

## Asia

*Afghanistan's grain output for 2002 is just shy of the last good harvest in 1998, but nutritional food gaps remain high at nearly 1.1 million tons. North Korea shows a relatively small food gap in 2002, but this assumes that relatively large amounts of food aid will continue. The number of people in Asia not meeting nutritional requirements is expected to decline in the next decade from roughly 583 million people to about 257 million, with most of the decline coming from India. [Michael Trueblood]*

Food security for the Asian countries included in this analysis is expected to improve significantly over the next decade.<sup>1</sup> The number of people not meeting nutritional requirements is expected to decline from roughly 583 million people in 2002 to about 257 million people in 2012. Because of the relatively large size of Asia's population compared with other regions, the number of hungry people worldwide should be significantly reduced. Asia's estimated share of the global population that does not meet nutritional standards should drop from about 58 percent in 2002 to 37 percent in 2012.

The region's major food situation story for 2002 is the remarkable harvest in Afghanistan. Grain production is estimated at 3.6 million tons, which is just shy of the last good harvest in 1998. This positive development is explained by an end of the 3-year drought and return to political stability, which has encouraged farmers to go back to their land. The large number of returning refugees, however, is straining food resources in the short run. The quality of data necessary to estimate Afghanistan's shortrun and longrun food gaps is weak. However, according to ERS projections, Afghanistan's high output level in 2002 means that it will have no status quo food gap this year; that is, the country will be able to at least meet consumption levels of the previous 3 years. This target is quite low though because 1999-2001 was characterized by very low output and significant nutritional deficits. When nutritional requirements are used as the consumption target, the gap soars to nearly 1.1 million tons (about 18 percent below requirements).

Nepal and North Korea are estimated to have status quo food gaps in 2002. This year's report employs a new methodology that included 1999-2001 food aid levels in projected food availability. In North Korea, where food aid averaged more than 1.2 million tons in

1999-2001, food availability is augmented considerably, and, therefore, food gaps are relatively small—9,000 tons. Nepal is estimated to have a larger status quo food gap of 265,000 tons.

Distribution gaps—the amount of food required to bring all income groups within a country up to nutritional requirements—are significant throughout the Asian region due to generally low per capita incomes and the skewed distribution of income. Excluding Afghanistan and North Korea, for which no data exist, the region's incomes average about \$540 per person, ranging from \$240 in Nepal to \$1,040 in the Philippines. Because of the size of its population, India has a much larger distribution gap in 2002 (6.4 million tons) than the other countries in the region. Afghanistan has the next largest distribution gap, at 1 million tons. These gaps are projected to decline for the region overall by 2012, primarily due to the large reduction expected in India. The diminishing distribution gap in India is expected to result from rising per capita production growth, declining population growth, and brisk export growth that will allow financing of additional food imports. However, this result should be viewed with caution because of rising consumer food costs in India and an inefficient food safety net program (see "India's Consumer and Producer Price Policies: Implications for Food Security" in this report). Distribution gaps will increase in absolute terms over the next decade for some countries (Afghanistan, Bangladesh, North Korea, and Nepal).

Access to food has been boosted by rapid per capita income growth over the last decade in several countries and this trend is expected to continue. Vietnam's per capita income has doubled since 1991 as a result of strong growth of 12 percent per year. Sri Lanka (up 6.1 percent) and the Philippines (up 4.2 percent) also have experienced rapid annual growth. Finally, per capita incomes in Bangladesh (up 3.2 percent) and India (up 3.0 percent) have grown steadily over the last decade.

<sup>1</sup> The countries covered include Afghanistan, Bangladesh, India, Indonesia, Nepal, North Korea, Pakistan, Philippines, Sri Lanka, and Vietnam.

