Global Food Security: 2004 Assessment and Prospects

All ERS food security indicators show weather-related deterioration in food availability in 2004 relative to 2003. In the next decade, the number of hungry people is projected to decline in all regions except in Sub-Saharan Africa. [Shahla Shapouri and Stacey Rosen]

Some Improvement In Food Security Is Projected, But …

The food security indicators for the 70 lower income countries covered in this report show a deteriorating situation in 2004 relative to 2003 (see box, "How Food Security Is Assessed: Methods and Definitions").[1] The distribution gap, which takes into account unequal purchasing power within countries, was estimated at close to 31 million tons for 2004—up nearly 30 percent from 2003. The number of hungry people was estimated to have risen by roughly the same rate, reaching almost 1.1 billion for 2004.[2] Grain production for the countries, on average, is estimated to have fallen approximately 2 percent. (These estimates for 2004 do not include impacts of the recent tsunami in several Asian countries.)

Status quo (amount of grain equivalent needed to maintain per capita consumption at 2001-03 levels) and nutritional requirement food gaps are estimated at 11 million tons and 14 million for 2004, about 15-18 percent of estimated commercial grain imports (table 1-1). The distribution gap is about 41 percent of grain imports. These percentages are averages for all 70 countries; the situation varies widely by country. In general, those countries that are most vulnerable to food insecurity rely less on imports, and in most cases this is not by choice but because of limited foreign exchange. Closing the food gaps by increasing domestic food production is more feasible in most countries. Domestic production contributes 60 to 95 percent of food consumption in the study countries. Growth in food production would also increase farm income. Since most of the poor live in rural areas, a boost in agricultural income would improve income inequality and thus food security.

Consumption fell short of nutritional requirements for an estimated 1.1 billion people in 2004; this is projected to decline to under 800 million by 2014. The number of undernourished people in Asia was double that of Sub-Saharan Africa (SSA), 664 million versus 333 million, in 2004. Latin America and the Caribbean (LAC) were home to 82 million of such people, with another 2 million in the Commonwealth of Independent States (CIS). Happily, even the poorest in North Africa (the lowest 10 percent in income) had adequate food consumption on average. However, hunger is not absent in these countries, only less prevalent.

As we approach 2015, the milestone set by the World Food Summit in 1996 to reduce global hunger by half, how close are we? According to ERS projections, the number of people consuming below the nutritional requirement in 2014 will be about 27 percent lower than the 2004 estimate. Performance by region varies significantly, with the sharpest decline projected for

[1] The estimates of 2004 food security indicators are based on preliminary 2004 food production data and the projections of commercial imports and constant country food aid data at the 2001-03 level. Therefore, if commercial imports are higher than estimated, or countries decide to draw down stocks, or donors increase food aid commitments to countries in need, these estimates of gaps, as well as the number of hungry people, could fall.

[2] A person is considered food insecure, or hungry, if average food availability or access to food falls below Food and Agriculture Organization recommended average calorie intake levels of approximately 2,100 calories per day, depending on the region.

How Food Security Is Assessed: Methods and Definitions

Commodities covered in this report include grains, root crops, and a group called "other." The three commodity groups account for 100 percent of all calories consumed in the study countries and are expressed in grain equivalent. The conversion is based on calorie content. For example: grain has roughly 3.5 calories per gram and tubers have about 1 calorie per gram. One ton of tubers is therefore equivalent to 0.29 ton of grain (1 divided by 3.5), and one ton of vegetable oil (8 calories per gram) is equivalent to 2.29 tons of grain (8 divided by 3.5).

Food consumption and food access are projected in 70 lower income developing countries—37 in Sub-Saharan Africa, 4 in North Africa, 11 in Latin America and the Caribbean, 10 in Asia, and 8 in the Commonwealth of Independent States (see Appendix 1 for a detailed description of the methodology and definitions of terms and Appendix table 2a for a list of countries). The projections are based on 2001-2003 data. The periods covered are 2004 (current), 2009 (5-year forecast), and 2014 (10-year forecast). Projections of food gaps for the study countries through 2014 are based on differences between consumption targets and estimates of food availability, which is domestic supply (production plus commercial and food aid imports) minus nonfood use. The estimated gaps are used to evaluate food security of the study countries.

The food gaps are calculated using two consumption targets: 1) maintaining base per capita consumption or status quo (SQ), which is the amount of food needed to support 2001-2003 levels of per capita consumption; and 2) meeting nutritional requirements (NR), which is the gap between available food and food needed to support a minimum per capita nutritional standard (for definitions of terms used see Methodology in Appendix 1). Comparison of the two measures, either for countries, regions, or the aggregate, indicates the two different aspects of food security: consumption stability and meeting the nutritional standard.

The aggregate food availability projections do not take into account food insecurity problems due to food distribution difficulties within a country. Although lack of data is a major problem, an attempt was made in this report to project food consumption by different income groups based on income distribution data for each country. The concept of the income-consumption relationship was used to allocate the projected level of food availability among different income groups. The estimated "*distribution gap*" measures the food needed to raise food consumption of each income quintile to the minimum nutritional requirement. Finally, based on the projected population, the number of people who cannot meet their nutritional requirements is projected.

The common terms used in the reports are **domestic food** supply, which is the sum of domestic production and commercial and food aid imports; f**ood availability**, which is food supply minus non-food use such as feed and waste; **import dependency**, which is the ratio of food imports to food supply; and **food consumption** which is equal to food availability.

