONAL STATUS in developing countries

Region, subregion, country	FOOD AVAILABILITY AND DIET COMPOSITION			HEALTH AND SANITATION			NUTRITIONAL STATUS OF CHILDREN UNDER FIVE		
	Dietary energy supply (DES) per person 1995/97 (calories per day)	Share of main food group in total DES (a) 1995/97 (%)	Main cereal or starchy root consumed (b) 1995/97	Access to adequate sanitation 1990/97 (%)	Life expectancy at birth 1995 (years)	Under 5 mortality rate 1995 (per '000)	Underweight around 1995 (d) (%)	Stunted around 1995 (d) (%)	Wasted around 1995 (d) (%)
Thailand (4)	2350	48	rice	96	69	32	25	22	5
Viet Nam (3)	2470	73	rice	21	66	45	40	36	10
SOUTH ASIA									
Bangladesh (5)	2080	81	rice	43	57	115	56	55	18
India (4)	2470	64	rice	29	62	115	53	52	18
Nepal (4)	2320	77	rice	16	55	114	47	49	11
Pakistan (3)	2460	55	wheat	56	63	137	40	50	9
Sri Lanka (4)	2290	55	rice	63	73	19	33	20	13
LATIN AMERICA AND CARIBBEAN									
NORTH AMERICA									
Mexico (3)	3110	46	maize	72	71	32	14	23	6
CARIBBEAN									
Cuba (3)	2420	38	wheat/rice	66	76	10	...	...	1
Dominican Rep (4)	2280	30	rice	78	70	44	6	11	1
Haiti (5)	1840	45	rice/maize	25	58	124	28	32	8
Jamaica (3)	2600	30	rice/wheat	89	74	13	10	10	4
Trinidad & Tobago (3)	2710	36	wheat	79	72	18	7	5	4
CENTRAL AMERICA									
Costa Rica (3)	2690	33	rice/wheat	84	77	16	5	6	2
El Salvador (3)	2550	56	maize	90	67	40	11	23	1
Guatemala (3)	2340	59	maize	83	66	67	27	50	3
Honduras (4)	2370	48	maize	74	69	38	25	39	1
Nicaragua (4)	2180	54	maize/rice	35	68	60	12	25	2
Panama (3)	2420	38	rice	83	73	20	7	9	1
SOUTH AMERICA									
Argentina (1)	3110	31	wheat	68	73	27	2	5	1
Bolivia (4)	2200	41	wheat/maize	58	60	105	8	27	1
Brazil (3)	2930	31	rice/wheat	70	67	60	6	11	2
Chile (3)	2770	39	wheat	...	74	15	1	2	0
Colombia (3)	2590	33	maize/rice	85	70	36	8	15	1
Ecuador (3)	2660	35	rice	76	69	40	17(c)	34(c)	2(c)
Guyana (3)	2490	49	rice	88	...	...	18	...	...
Paraguay (3)	2570	28	maize/cassava	41	71	34	4	14	0
Peru (3)	2360	39	rice/wheat	72	67	55	8	26	1
Suriname (3)	2670	48	rice	...	...	...	...	...	...
Uruguay (2)	2800	31	wheat	...	73	21	4	10	1
Venezuela (3)	2390	37	maize/wheat	58	72	24	5	15	3
NEAR EAST AND NORTH AFRICA									
NEAR EAST									
Afghanistan (5)	1730	81	wheat	8	45	257	49	48	16
Iran (3)	2830	54	wheat	81	69	40	16	19	7
Iraq (3)	2370	55	wheat	75	67	71	12	22	3
Jordan (2)	2910	50	wheat	77	69	25	6	16	3
Kuwait (2)	3060	37	wheat	...	75	14	2	3	1
Lebanon (1)	3270	35	wheat	63	69	40	3	12	3
Saudi Arabia (2)	2800	49	wheat	86(c)	71	34	...	...	...
Syrian Arab Rep (1)	3330	55	wheat	67	68	36	13	21	9
Turkey (1)	3520	49	wheat	80	68	50	10	21	3
United Arab Emirates (1)	3360	34	rice/wheat	92	74	19	...	...	...
Yemen (5)	2032	68	wheat	24	51	110	30	44	13

