

## Appendix—Food Security Model: Definition and Methodology

The Food Security Assessment model used in this report was developed by USDA's Economic Research Service for use in projecting food consumption and access and food gaps (previously called food needs) in low-income countries through 2015. The reference to food is divided into three groups: grains, root crops, and a category called "other," which includes all other commodities consumed, thus covering 100 percent of food consumption. All of these commodities are expressed in grain equivalent.

Food security of a country is evaluated based on the gap between projected domestic food consumption (produced domestically plus imported minus nonfood use) and a consumption requirement. Like last year, we use total food aid data (cereal and noncereal food commodities) provided by the World Food Program (WFP). All food aid commodities were converted into grain equivalent based on calorie content to allow aggregation. 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), one ton of vegetable oil (8 calories per gram) is equivalent to 2.29 tons of grain (8 divided by 3.5).

It should be noted that while projection results will provide a baseline for the food security situation of the countries, results depend on assumptions and specifications of the model. Since the model is based on historical data, it implicitly assumes that the historical trend in key variables will continue in the future.

Food gaps are projected using two consumption criteria:

1) *Status quo target*, where the objective is to maintain average per capita consumption of the recent past. The most recent 3-year average (2002-2004) is used for the per capita consumption target to eliminate short-term fluctuations.

2) *Nutrition-based target*, where the objective is to maintain the minimum daily caloric intake standards of about 2,100 calories per capita per day—depending on the region—recommended by the UN's Food and Agriculture Organization (FAO). The caloric requirements (based on total share of grains, root crops, and "other") used in this assessment are those necessary to sustain life with minimum food-gathering activities. They are comparable to the activity level for a refugee—they do not allow for play or work.

The status quo measure embodies a "safety-net" criterion by providing food consumption stability at recently achieved levels. The nutrition-based target assists in comparisons of relative well-being. Comparing the two consumption measures either for countries or regions provides an indicator of the need depending on whether the objectives are to achieve consumption stability and/or to meet a nutritional standard. Large nutrition-based needs relative to status quo needs, for example, mean additional food must be provided if improved nutrition levels are the main objective. In cases where

nutrition-based requirements are below status quo consumption needs, food availability could decline without risking nutritional adequacy, on average. Both methods, however, fail to address inequalities of food distribution within a country.

### **Structural Framework for Projecting Food Consumption in the Aggregate and by Income Group**

**Projection of food availability**—The simulation framework used for projecting aggregate food availability is based on partial equilibrium recursive models of 70 lower income countries. The country models are synthetic, meaning that the parameters that are used are either cross-country estimates or are estimated by other studies. Each country model includes three commodity groups: grains, root crops and “other.” The production side of the grain and root crops are divided into yield and area response. Crop area is a function of 1-year lag return (real price times yield), while yield responds to input use. Commercial imports are assumed to be a function of domestic price, world commodity price, and foreign exchange availability. Food aid received by countries is assumed constant at the base level during the projection period. Foreign exchange availability is a key determinant of commercial food imports and is the sum of the value of export earnings and net flow of credit. Foreign exchange availability is assumed to be equal to foreign exchange use, meaning that foreign exchange reserve is assumed constant during the projection period. Countries are assumed to be price takers in the international market, meaning that world prices are exogenous in the model. However, producer prices are linked to the international market. The projection of consumption for the “other” commodities is simply based on a trend that follows the projected growth in supply of the food crops (grains plus root crops). Although this is a very simplistic approach, it represents an improvement from the previous assessments where the contribution by commodities to the diet, such as meat and dairy products, was overlooked. The plan is to enhance this aspect of the model in the future.

For the commodity group grains and root crops ( $c$ ), food consumption ( $FC$ ) is defined as domestic supply ( $DS$ ) minus nonfood use ( $NF$ ).  $n$  is country index and  $t$  is time index.

$$FC_{cnt} = DS_{cnt} - NF_{cnt} \quad (1)$$

Nonfood use is the sum of seed use ( $SD$ ), feed use ( $FD$ ), exports ( $EX$ ), and other uses ( $OU$ ).

$$NF_{cnt} = SD_{cnt} + FD_{cnt} + EX_{cnt} + OU_{cnt} \quad (2)$$

Domestic supply of a commodity group is the sum of domestic production ( $PR$ ) plus commercial imports ( $CI$ ), changes in stocks ( $CSTK$ ), and food aid ( $FA$ ).