Table 1-1—Food availability and food gaps for 70 countries

Year	Grain production	Root production (grain equiv.)	Commercial imports (grain)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	410,087	61,111	55,121	8,562	668,294
1996	434,035	62,935	53,989	6,203	677,648
1997	423,897	64,870	59,112	6,458	681,917
1998	440,753	66,355	64,396	7,629	702,867
1999	455,565	71,410	65,019	8,586	726,695
2000	454,884	73,281	65,508	8,700	725,056
2001	471,994	75,469	64,329	9,601	757,112
2002	445,659	76,968	73,940	8,284	769,764
2003	484,756	77,255	74,773	8,494	797,969
Projections				**Food gap***	
				SQ / NR	
2004	475,436	79,496	75,168	***11,073*** / ***13,912***	776,431
2009	545,110	86,700	88,933	***7,872*** / ***11,471***	884,638
2014	607,199	94,458	100,876	***11,931*** / ***11,817***	975,831

*SQ stands for status quo and describes the amount of grain equivalent needed to support 2001-2003 levels of per capita consumption, and NR stands for nutritional requirements and describes the amount needed to support nutritional standards.

Source: FAOSTAT, USDA, ERS calculations.

the Asian and LAC regions at 46 percent. The CIS region is projected to have an increase, but the number of people consuming below the requirement relative to total population will remain small. Sub-Saharan Africa is projected to suffer a 15-percent increase in the number of people with a consumption shortfall.

The latest FAO report *The State of Food Insecurity in the World, 2004*, states that, in aggregate, the number of undernourished people in developing countries has increased since the second half of the 1990s. According to this report, the number of chronically undernourished people worldwide was estimated at 852 million in 1999-2001. Of this estimate, about 95 percent were in developing countries. The report shows that the incidence of undernutrition declined in Asia and Latin America, but rose in the Middle East, North Africa, and Sub-Saharan Africa.

Our estimates mirror FAO trend estimates, but are higher in absolute terms. In estimating hunger, we use an average daily requirement of 2,100 calories, versus FAO's 1,800 calories. Another difference is that our estimates are based on annual data, which include both chronic and transitory shortfalls in consumption. In contrast, FAO's estimates are based on 3-year averages. Including the variability is important since it reflects the profound impact of short-term food insecurity. Since 1992, variation from trend in the number of people consuming less than the nutritional requirement ranged from an annual increase of 150 million people to a decrease of 220 million people. In fact,

because of the frequency of transitory hunger, we could not identify a clear trend at the aggregate level in the number of food-insecure people in the study countries. This is not to say that there are no clear trends in specific regions or countries, but aggregate trends are harder to discern. Improvements in hunger in one country may be offset by deterioration in another.

The unambiguous trend, however, is the worsening of the situation in Sub-Saharan Africa, with no prospects for improvement. According to the FAO report, there is no shortage of resources to combat hunger, but "political will" is required to mobilize these resources. The fundamental forces that influence food security in Sub-Saharan Africa—domestic food production, available technology, and trade growth—can right themselves. Much greater food production is possible even in the most vulnerable countries. Sub-Saharan Africa has arable land that can be brought into production, although at some cost. In regions and countries with limited arable land, more intensive agricultural production under newly available technologies can improve yields. Trade can also enhance countries' food availability. The region's trade share in the global market was just 1.3 percent in 2002, a decline from about 3 percent in the early 1970s. There is significant potential for the region to expand its trade.

In Sub-Saharan Africa, however, the reality of the past dampens optimism. The region has been upended by years of political unrest and regional conflicts, and now is faced with the devastating effects of HIV/AIDS, which are difficult to quantify. According to the FAO report, 55 million Africans are projected to die from AIDS, over 2000 to 2020. A recent FAO report indicates that AIDS has reduced the economic growth of countries where the disease is widespread by 2-4 percent, deepening the problem of food insecurity. Despite the dampening effect of AIDS on population growth, it remains high in Sub-Saharan Africa, and is expected to remain so. The annual projected population growth during 2005-2015 is 2.4 percent, followed by 1.9 percent in North Africa, 1.7 percent in Asia and LAC, and 0.9 percent in CIS countries. Total population of the 70 countries is expected to grow from 2.8 billion in 2004 to 3.3 billion by 2014. Sub-Saharan Africa having to feed 157 million more people over the next 10 years is unlikely to break the cycle of hunger and poverty.

What Is in This Report?

All historical and projected data are updated relative to the 2003 Food Security Assessment (FSA) report. Food production estimates for 2004 are preliminary, based on USDA data as of October 2004, with supplemental data from the FAO and the World Food Program (WFP). Financial and macroeconomic data are based on the latest World Bank data. Projected macroeconomic variables are either extrapolated based on calculated growth rates for the 1990s or are World Bank projections/estimations. Seventy countries are covered in this report. Projections/estimates of food availability include food aid, with the assumption that each country will receive the 2001-2003 average level of food aid throughout the next decade.

This year, we have changed the format of the report. We treat food security by region and country in one section as opposed to separate regional

sections. Two additional sections focus on the twin pillars of food availability: production and imports. The analysis of food aid and its impact on food security is included in the import section.

This report includes one special article, "Genetically Engineered Corn in South Africa: Implications for Food Security in the Region." It reviews the importance of corn in the diet of most Southern African countries. Given the financial constraints that hinder import capacity, domestic corn production in South Africa is critical. However, exceedingly low yields and low levels of input use have reduced the region's food supplies. The adoption of higher yielding technologies holds some promise, especially the use of genetically engineered corn in South Africa.

Food Security: Regional and Country Perspectives

The most significant improvement over the next decade is expected in Asia, followed by Latin America and the Caribbean (LAC). In Sub-Saharan Africa (SSA), with the largest number of countries (37), there will be some improvement in per capita consumption and nutritional adequacy at the aggregate national level. However, the deep poverty that leads to hunger among the lower income population will remain unchanged.