Tables

Table 2, cont.: FOOD AVAILABILITY, HEALTH CONDITIONS AND NUTRITIONAL STATUS in developing countries

Region, subregion, country	FOOD AVAILABILITY AND DIET COMPOSITION			HEALTH AND SANITATION			NUTRITIONAL STATUS OF CHILDREN UNDER FIVE		
	Dietary energy supply (DES) per person 1995/97 (calories per day)	Share of main food group in total DES (a) 1995/97 (%)	Main cereal or starchy root consumed (b) 1995/97	Access to adequate sanitation 1990/97 (%)	Life expectancy at birth 1995 (years)	Under-5 mortality rate 1995 (per '000)	Underweight around 1995 (d) (%)	Stunted around 1995 (d) (%)	Wasted around 1995 (d) (%)
NORTH AFRICA									
Algeria (3)	2 953	60	wheat	91	68	61	13	18	9
Egypt (2)	3 276	66	wheat	88	65	51	12	25	6
Libyan Arab Jamahiriya (1)	3 259	47	wheat	98	64	63	5	15	3
Morocco (3)	3 141	62	wheat	58	65	75	10	24	2
Tunisia (1)	3 258	54	wheat	80	69	37	9	23	4
SUB-SAHARAN AFRICA									
CENTRAL AFRICA									
Cameroon (4)	2 140	37	maize/cassava	50	57	106	15	26	3
Cent Afr Rep (5)	1 980	35	cassava	27	50	165	23	28	6
Chad (5)	1 960	53	sorghum	21	49	152	39	40	14
Congo, Dem Rep (5)	1 820	57	cassava	69	51	108	24	28	6
Congo, Rep (4)	2 130	42	cassava	18	52	185	34	45	10
Gabon (3)	2 530	30	rice/wheat	...	55	148	...	...	...
EAST AFRICA									
Burundi (5)	1 690	30	cassava/sweet potatoes/maize	51	51	176	38	47	6
Eritrea (5)	1 630	72	wheat	13	52	195	44	38	16
Ethiopia (5)	1 820	65	maize	19	49	195	48	64	8
Kenya (5)	1 980	52	maize	77	55	90	23	34	8
Rwanda (5)	2 050	28	sweet potatoes	...	47	139	26	56	4
Somalia (5)	1 570	34	sorghum	...	48	211	...	...	...
Sudan (4)	2 380	57	sorghum	51	54	115	34	34	13
Tanzania, United Rep (5)	2 000	49	maize	86	52	160	31	43	7
Uganda (4)	2 170	28	sweet potatoes/maize	57	44	185	26	38	5
SOUTHERN AFRICA									
Angola (5)	1 900	35	cassava	40	48	292	...	...	...
Botswana (4)	2 230	49	maize/sorghum/wheat	55	66	52	...	...	...
Lesotho (4)	2 240	75	maize	38	62	154	16	33	2
Madagascar (5)	2 020	53	rice	40	58	164	40	48	7
Malawi (5)	2 070	68	maize	3	45	219	30	48	7
Mauritius (3)	2 920	44	wheat/rice	100	71	23	15	10	14
Mozambique (5)	1 780	41	cassava	54	47	275	26	36	8
Namibia (4)	2 140	49	maize/millet	62	60	78	26	29	9
Swaziland (3)	2 480	51	maize	59	...	...	10 (c)	30 (c)	1 (c)
Zambia (5)	1 960	66	maize	71	48	203	24	42	4
Zimbabwe (5)	2 100	62	maize	52	52	74	16	21	6
WEST AFRICA									
Benin (3)	2 470	37	cassava/maize	27	48	142	29	25	14
Burkina Faso (4)	2 180	75	sorghum	37	47	164	33	33	13
Côte d'Ivoire (3)	2 570	39	rice	39	50	150	24	24	8
Gambia (4)	2 300	54	rice	37	46	110	15	14	6
Ghana (3)	2 620	48	cassava	55	57	130	27	26	11
Guinea (4)	2 250	45	rice	31	46	219	...	...	...
Liberia (5)	2 040	42	wheat/rice	30	56	216	...	33	9
Mali (4)	2 210	74	millet/sorghum	6	47	210	40	30	23
Mauritania (3)	2 620	54	wheat/rice	32	53	195	23	44	7
Niger (5)	2 050	69	millet	17	48	320	50	41	21
Nigeria (3)	2 750	44	sorghum/maize/millet	41	51	191	39	39	21
Senegal (3)	2 400	55	rice	39	50	110	22	23	7
Sierra Leone (5)	2 050	52	rice	11	40	284	28	35	8
Togo (4)	2 340	44	maize/cassava	41	56	128	25	22	12

