V. POPULATION ASPECTS IN THE REDUCTION OF HUNGER

Food and Agriculture Organization of the United Nations

A. INTRODUCTION

The objective of the International Conference on Population and Development (ICPD) was to raise the quality of life and the well-being of human beings, through appropriate population and development policies and programmes aimed at achieving, among other goals, food security. The ICPD Plan of Action recommends that "measures should be taken to strengthen food, nutrition and agricultural policies and programmes, and fair trade relations, with special attention to the creation and strengthening of food security at all levels." It recommends actions concerning interrelationships between food security and nutrition issues with gender, child health and survival, the nutritional needs of women of child-bearing age and international migration. The Plan of Action also recommends research on development and improvement of methods with regard to sustainable food production and crop and livestock systems in both developed and developing countries.

At the World Food Summit of 1996, the global community renewed its commitment to the fight against hunger and poverty. The Food and Agriculture Organization (FAO) member states pledged their political will to an effort to eradicate hunger in all countries and to achieve food security for all, with an immediate view of reducing the number of undernourished people by one half—to 400 million—no later than by 2015. This goal was reconfirmed in September 2000 at the UN Millennium Summit, and subsequently at world gatherings in Doha in 2001, and Monterrey, Rome and Johannesburg in 2002.

At a special session (known as ICPD+5) of the United Nations General Assembly, convened in 1999 to review progress towards meeting the ICPD goals, one of the key actions recommended was that "measures should be taken to strengthen food, nutrition and agricultural policies and programmes, and fair trade relations, with special attention to the creation and strengthening of food security at all levels". Although, unlike the Millennium Development Goals (MDGs), the Programme of Action and the ICPD+5 document do not quantify goals for food security, their recommendations are consistent with and relevant to the achievement of MDG 1.

Reducing hunger is critical to the attainment of the Millennium Development Goals (MDGs) as good nutrition underpins progress towards each of the first six MDGs. The evidence suggests that reducing hunger diminishes poverty by boosting productivity through the life cycle and across generations; that it leads to improved educational outcomes; that better nutrition contributes to child survival as well as to maternal health; and that food security slows the onset of AIDS in HIV-positive individuals, improves survival among the victims of malaria, and lowers the risk of diet-related chronic diseases.

The first section of this paper takes stock of current undernourishment around the world and the progress of countries and regions towards the attainment of the MDG target on hunger. The second section discusses the relationship between population issues, food security and the MDG targets on hunger and poverty.

B. UNDERNOURISHMENT AROUND THE WORLD: CURRENT SITUATION

According to FAO estimates, some 842 million people worldwide were undernourished in 1999-2001 (FAO, 2003a; 2004a). This included 10 million in industrialized countries, 34 million in countries in transition, and 798 million in developing countries. After falling by 37 million during the first half of the 1990s, the number of hungry people in developing countries increased by 18 million in the second half of the decade. Recent available figures for countries in transition showed an overall increase of 9 million between the period of 1993-1995 to 1999-2001.

Regionally, only the Latin America and the Caribbean region has seen a decline in the number of hungry since the mid-1990s. Merely 19 countries, including China, succeeded in reducing the number of undernourished throughout the 1990s by 80 million. In 22 countries, including Bangladesh, Haiti, and Mozambique, the number of undernourished declined during the second half of the decade. In 17 other countries, however, the trend shifted in the opposite direction and the number of undernourished people, which had been falling, began to rise. In another 26 countries the number of undernourished people increased by 60 million during the same period.

The progress of countries and regions towards the attainment of the MDG target on hunger is highly variable (table V.1). Out of a total of 122 developing and in-transition countries for which data exist, more than three fourths are either lagging behind or not on course to attain the goal of reducing the number of hungry people by 50 per cent in relation to the 1990-1992 base period. Twenty-five countries have achieved the objective while only six countries are on track. Forty-two countries are lagging or far behind. In the 49 countries that are off-track, the prevalence of hunger has actually worsened considerably. The situation is particularly dire in Sub-Saharan Africa.

What differentiates the successful countries from those that suffered setbacks? A closer examination (FAO, 2003a) revealed that countries that succeeded in reducing hunger were characterized by more rapid economic growth and specifically more rapid growth in their agricultural sectors. They also had lower population growth rates, lower levels of HIV infection, and higher ranking in the UNDP's Human Development Index. These findings indicate that improvements in food security depend on a few key factors: rapid economic growth, slower population growth, well-developed institutions, and a political environment that ensures good governance and effective decision-making on development.