North Africa

North Africa is and will continue to be a food-secure region, at the national level. Per capita calorie consumption in the region averages well above 3,000 calories per day, which is comparable to most developed countries. The region's per capita consumption is projected to remain stable over the next 10 years, with only a slight decline in Egypt. This compares with a 0.6-percent annual increase from 1980 to the present. This slowdown is a reflection of slower production growth—from 1.7 percent per year since 1990 to about 1.1 percent for the projection period. North Africa's trend mirrors trends in Egypt, the region's largest producer. Egypt's grain yields are by far the highest in the region—and among the highest in the world—but its growth is not expected to match that of the recent past.

As a result of the slowdown in production growth, Egypt is the only country in the region with aggregate-level food gaps. This means that during the next decade Egypt is not expected to maintain its per capita food consumption levels of 2001-03. By 2014, the status quo food gap for the region—based on Egypt's situation—is projected at 345,000 tons (table 1-2). The country will, however, be able to meet nutritional food needs in 2014. Algeria, Morocco, and Tunisia are projected to have sufficient food at the national level and when income inequality is taken into account for 2014.

The main food security issue for North African countries is the ability to finance imports. The region is dependent on imports for about half of its essential food items, and this share is expected to grow along with income as imports of higher value commodities rise. Food aid, which had been a

Table 1-2—Food availability and food gaps for North Africa

Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	19,881	1,353	20,186	250	47,162
1996	33,267	1,465	16,578	193	44,082
1997	22,439	1,192	20,691	137	46,027
1998	26,699	1,261	20,084	74	43,955
1999	24,476	1,202	21,590	105	46,670
2000	21,312	1,224	24,530	356	46,373
2001	25,442	1,239	23,989	82	47,505
2002	24,702	1,381	27,456	72	52,413
2003	32,220	1,412	27,477	47	57,778
Projections				**Food gap**	
				SQ NR	
2004	32,883	1,406	26,849	***0*** ***0***	58,031
2009	29,109	1,535	32,590	***0*** ***0***	59,850
2014	30,826	1,671	37,219	***345*** ***0***	65,377

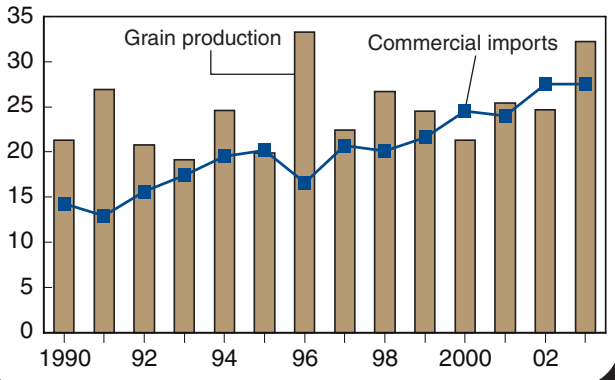
North Africa (147 million people in 2004)

Calorie consumption, on average, is well above the nutritional requirement of 2,100 calories per day.

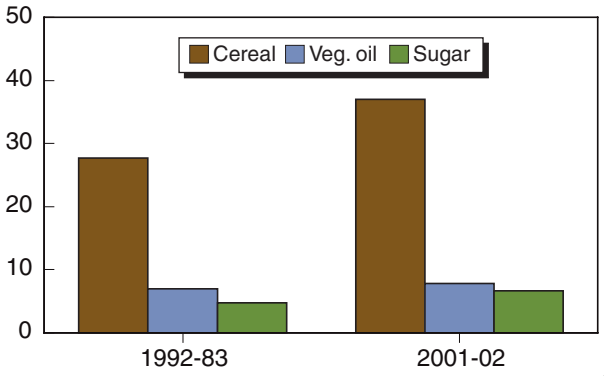
Although production growth is projected to slow relative to the historical period, food supplies will be adequate to meet nutritional requirements through the next decade.

Imports contribute about 45 percent of food supplies and the share is projected to increase. Therefore, the state of the economies of these countries and export potential play a key role in the food security outlook.

North Africa: Grain production and imports



North Africa: Commodity imports as share of domestic consumption



North Africa: Food import dependency

	Food imports		Food as % of tot. imports		Cereal imports as % of consumption	
	2001-02	Growth since 1992-93	1992-93	2001-02	1992-93	2001-02
	1,000 U.S. dollars		*Percent*			
North Africa	7,251,597					
Algeria	2,503,134	17.2	24.5	22.9	40.1	46.4
Egypt	2,740,579	49.6	22.2	17.7	22.9	23.4
Morocco	1,290,318	50.4	12.2	11.4	30.0	34.4
Tunisia	717,567	81.9	6.3	7.5	18.0	43.8

Source: FAOSTAT, ERS calculations.

major source of imports, for Egypt in particular, in the early 1980s, currently accounts for less than 1 percent of total food imports in the region. This makes financial capacity a critical element in projecting the region's food security. Recent growth in oil prices is good news both directly (as exporters) and indirectly because of the gains from worker remittances. Higher oil prices are expected to stimulate regional labor migration and increase remittances. Among the four countries in the region, Algeria is the only one where the value of exports has been higher (15 percent) than imports during 2000-02. External financing accounted for 25 percent of imports in Morocco, 16 percent in Egypt, and 7 percent in Tunisia. Historically, these countries have been successful in accessing credit to finance imports. Continuing political unrest and slowdown in tourism/investment could hurt the region's finances.

Sub-Saharan Africa

Sub-Saharan Africa's per capita food consumption is projected to follow the trend of the last two decades and remain stagnant through 2014. Annual production growth is projected at 2.5 percent for the next decade, fairly close to population growth (table 1-3). The number of hungry people (those who can not meet the nutritional target) in the region is projected to increase from an estimated 333 million in 2004 to 383 million in 2014 (fig. 1-1). This rate of increase, however, is less than the region's population growth rate, meaning that the share of hungry people in the region will decline from 52 percent in 2004 to 48 percent in 2014. Still, this is the only region where the number of undernourished people is projected to grow in absolute terms.