The longrun food security outlook is promising in the region, with the exception of a few countries. North Korea is projected to have an increasing status quo food gap throughout the next decade, assuming a continuation of relatively large food aid donations, but not a nutritional food gap. This result should be interpreted carefully. Donors allocate food aid on fixed yearly budgets, so the amount of available food aid can fluctuate due to budget constraints or be limited by high commodity prices. If North Korea does not receive food aid at recent levels, the country would show both status quo and nutritional food gaps. Recent reports about the food situation in the country indicate that children and the elderly suffer from malnutrition. Nepal also shows a growing status quo food gap, but not a nutritional food gap, which indicates that there is a strain on resources in these countries to maintain current per capita consumption patterns that are above nutritional requirements. Afghanistan is the only country expected to have a nutritional food gap in 2012 (2.3 million tons), but there is much uncertainty over the country's path to recovery. Assuming that there is political stability, the current model is guardedly optimistic and projects that area sown will recover over the next decade to the earlier high levels in the 1980s.

Domestic production is the dominant source of food supplies in the Asian region, although there has been a noticeable increase in the import share of consumption over the last decade (from about 3.5 percent to 6 percent). Given this major role of domestic production, it is important to note the trends in production performance over the last two decades. The region is split fairly evenly between countries in which production growth has been accelerating and those in which growth has been slowing down. Bangladesh, Pakistan, and Sri Lanka reversed a negative per capita production trend in the 1980s to a positive trend in the 1990s. Vietnam increased its positive growth rate in the 1980s to an even faster growth rate in the 1990s (2.2-3.3 percent). Conversely, Afghanistan and North Korea experienced a more rapid decline in growth in the 1990s than in the 1980s. Per capita production in Indonesia, Nepal, and Philippines went from positive trends in the 1980s to negative trends in the 1990s. Finally, India's production trends were positive in both the 1980s and 1990s, but have been slowing down in the last decade.

Production volatility in the Asian region is the lowest of the regions examined in this report. The production coefficient of variation for the region has been steady in recent decades at around 6.5 percent. Much of this stability is explained by the relatively large portion of

land that is irrigated compared with other regions. Only two countries, Afghanistan and Bangladesh, saw their coefficient of variations increase noticeably. Bangladesh's increase from the 1980s to the 1990s was modest (3-8 percent), while Afghanistan's increase (9-22 percent) was driven mostly by civil strife. Only Afghanistan and North Korea experienced an increase in the number of production shocks (defined as 10 percent or more below trend) in the 1990s, compared with the 1980s. The number of production shocks in Pakistan and Vietnam declined from 4-5 in the 1980s to 0 in the 1990s.

To further explore the issue of production volatility, hypothetical production shocks were considered for selected countries in 2003. The hypothetical production shocks took the worst percentage shock from the past 20 years in that particular country. If Afghanistan were to experience a 43-percent production shock in 2003, this would lead to a status quo food gap of 1.2 million tons and a nutritional food gap of 3.2 million tons. In contrast, the highest level of food aid Afghanistan received during 1980-2000 was about 500,000 tons, making this scenario potentially alarming.

At first glance, Bangladesh, India, and Vietnam appear to face large food gaps if and when they experience negative production shocks again. However, Bangladesh and India both would be able to cope with these shocks and eliminate the food gaps. Bangladesh's worst shock in recent years was 11.8 percent (1994). If this occurred in 2003, the country would have a status quo food gap of 2.9 million tons. Based on historical patterns, the country should be able to draw down stocks and increase its commercial imports to eliminate this gap. If India experienced a production shock of 16.8 percent, as it did in 1987, the country would have a status quo food gap of 3.6 million tons and a nutritional gap of 8.7 million tons. However, India's stocks have been at record highs in recent years (averaging about 39 million tons), so the country should be able to tap into these stocks to address the problem. It is not clear if Vietnam has the resources to cope with another large shock, though. If Vietnam experienced a 22.4 percent shock as in 1986, it would have a status quo gap of 4.3 million tons. The country could draw down some stocks, increase commercial imports, and reduce its food exports, but if it did this at the highest rates of previous years, the country would still have a deficit of about 2.2 million tons. Hypothetically, Vietnam could solve the problem by imposing a total ban on grain exports, but such bans are typically unpopular politically.