Published in 1999 by the
Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla, 00100 Rome, Italy

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

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior permission of the copyright owner. Applications for such permission, with a statement of the purpose and extent of the reproduction, should be addressed to the Director, Information Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, 00100 Rome, Italy.

© FAO 1999

ISBN 92-5-104328-0

Printed in the UK

Photographs

As cover, from left to right: Banson; Paiboon Pattanasitubol/UNEP/Topham; Peter Beard/The Time is Always Now.

Acknowledgements

This first edition of *The State of Food Insecurity in the World* was prepared by FAO to provide information about the number of hungry people in the world, who they are, where they live, why they find themselves in this condition and what can be done to improve their lives. Its aim is to focus attention on both progress and challenges in the ongoing effort to reduce the number of undernourished.

A collaborative effort between the Economic and Social Department (ES) and the Information Division of the General Affairs and Information Department (GI), the publication was prepared by an interdepartmental Task Force comprised of the Global Information and Early Warning Service (ESCG), the Nutrition Planning, Assessment and Evaluation Service (ESNA), the Statistical Analysis Service (ESSA)

and the Environment and Natural Resources Service of the Sustainable Development Department (SDRN), with the participation of the FIVIMS secretariat.

Overall leadership was provided by Hartwig de Haen, Assistant Director-General, ES, and technical leadership by Barbara Huddleston, Chief, Food Security and Agricultural Projects Analysis Service (ESAF).

Substantive technical contributions were provided by Ergin Ataman, Geographical Information System Manager and Rene Gommès, Senior Officer, SDRN; Jean-Pierre Cotier, Chief, Barbara Burlingame, Senior Officer and Simon Chevassus, Nutrition Officer, ESNA; Loganaden Naiken, Chief and Jorge Mernies, Senior Officer, ESSA; and David Wilcock, FIVIMS Coordinator.

Conceptual and editorial guidance was provided by Shalini Dewan, Chief of the Publishing and Multimedia Service and Andrew Marx, Chief of the Multimedia Group of the Information Division, GI. Language editing services were provided by the Editorial Group, GI.

Gillian Bunting and Fulvia Petrassi (SDRN), Josilien Edouard and Jenny Riches (ESAF), Cinzia Cerri and Francesco Vizioli de Meo (ESSA) and Rafaella Siano (ESNA) gave invaluable assistance at various stages of the work.

FAO extends special thanks to the team at Banson, London, for design, layout and production.



The state of food insecurity in the world

In the developing world, 790 million people do not have enough to eat, according to the most recent estimates (1995/97). That represents a decline of 40 million compared to 1990/92.

At the World Food Summit in 1996, world leaders pledged to reduce the number of hungry people to around 400 million by 2015. At the current rate of progress, a reduction of 8 million undernourished people a year, there is no hope of meeting that goal.

According to *The State of Food Insecurity in the World 1999*, the current reduction does not indicate uniform progress throughout the world. Indeed the data reveal that, in the first half of this decade, just 37 countries achieved a reduction in the number of undernourished, totalling 100 million people. Across the rest of the developing world, the number of hungry people actually increased by almost 60 million.

This first edition of *The State of Food Insecurity in the World* also points out that hunger is not limited to the developing nations. It presents the first assessment of the number of undernourished people in the developed world, finding 8 million in the industrialized countries and 26 million in the countries in transition.

There is no single prescription for action to combat hunger. What is needed, says the report, is to translate the goal into concrete objectives at local, national and regional levels where people and their leaders can take action that will guarantee the birthright of everyone on this planet – enough to eat.



Food
and
Agriculture
Organization
of
the
United
Nations