In Sub-Saharan Africa, the food security problem stems both from inadequate food availability and unequal access to what is available. In other regions, food availability may be adequate, but lack of purchasing power is the main impediment to food security. In SSA, inequality in food access deepens the severity of the situation. According to our estimates for 2004, average per capita food consumption (availability) fell short of the nutritional requirement in 15 of the 37 SSA countries. In 29 countries, per capita food consumption is estimated to be less than the average of 2001-03. The region has about 23 percent of the population of the 70 study countries, but is saddled with more than 80 percent of various food gaps.

This pattern is not new. While obesity becomes more prominent in most developed and some developing countries, per capita food consumption in many Sub-Saharan countries continues to decline. Based on FAO data, annual per capita calorie consumption has declined in 12 of these countries since 1990. Average daily consumption in the region was 2,208 calories in 2001-02, slightly higher than the 2,100-calorie average requirement and 20 percent less than the global average (2,804 calories per day in 2002). Average daily consumption for the most food-insecure countries in the region is 1,776 calories—about 15 percent less than the requirement and 37 percent less than the global average.

Seven of the SSA countries—Democratic Republic of Congo, Burundi, Eritrea, Ethiopia, Somalia, Chad, and Sierra Leone—have especially severe food insecurity, with consumption falling below the nutritional target across

Table 1-3—Food availability and food gaps for Sub-Saharan Africa (SSA)

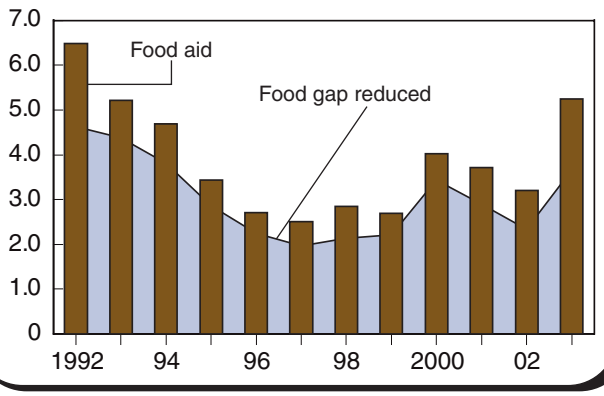
Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	64,250	40,480	6,795	3,431	136,843
1996	68,799	41,412	7,670	2,707	140,167
1997	63,592	42,729	10,248	2,497	141,685
1998	71,237	45,678	12,050	2,837	152,901
1999	67,570	47,768	9,814	2,690	152,828
2000	68,552	49,120	10,784	4,027	157,677
2001	73,862	51,126	13,108	3,722	170,429
2002	68,281	51,677	14,075	3,225	170,204
2003	74,919	51,352	13,526	5,251	177,979
Projections				**Food gap**	
				SQ NR	
2004	71,567	53,352	14,378	***9,454 13,394***	168,947
2009	89,866	58,235	15,537	***7,079 10,792***	199,298
2014	103,519	63,499	16,781	***10,912 11,171***	223,410

Sub-Saharan Africa (645 million people in 2004)

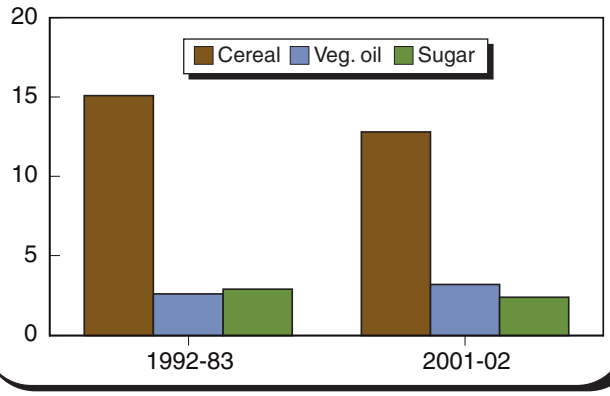
At the regional level, per capita consumption is projected to increase nominally through the next decade. However, at the national level, it will decline in 16 of the 37 countries.

The number of hungry people in the region is projected to rise from 333 million in 2004 to 383 million in 2014. This means that roughly half of the region's population will consume less than their nutritional requirements throughout the next decade.

Average food aid effectiveness in reducing food gaps was 79% in SSA



Sub-Saharan Africa: Commodity imports as share of domestic consumption



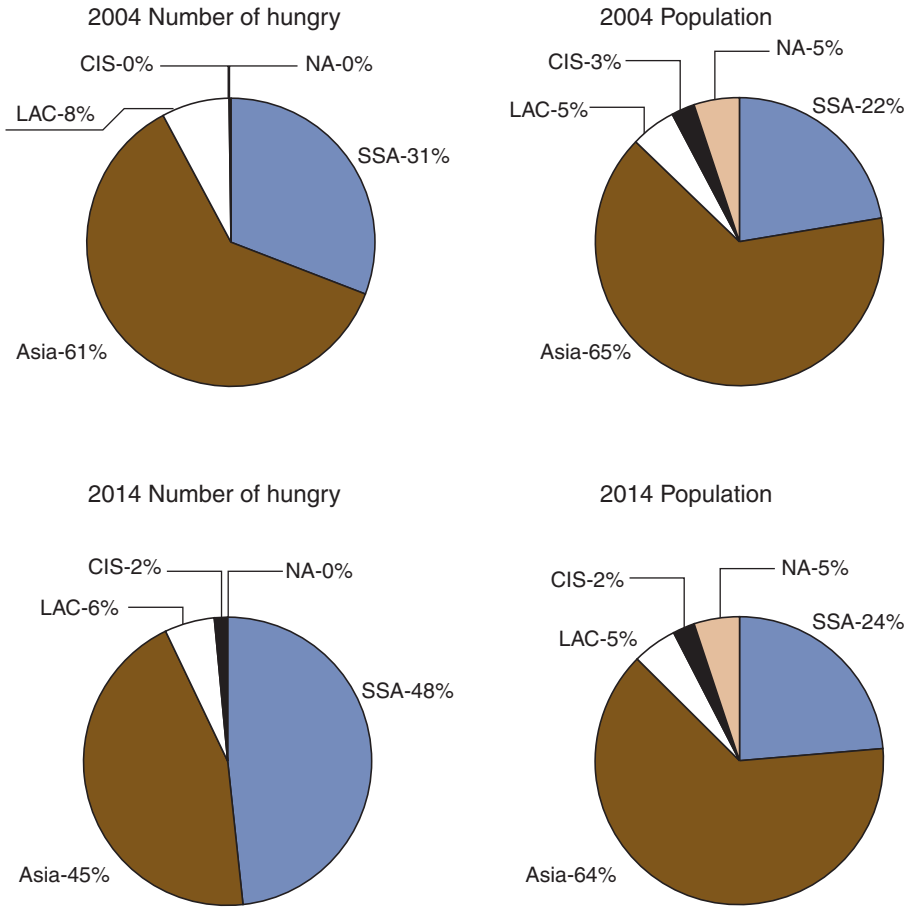
Sub Saharan Africa: Food import dependency of selected countries