TABLE V.1. PERFORMANCE OF COUNTRIES IN REDUCING THE NUMBER OF HUNGRY, BY REGION
(2003 estimates of country performance in 1999-2001)

Region	*Achieved*	*On target*	*Lagging*	*Far behind*	*Off track*	*Total*
Sub-Saharan Africa	1	1	2	14	19	37
Near East and North Africa	3	0	1	4	9	17
East Asia and Pacific	1	4	5	0	3	13
South Asia	0	0	3	0	2	5
Latin America and Caribbean	7	1	4	3	9	24
Countries in transition	13	0	0	6	7	26
All less developed regions	25	6	15	27	49	122

Source: Food and Agriculture Organization (2004).

NOTE: This assessment is based on the following criteria: Achieved: the country has already achieved the 2015 target; On track: the country has attained the rate of progress needed to achieve the target by 2015 or has attained 90 per cent of that progress rate; Lagging: the country has achieved 70-89 per cent of the rate of progress required to achieve the target by 2015; Far behind: the country has achieved less than 70 per cent of the required rate of progress; Off track: the performance of the country is less than 70 per cent of the required rate of progress.

C. POPULATION ISSUES IN AGRICULTURE AND RURAL DEVELOPMENT

How do population issues relate to food security and the MDG targets on hunger and poverty? Several population factors were recognized as relevant to sustainable agricultural and rural development and as such highlighted in the Plan of Action approve at the World Food Summit (WFS) in 1996, as well as in the WFS+5 Declaration adopted in June 2002. The following paragraphs present examples of important linkages.

Few of the population issues discussed below have simple, uniform effects on food security across time and space. To fully understand their impact requires careful examination of how they influence each other, and interact with other factors leading to undernutrition and hunger. However, in order to keep the discussion within reasonable bounds, such interactions will not be examined here.

1. *Population growth*

The latest United Nations assessment of global population prospects (United Nations, 2003) indicates that a radical slowdown in world demographic growth is likely. However, despite the considerable fall in the growth rate, the annual increments will continue to be large because of population momentum—the tendency for population growth to continue beyond the time that low fertility has been achieved due to the relatively high concentration of people in the childbearing ages. During the period from 2000 to 2015, the population of developing regions is currently expected to grow by another 22 per cent, with marked regional disparities—the added percentage ranging from 9 per cent for Eastern Asia to 26 per cent for South-Central Asia, 34 per cent for Western Asia, and as much as 38 per cent for Sub-Saharan Africa (United Nations, 2003).

Technological improvements in agriculture over the past century have allowed most regions of the world to increase food production well ahead of population growth at a steady falling economic cost, and without an environmental catastrophe (Dyson, 1996). The crucial question is: can this progress be sustained in the future? Overall, there is no doubt that the demographic transition which is now underway in most developing countries—and is fairly advanced in some of them—helps to slow down the growth in demand for agricultural commodities, and thus facilitates the process of achieving food security. On the other hand, the economic and environmental costs of augmenting per capita food production may well prove too great for countries whose populations grow faster than their economies, resulting in greater poverty and fewer resources to fight it. In such countries, much will depend on their governments' ability to develop effective policy responses to the challenges posed by growing human numbers, poverty, and environmental degradation. It is clear that in order to strengthen food security and address disparities in nutritional levels, a massive increase in food production is needed in many poorer countries, combined with growth in per capita incomes and improvements in international trade. But whatever the policy context, the goal of achieving food security will be made more difficult if population growth rates cannot be reduced.

How can a country reduce its population growth? The evidence on the matter suggests that much can be achieved through policies which reduce unwanted births, enhance women's education, increase life expectancy, and reduce the demand of households for child labour (FAO/UNFPA, 1996). In this context it is worth recalling that the average total fertility rate of the least developed countries (LDCs) is estimated at 5.1 children per woman in the period 2000-2005, i.e. much higher than the average 2.9 children per woman for the developing regions as a whole (United Nations, 2003). Among the LDCs, seven countries—of which six are in Sub-Saharan Africa—have currently a total fertility rate exceeding seven children per woman, indicating that the demographic transition has not started. Reducing fertility levels in these countries through the types of policy interventions mentioned above would certainly create

better conditions for achieving progress in human development, including improvements in nutrition and food security.

2. *HIV/AIDS and other diseases*

The inability to halt and reverse the spread of HIV/AIDS—a millennium development goal in its own right—is undermining food security in many countries. Some 38 million people are infected worldwide, of whom 36 million are in developing countries, 25 million in Sub-Saharan Africa and 7 million in Asia, of whom 4 million are in India (UNAIDS, 2004). HIV/AIDS prevalence rates of 10 per cent are common in many countries. Indeed, rates greater than 15 per cent are not exceptional, and Botswana, Lesotho, Swaziland and Zimbabwe are experiencing rates of over 30 per cent which are still rising.