**Table 4—Food availability and food gaps for Asia**

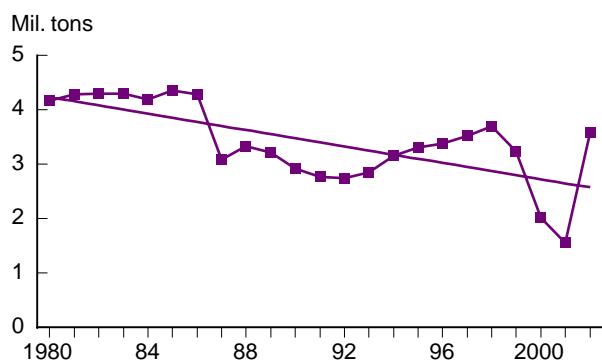
Year	Grain production	Root production (grain equiv.)	Commercial imports (grains)	Food aid receipts (grains)	Aggregate availability of all food
			1,000 tons		
1993	285,926	15,544	11,398	1,792	404,271
1994	289,873	15,706	11,187	1,942	414,713
1995	299,293	15,565	18,026	2,107	433,975
1996	303,164	16,297	17,094	1,686	441,913
1997	307,074	17,218	16,338	2,105	442,409
1998	316,759	15,722	17,792	4,553	451,655
1999	329,398	18,247	22,494	3,200	470,316
2000	332,728	18,707	16,013	3,305	467,381
2001	328,625	18,730	15,838	3,441	476,173
<b>Projections</b>				<b>Food gap</b>	
				SQ	NR
2002	320,500	19,173	18,440	<b>273</b>	<b>1,085</b>
2007	374,348	20,751	22,019	<b>404</b>	<b>2,425</b>
2012	407,832	22,440	25,891	<b>628</b>	<b>2,262</b>

**Asia**  
(1,737 million people)

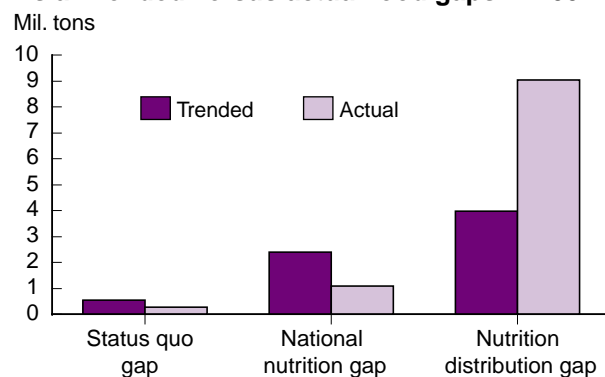
Afghanistan has experienced a recovery in output after two consecutive droughts. North Korea also is experiencing a good harvest in 2002. However, food supplies will still fall short of needs, despite expected food aid deliveries of about 1.5 million tons.

The number of hungry people in Asia is projected to decline from 583 million people in 2002 to 257 million people in 2012. Most of the decrease is projected to come from improvements in the lowest income groups in Bangladesh and India.

**Afghanistan's grain production is up in 2002 after previous sharp decline**



**Asia: Trended versus actual food gaps in 2002**



**Asia: Food aid**

	Total food aid received		Food aid per capita		Highest food aid amount received		Food aid as % of imports	
	1980-90	1991-2000	1980-90	1991-2000	1,000 tons	Year	1980-90	1991-2000
	1,000 tons		Kg				Percent	
<b>Asia</b>	<b>33,820</b>	<b>28,302</b>	<b>4.9</b>	<b>5.3</b>			<b>43*</b>	<b>40*</b>
Afghanistan	2,439	1,504	16.4	7.0	517	1987	1,324	84
Bangladesh	14,614	8,965	13.6	6.5	1,687	1986	73	50
India	3,411	3,007	0.4	0.3	456	1989	87	142
Indonesia	2,324	2,703	1.3	1.2	1,374	1998	9	4
Korea, Dem. Rep.	0	6,919	0.0	25.3	1,474	2000	0	48
Pakistan	5,104	1,581	1.6	1.4	701	1987	87	9

\* Without Afghanistan.

Source: FAOSTAT, ERS calculation.