	Food imports		Food as % of tot. imports		Cereal imports as % of consumption	
	2001-02	Growth since 1992-93	1992-93	2001-02	1992-93	2001-02
	Mil. U.S. dollars		*Percent*			
SSA	**6,768,253**					
Ethiopia	169,766	73.9	12.7	9.7	4.5	5.7
Senegal	436,621	50.2	24.2	28.8	22.2	32.3
Rwanda	42,665	-5.8	14.1	16.3	6.2	1.9
Kenya	271,680	48.3	10.1	7.5	7.5	11.0
Tanzania	195,077	136.0	5.6	11.5	2.6	5.5

Source: FAOSTAT, ERS calculations.

Figure 1-1

SSA will have the largest share of hungry people by 2014



Source: Economic Research Service, USDA.

all income quintiles in 2004. Most of these countries have been embroiled in some kind of internal conflict. In the Dem. Rep. of Congo, per capita food availability has been declining since 1992 and has fallen short of the nutritional target since 1995, measuring 77 percent in 2003. Even with optimistic assumptions for area and yield growth, production growth is not likely to exceed projected population growth of nearly 3 percent per year through the next decade. Per capita availability in Ethiopia has risen steadily since the war with Eritrea ended in 1991. However, it remains less than 90 percent of the nutritional target. In Somalia, grain production is about half that of pre-war levels of the late 1980s. As a result, the nutritional situation is desperate—availability in 2003 was 64 percent of the nutritional target.

The food security outlook for Sub-Saharan Africa is based on historical performance and some factors could alter the outcome. Growth in prices for oil and metal is welcome news for Nigeria, Angola, and Chad. If these increased earnings are managed carefully, they can have positive long-term economic benefits. Improvements in the political situation for some of the most food-insecure countries, such as Burundi and the Central African Republic, also hold promise for future recovery. For most SSA countries, however, higher oil prices are expected to dampen economic growth and

place additional pressure on import bills. Overall, the outlook is filled with risk. Political conflict continues to flare up in different countries. The region remains highly vulnerable to drought. Despite donors' increasing support for the fight against HIV/AIDS, health issues will put tremendous pressure on African countries indefinitely.

Lower Income Asian Countries

Growth in per capita food consumption in the Asian countries included in this report (10 countries) has been just 0.36 percent per year since 1990. This trend is projected to improve slightly during the next decade. This slow growth springs from the conservative import policies of countries like India, Bangladesh, and Nepal, which have resulted in some of the lowest import dependency rates of all the study countries. The value of total exports grew about 10-13 percent per year since 1990 in these countries, which would have allowed for higher food imports in the absence of such protectionist policies. The expected consequence of limited imports is an estimated decline in per capita food consumption in Bangladesh and Nepal and slight improvement in India. The estimated status quo food gap—the food needed to maintain per capita consumption—of 1.5 million tons in 2004 is projected to decline by more than half by 2014 (table 1-4).

During the next decade, the Asian region is projected to become more nutritionally food secure as population growth slows and production growth is maintained. Population growth, which averaged 2 percent per year during the 1980s and 1990s, is projected to fall to 1.5 percent per year. Production growth is projected to nearly match its historical rate of 2.2 percent per year. This means that by 2014, at the average national level, there would be adequate food to meet the nutritional needs of the countries.

The income disparity within countries, however, is expected to remain an obstacle to food security of the lower income groups in the region. Given the expected improvement in all relevant indicators, the impact of income disparity on food consumption will be much smaller in the next decade. The estimated regional distribution gap in 2004 was 8.6 million tons, but is projected to decline to 3 million tons by 2014. The improvements are reflected in fewer hungry people in the region. In 2004, it is estimated that 664 million people—or 35 percent of the population—were hungry. By 2014, this number is projected to fall to 354 million, or 16 percent. This success is principally driven by improvements in all countries except Afghanistan and North Korea. In Vietnam, per capita consumption is projected to continue rising by 1.2 percent per year through 2014 as a result of near 4-percent annual growth in production and low population growth. By 2014, even the poorest 10 percent of Vietnam's population, on average, could be consuming 13 percent above the nutritional target.