The rural sector lies at the core of the AIDS epidemic. In most AIDS-affected countries, subsistence agriculture is the predominant source of livelihoods for the majority of the population (up to 80 per cent in some countries); crops, livestock and other natural resource products are the mainstay of economy and export earnings; and agriculture, forestry and fisheries traditionally provide vital safety nets for rural households. HIV/AIDS induces a downward spiral in the welfare of a household from the moment the first member falls ill. The loss of able-bodied adults to AIDS, leaving grandparents caring for orphaned children as the main breadwinners, severely affects household capacity to produce and buy food. In turn, the AIDS-induced food insecurity often triggers response mechanisms—such as changes in farming patterns towards fast-growing but less profitable crops, or selling of tools or income-producing animals to cover health and funeral expenditures—which further undermine the viability of rural livelihood strategies (Engh and others, 2000; du Guerny, 2002; FAO, 2002). In addition, HIV/AIDS can act "as a Trojan horse for other diseases such as tuberculosis and malaria, augmenting their impact on malnourished bodies" (du Guerny and Hsu, 2004; p. 9).

FAO estimates that in the ten most affected African countries, the size of the agricultural labour force could be reduced by one quarter by 2020 (FAO, 2001). The effects of HIV/AIDS on the availability, quality, and cost of the labour force will have enormous repercussions on agricultural production and economic growth. It has been calculated that unless things improve, it will take over 100 years for Sub-Saharan Africa to halve extreme poverty and hunger (UNDP, 2003). HIV/AIDS thus presents an exceptionally serious threat to food security, agricultural production, and the social fabric of the affected societies. Agricultural institutions, both at national and local levels, need to reassess their mode of operation and respond effectively to the rapidly changing needs of rural populations in AIDS-affected regions.

3. *Migration and urbanization*

Migration is a complex demographic phenomenon of consequence to food security. Outmigration is often a consequence of poverty and lack of food security, and as such it usually is an indicator of problem areas. On the other hand, it may contribute to resolve problems in sending areas by reducing population pressures there, including the demand for agricultural land, water and other resources. But it may also deprive those same areas of valuable labour and human resources. At the migrants' level, migration usually improves individual and household wellbeing; but at the aggregate level it may add to social tensions, environmental problems and economic difficulties in both sending and receiving areas. Food insecurity and specific nutritional problems among migrants can be a prominent feature of large-scale migration flows, including refugee movements.

Migration leads to changes in the spatial distribution of populations, the most notable of which is urbanization. From the rural viewpoint, urbanization can foster the development of commercial

agriculture and contribute, with urban-based products and services such as over-land transportation, to agricultural progress and the modernization of rural life. However, insofar as the intensity of rural-to-urban migration is often determined by flight from rural poverty, rather than by actual economic opportunities in the urban sector, the livelihood and food security problems of urban populations are exacerbated: people migrating to urban areas cannot feed themselves by subsistence farming, and if urban employment opportunities are scarce, many of them may lack the income to buy the food they need. Rural to urban migration can also significantly reduce the availability of labour in rural areas, which could result in declines in agricultural production, increased dependency on agricultural imports, and growing food insecurity at the national level. Moreover, urbanization usually boosts industrialization, the environmental effects of which—such as soil and water contamination, acid rain, or climate change—can impact negatively on agricultural production in rural and peri-urban areas.

Migration can also trigger changes in dietary patterns as migrants often adopt new behaviours upon settling in the new environment. For instance, in the industrializing Asian countries, city dwellers tend to consume more transportable and storable grain, such as rice and wheat, and also more vegetables and livestock products, the production of which requires more arable land and grain to be used for animal feed (Leisinger and others, 2002). Urbanization, especially when coupled with rising per capita incomes, may also increase the demand for more high-value foods. This could prompt many domestic producers to reorient production towards more expensive foodstuffs, with negative consequences for the food security of poorer people.

In sum, changes in the spatial distribution of populations can considerably affect both the supply of food and the demand for types of food produced and consumed. Much still needs to be done to take into account migration flows, including their determinants and possible consequences, in the design of development interventions.

4. *Population ageing*

The ageing of human populations has emerged as one of the most significant demographic processes of the present time—and of the decades to come. In developing countries, the proportion of the population over 60, now estimated at slightly below 8 per cent, is expected to rise to 10 per cent by 2015 and to 20 per cent by 2050 (United Nations, 2003).

FAO studies (Marcoux, 1994, 2001; Stloukal, 2001, 2004) have demonstrated that ageing often manifests itself earlier, and proceeds faster, in rural areas than in the urban sector, due to the migration of young adults to the cities. Population ageing in rural areas will have major implications for patterns of agricultural production, food security, labour markets and the process of development itself. As a result of ageing, household livelihood strategies—productive activities, saving, investment, etc.—may become less forward-looking and more subsistence-oriented. Older farmers, many of whom are women, are more likely to shift to crops that are less labour-intensive, or to stop farming due to ill-health, retirement, or death. They may be less able to adapt to technological change and less willing to invest in land preservation or to adopt new modes of production, which in turn could result in environmental degradation and decreased agricultural production. Experience shows that many of these older farmers in developing regions will be marginal producers, requiring government subsidies and protection, if available (Leisinger and others, 2002).