Afghanistan will remain the region's most nutritionally vulnerable country. After the recovery in agricultural output in 2003, grain production declined in 2004. The country remains dependent on imports and food aid for about 20 percent of its consumption. Commercial imports are primarily supported by external financial assistance since exports covered only 16 percent of the total value of imports in 2000-02. Traditional exports such as livestock

Table 1-4—Food availability and food gaps for Asia

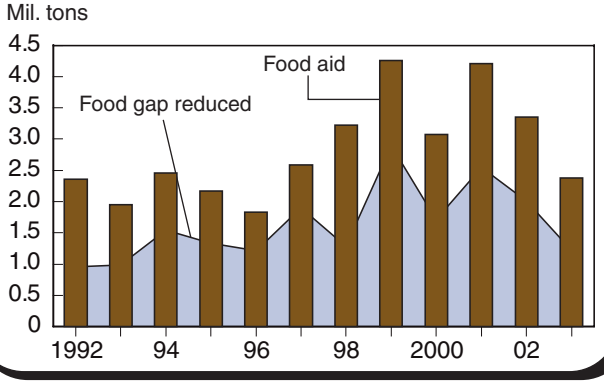
Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	299,293	15,574	17,355	2,170	432,090
1996	303,164	16,277	16,568	1,834	440,090
1997	307,074	17,183	15,279	2,591	440,658
1998	317,031	15,644	18,657	3,223	450,938
1999	328,635	18,206	20,859	4,259	468,280
2000	333,190	18,571	16,572	3,070	465,754
2001	335,386	18,604	13,600	4,209	480,811
2002	312,002	19,307	18,620	3,345	485,160
2003	337,400	19,781	19,037	2,381	498,953
Projections				**Food gap**	
				SQ NR	
2004	332,905	19,912	18,616	***1,487 52***	484,713
2009	383,597	21,662	21,509	***786 75***	551,072
2014	427,414	23,545	22,766	***643 0***	600,841

Asia (1,788 million people in 2004)

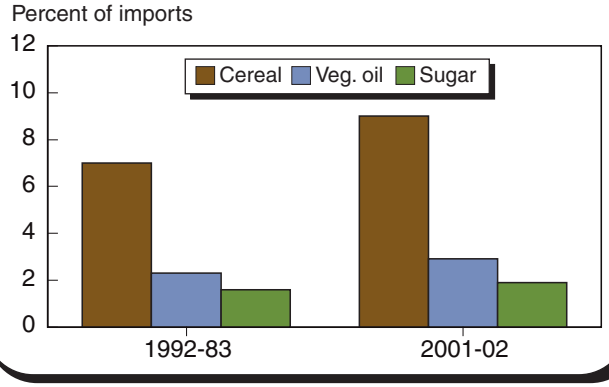
The number of hungry people in Asia is projected to decline from 664 million people in 2004 to 354 million people in 2014. In terms of population share, this marks a decline from 37 percent to 17 percent. India is projected to account for nearly all of this decline as the country's continued slowdown in population growth and steady production growth will result in rising per capita consumption.

The most vulnerable country in the region is Afghanistan, where roughly 60 percent of the country's population is projected to be hungry in 2014.

Average food aid effectiveness in reducing food gaps was 57% in Asia



Asia: Commodity imports as share of domestic consumption



Asia: Food import dependency of selected countries

	Food imports		Food as % of tot. imports		Cereal imports as % of consumption	
	2001-02	Growth since 1992-93	1992-93	2001-02	1992-93	2001-02
	Mil. U.S. dollars		*Percent*			
Asia	**9,258,641**					
Afghanistan	145,405	na	25.6	na	na	na
Bangladesh	745,134	-60.6	10.5	8.5	4.9	8.3
India	1,302,039	6.5	2.9	2.4	0.3	0.0
Indonesia	2,622,142	5.7	4.4	8.4	4.3	7.8
Korea, Dem.R.	294,413	835.2	18.6	22.6	11.7	26.8
Pakistan	617,218	-90.3	8.4	5.8	7.6	0.5

Source: FAOSTAT, ERS calculations.

products and fruits/vegetables remain limited. Political stability has followed the recent successful election, but security remains precarious. In addition, the outlook for economic growth, which is highly dependent on the flow of external assistance, remains uncertain. Income disparity within the country also remains a problem and that could intensify food insecurity of the country over time. Assuming the continuation of current weak production growth and an increase in external assistance to support food imports, the distribution gap is projected to increase from 305,000 tons in 2004 to 776,000 tons by 2014. This deterioration would intensify food insecurity for an increasing share of the population—from 40 percent in 2004 to about 60 percent by 2014.

North Korea is the region's second most vulnerable country. Grains contribute about two-thirds of total food consumption and imports account for 40 percent of grain consumption. More than half of the grain imports, annually more than 1 million tons (2000-3003), are food aid. Grain production declined gradually through the 1990s, followed by a sharp drop in 2000. Since then, output has begun to recover, albeit slowly. North Korea depends on external assistance for 25 percent of its imports and, because of its political situation, continued support is uncertain. Therefore, per capita food consumption is projected to decline in the next decade. Consumption was estimated to fall short of the nutritional target in 2004 for only the bottom income group; by 2014, this may be true for the bottom two groups. As such, between 20 and 40 percent of the population will be hungry. These results are highly dependent upon continued shipments of food aid. In our analysis, we assume food aid to be constant through the projection period at the base (2001-2003) level. If food aid reverts to levels of the mid-1990s (less than half of recent levels), food security in North Korea would deteriorate significantly.

Lower Income Latin American and Caribbean Countries

Per capita food availability in the region as a whole is steadily increasing. All 11 countries are projected to improve their food availability during the next decade (table 1-5). This increase in food supplies comes from rapidly growing food imports. The average annual growth rate for the region's food imports was above 5 percent per year between 1980 and 2003, with 7-percent growth since 1990. Growth in food production is slightly less than projected population growth of about 2 percent. Only Haiti, Honduras, and Nicaragua are expected to have nutritional food gaps in 2004; in Haiti and Nicaragua, this gap is expected to grow during the next decade.

A lack of nutritional gaps at the national level does not preclude food-insecure people. The distribution gap, which accounts for skewed income distributions by measuring the food needed to raise consumption of each income quintile to the nutritional requirement, reveals that food insecurity exists in all LAC countries, with the exception of Jamaica. In fact, Latin American countries have the most skewed income distribution in the world. The share of income held by the highest income quintile ranged from 49 percent in Jamaica to 64 percent in Guatemala. In contrast, the share held by the lowest income quintile ranged from less than 1 percent in Peru to 2.7 percent in Jamaica. The sharp income

Table 1-5—Food availability and food gaps for Latin America and the Caribbean

Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	10,282	2,992	8,158	876	31,860
1996	10,110	3,047	9,035	722	32,555
1997	9,831	3,005	9,773	658	32,507
1998	10,138	2,989	10,474	1,013	33,977
1999	11,267	3,296	9,716	1,178	34,432
2000	11,430	3,424	10,209	887	35,363
2001	11,497	3,368	11,095	1,067	36,461
2002	11,787	3,409	11,854	1,127	38,088
2003	12,198	3,433	12,562	539	38,632
Projections				**Food gap**	
				SQ NR	
2004	11,892	3,540	13,090	***131*** ***465***	38,680
2009	13,542	3,865	16,885	***7*** ***527***	47,419
2014	14,663	4,214	21,574	***32*** ***539***	56,982

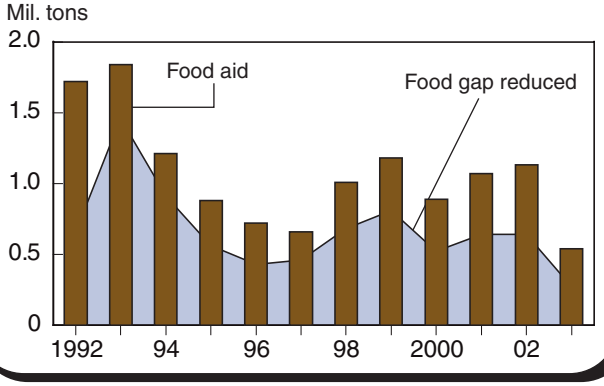
Latin America and the **Caribbean** (147 million people in 2004)

Food security in the region is projected to improve over the next 10 years, with the number of hungry people projected to decline from 82 million in 2004 to 47 million in 2014.

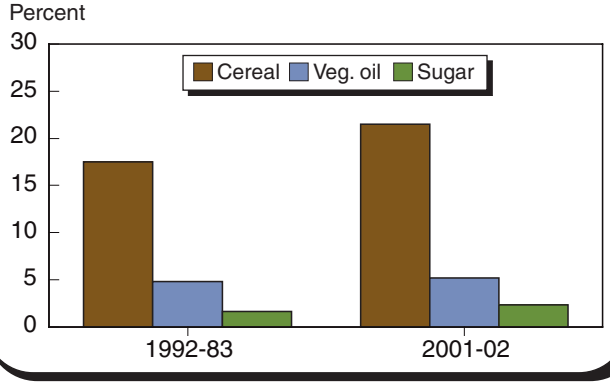
Commercial food imports will increasingly replace domestic production as the main food source.

Haiti, Honduras, and Nicaragua, the chronically food-insecure countries in the region, are likely to continue to require food aid.

Average food aid effectiveness in reducing food gaps was 62% in LAC



LAC: Commodity imports as share of domestic consumption



Latin America and the Caribbean: Food import dependency of selected countries

	Food imports		Food as % of tot. imports		Cereal imports as % of consumption	
	2001-02	Growth since 1992-93	1992-93	2001-02	1992-93	2001-02
	Mil. U.S. dollars		*Percent*			
LAC	**5,476,384**					
Guatemala	667,591	175	9.1	11.4	12.6	27.7
Haiti	279,461	286	55.9	25.9	23.9	28.6
Honduras	409,137	153	9.3	13.7	9.8	21.4
Nicaragua	211,765	141	18.0	11.9	10.0	12.1
Peru	776,796	-72	16.6	10.7	28.8	19.1

Source: FAOSTAT, ERS calculations.

disparity limits purchasing power and leads to food insecurity for a large share of population in these countries. In 2004, between 40 and 60 percent of the population are estimated to have been unable to achieve nutritional requirements in Bolivia, Colombia, the Dominican Republic, El Salvador, Ecuador, and Peru. The most severely affected countries are Guatemala, Haiti, Honduras, and Nicaragua, with more than 80 percent of their population deemed food insecure.

Projections for 2014 indicate that—except for Haiti, Honduras, and Nicaragua, where food insecurity will remain unchanged or grow worse—food security in the region is expected to improve, reducing the number of hungry people from 82 million in 2004 to 44 million by 2014. In Haiti, the potential for political uncertainty is problematic, but donors are aware of the tremendous need for food assistance in the country. In Nicaragua and Honduras, agricultural production and economic growth are just keeping pace with population growth of about 2.5 percent, holding per capita food consumption constant over the coming decade. Much faster growth in yields and income will be necessary to raise average consumption to the level of nutritional requirements.

The growing food import dependency of LAC countries, particularly for staple foods such as grains, dramatizes the issue of import financing. During 2000-02, countries such as Guatemala, Nicaragua, and Haiti used external support to finance 40 to 60 percent of their import bills (merchandise and services). In Bolivia, Honduras, the Dominican Republic, and El Salvador, external support covered 20 to 27 percent of their import bill. Jamaica was dependent on external support for 5 percent of its imports, while Peru and Columbia had a net trade surplus. Most countries are expected to be able to secure adequate external financing for imports, but countries like Haiti and Nicaragua that rely on such assistance for more than half of their import bill could be exposed to more vulnerability.