However, it would be a mistake to view rural ageing as an all-negative trend. In some situations, it may offer valuable opportunities for positive change, such as altering rural socio-economic structures to new ones that are more supportive of agricultural intensification. The typical view of older persons as a liability or a constraint to development is inaccurate and should be challenged. There are many benefits of ageing that are usually not recognized, such as the wealth of skills and experience that older people bring

to the workplace, to public life and to the family. However, because mechanisms such as pension schemes or social safety nets require a considerable amount of lead-time to become truly effective, the need for developing countries to put appropriate policies in place is urgent.

5. *Gender issues*

Gender refers not just to differences between men and women but to the socially constructed norms, expectations, needs and opportunities, patterns of behaviour, and ideology surrounding those differences. Gender is a central organizing principle of all known societies and as such has major effects on the processes of production and consumption. In rural settings of developing countries, an important aspect of gender relations concerns the division of agricultural labour, access to and management of productive resources, access to agricultural support systems and services, participation in power structures and economic decision-making, and legal rights including inheritance capacity—all directly relevant to household and community food security.

Although there is a wide diversity in household production patterns, women in all regions play a critical role in food security through farm labour, food preparation and day-to-day family subsistence. Empirical evidence shows that the improvement of household food security and nutritional levels is associated with women's access to gainful employment and education, and with their role in decisions on household expenditure and production matters (FAO, 1997; World Bank, 2003). Therefore, efforts to promote gender equality and empower women are a key component of the fight against poverty and hunger. Such efforts are especially needed in regions affected by HIV/AIDS because the spread of this disease is largely driven by gender inequality—as women and adolescent girls are socially, culturally and biologically more vulnerable to HIV infection—and also because the epidemic places a disproportionate burden on women as caregivers, producers of food, and users of productive resources such as agricultural land (FAO, 2004b).

D. CONCLUSION

The 6.3 billion people in the world today have, on average, more food per person than has ever been available on the globe, and yet the progress made towards achieving the MDG objective on hunger is painfully sluggish. Of the 800 million hungry and malnourished people in the developing world in the year 2000, 232 million were in India, 200 million in Sub-Saharan Africa, 112 million in China, 152 million elsewhere in Asia and the Pacific, 56 million in Latin America, and 40 million in the Near East and North Africa (FAO, 2004a). Of this total, about 214 million—26 per cent of the hungry—had caloric intakes so low that they were unable to work or care for themselves.

Experts are divided on whether future increases in agriculture outputs will be sufficient to meet the growing demand resulting from population growth. However, most analysts—including Alexandratos (1995), Bongaarts (1994, 1996), Dyson (1996, 2003), FAO (1996, 2003a, 2003b) and Smil (2000)—while acknowledging that the world food situation has many problems, are cautiously optimistic and predict progress in reducing undernourishment in many regions. FAO estimates that the global total of food-insecure people will decline in the future, although by 2015 it will still amount to some 675 million (FAO, 2003a). The outlook seems to be best in countries with fast rates of economic growth, adequate investment in agriculture, motivated political leadership, and an institutional setup that creates a development-friendly environment for men and women alike. Prospects are much worse for countries which lack sufficiently developed infrastructure and adequate systems of governance and which suffer from recurring natural and/or man-made disasters, low social expenditure, and high rates of HIV/AIDS and other diseases. Such countries must take much more concerted political action to overcome these constraints.

Demographically speaking, it is the combination of fast population growth, HIV/AIDS-associated morbidity and mortality, marked gender inequality, and high levels of urbanization, forced migration and refugee movements which poses the greatest demographic threat to achieving the MDG targets on poverty and hunger. These features typify many countries in sub-Saharan Africa and—together with widespread poverty, low agricultural yields, limited application of modern production technologies, socio-political instability, and scarce water and land resources—they contribute to making it the region with the grimmest food situation prognosis. But demographic growth is likely to complicate efforts to improve food security also in South-Central Asia where recent trends in food demand and food production, coupled with the likelihood of considerable future population increases, do not augur well for a major reduction in the proportion of hungry people.

In other parts of the developing world, population growth *per se* appears to be less of a problem, but other population factors—such as rapid urbanization, demographic ageing and low social status of women—could significantly affect agricultural developments, and thereby also progress towards achieving the MDG objectives. The challenge for governments, as well as for international bodies such as the United Nations, is to develop a sound understanding of the relationships among population dynamics, natural resources, agriculture and food security, and then design and implement policies which take these relationships fully into account.

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