Commonwealth of Independent States (CIS)

There were no food gaps in 2004 for the eight CIS countries monitored in this report in terms of meeting average consumption or nutritional targets (table 1-6). For most countries, grain harvests will be near trend levels over the next decade. Because of stagnant crop production in the region, imports continue to rise. Low population growth of less than 1 percent per year eases food security pressure. Only Kazakhstan continues to be a significant grain exporter. Over the next decade, only Tajikistan will have a nutrition-based food gap, about 107,000 tons by 2014.

About 2 million people, or the 20 percent of the population in the lowest income quintile, in Georgia and Tajikistan were estimated to consume less than the nutritional requirement in 2004. In other countries, food insecurity is limited to less than 10 percent of the population. Projections for 2014 indicate a deterioration of the food situation in Tajikistan, and that could mean expanding food insecurity to 80 percent of the population (6 million people). The continuation of the decline in commercial imports is projected to worsen food security in Uzbekistan such that by 2014, consumption in the lowest income quintile—20 percent of the population—will fall just short of

Table 1-6—Food availability and food gaps for Commonwealth of Independent States (CIS)

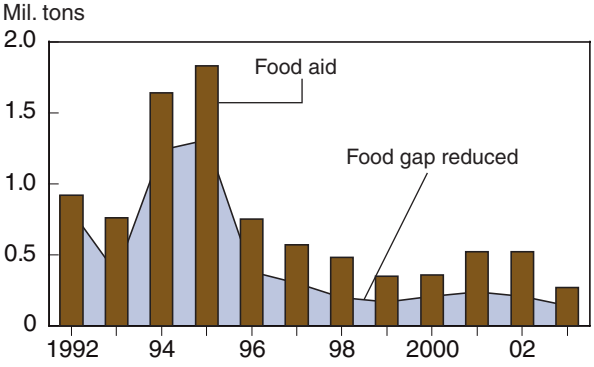
Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grain equiv.)	Aggregate availability of all food
			1,000 tons		
1995	16,381	712	2,627	1,834	20,339
1996	18,695	735	4,138	747	20,754
1997	20,961	761	3,120	575	21,039
1998	15,648	782	3,132	481	21,096
1999	23,617	937	3,039	353	24,485
2000	20,400	943	3,413	360	19,889
2001	25,807	1,131	2,536	521	21,906
2002	28,887	1,194	1,935	516	23,898
2003	28,019	1,277	2,171	275	24,627
Projections				**Food gap**	
				SQ NR	
2004	26,189	1,286	2,236	***0 0***	26,061
2009	28,995	1,403	2,413	***0 77***	26,999
2014	30,776	1,529	2,536	***0 107***	29,222

CIS (75 million people in 2004)

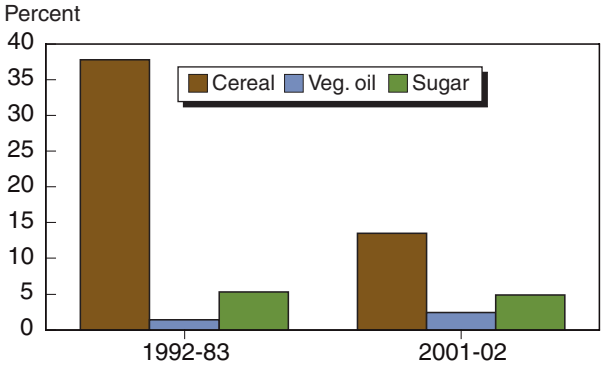
Only Tajikistan is projected to have longrun nutritional food gaps in this region, but food access might become a problem for the lowest income quintile in Uzbekistan during the next 10 years. The number of hungry people is projected to rise from 2 million in 2004 to 12 million in 2014.

Grain consumption declined sharply between 1992 and 1998, but has since rebounded. Food aid historically served as an important buffer to shocks in food availability. Only a few CIS countries today still rely on food aid to a significant degree.

Average food aid effectiveness in reducing food gaps was 56% in CIS



CIS: Commodity imports as share of domestic consumption



Commonwealth of Independent States: Food import dependency of selected countries

	Food imports		Food as % of tot. imports		Cereal imports as % of consumption	
	2001-02	Growth since 1992-93	1992-93	2001-02	1992-93	2001-02
	Mil. U.S. dollars		*Percent*			
CIS	**1,299,104**					
Armenia	147,376	5	70.0	16	42.9	31.4
Azerbaijan	194,787	-14	58.3	13	33.9	19.2
Georgia	172,537	-15	81.1	24.7	58.9	20.9
Kazakhastan	399,566	5	37.9	6.2	1.5	0.2
Tajikistan	96,625	150	44.6	13.7	63.1	25.5

Source: FAOSTAT, ERS calculations.

the nutritional target. Food security in Georgia is projected to improve as import capacity and grain production will grow as population declines.

Grain consumption in many CIS countries has increased since the late 1990s. In fact, per capita grain consumption, after declining 3 percent annually during 1988-98, increased sharply and in 2003 was nearly equal to the 1988 level. This gain is mainly due to production recovery. Grain imports as a share of total grain supply ranged from 20 to 25 percent in the early 1990s, but declined to about 7 percent by 2002-03. The recovery was not limited to the grain sector. Annual export growth of 7 percent overall surpassed the 4-percent import growth during 1992-02. Most countries in the region export oil, natural gas, and minerals. The recent oil and commodity price hikes have improved the financial situation of the countries, though this improvement is not uniform. The CIS countries with robust macroeconomic growth since the mid-1990s are Azerbaijan, Armenia, and Kazakhstan. The recovery has been slower and uneven in Georgia, Kyrgyzstan, Turkmenistan, Tajikistan, and Uzbekistan.

Future growth in the region depends on political stability since there are many unresolved disputes over national boundaries. Diversifying export destinations is also critical to maintaining growth. Currently, Russia is the main trading partner. According to the IMF World Economic Report (2004), the investment climate in these countries remains uncertain, with particularly weak regulatory institutions. Much policy reform is needed to develop market structure and institutions for market-based economies.