$$DS_{cnt} = PR_{cnt} + CI_{cnt} + CSTK_{cnt} + FA_{cnt} \quad (3)$$

Production is generally determined by the area and yield response functions:

$$PR_{cnt} = AR_{cnt} * YL_{cnt} \quad (4)$$

$$YL_{cnt} = f( LB_{cnt}, FR_{cnt}, K_{cnt}, T_{cnt} ) \quad (5)$$

$$RPY_{cnt} = YL_{cnt} * DP_{cnt} \quad (6)$$

$$RNPY_{cnt} = NYL_{cnt} * NDP_{cnt} \quad (7)$$

$$AR_{cnt} = f( AR_{cnt-1}, RPY_{cnt-1}, RNPY_{cnt-1}, Z_{cnt} ) \quad (8)$$

where *AR* is area, *YL* is yield, *LB* is rural labor, *FR* is fertilizer use, *K* is an indicator of capital use, *T* is the indicator of technology change, *DP* is real domestic price, *RPY* is yield times real price, *NDP* is real domestic substitute price, *NYL* is yield of substitute commodity, *RNPY* is yield of substitute commodity times substitute price, and *Z* is exogenous policies.

The commercial import demand function is defined as:

$$CI_{cnt} = f( WPR_{cp}, NWPR_{cp}, FEX_{nt}, PR_{cnt}, M_{nt} ) \quad (9)$$

where *WPR* is real world food price, *NWPR* is real world substitute price, *FEX* is real foreign exchange availability, and *M* is import restriction policies.

The real domestic price is defined as:

$$DP_{cnt} = f( DP_{cnt-1}, DS_{cnt}, NDS_{cnt}, GD_{nt}, EXR_{nt} ) \quad (10)$$

where *NDS* is supply of substitute commodity, *GD* is real income, and *EXR* is real exchange rate.

**Projections of food consumption by income group**—Inadequate access to food is the most important cause of chronic undernutrition among developing countries and is related to income level. Estimates of food gaps at the aggregate or national level fail to take into account the distribution of food consumption among different income groups. Lack of consumption distribution data for the study countries is the key factor preventing estimation of food consumption by income group. An attempt was made to fill this information gap by using an indirect method of projecting calorie consumption by different income groups based on income distribution data.<sup>1</sup> It should be noted that this approach ignores the consumption substitution of different food groups by income class. The procedure uses the concept of the income/consumption relationship and allocates the total projected amount of available food among different income groups in each country (income distributions are assumed constant during the projection period).

Assuming a declining consumption and income relationship (semi-log functional form):

$$C = a + b \ln Y \quad (11)$$

$$C = C_o / P \quad (12)$$

$$P = P_1 + \dots + P_i \quad (13)$$

$$Y = Y_o / P \quad (14)$$

*i* = 1 to 5

<sup>1</sup>The method is similar to that used by Shlomo Reutlinger and Marcelo Selowsky in "Malnutrition and Poverty," World Bank, 1978.

where  $C$  and  $Y$  are known average per capita food consumption (all commodities in grain equivalent) and per capita income (all quintiles),  $C_o$  is total food consumption,  $P$  is the total population,  $i$  is income quintile,  $a$  is the intercept,  $b$  is the consumption income propensity, and  $b/C$  is consumption income elasticity (point estimate elasticity is calculated for individual countries). To estimate per capita consumption by income group, the parameter  $b$  was estimated based on cross-country (67 low-income countries) data for per capita calorie consumption and income. The parameter  $a$  is estimated for each country based on the known data for average per capita calorie consumption and per capita income.

### ***Historical data***

Historical supply and use data for 1980-2004 for most variables are from the USDA Production Supply and Distribution (PS&D) database (<http://www.fas.usda.gov/psd/intro.asp>). Data for grain production in 2005 for most countries are based on the PS&D database as of October 2005. Food aid data are from the UN's World Food Program (WFP), and financial data are from the International Monetary Fund and World Bank. Historical nonfood-use data, including seed, waste, processing use, and other uses, are estimated from the FAO Food Balance series. The base year data used for projections are the average for 2002-2004, except export earnings, which are 2001-2003.

### ***Endogenous variables:***

Production, area, yield, commercial import, domestic producer price, and food consumption.

### ***Exogenous variables:***

*Population*—data are medium United Nations population projections as of 2004.

*World price*—data are USDA/baseline projections.

*Stocks*—USDA data; assumed constant during the projection period.

*Seed use*—USDA data, projections are based on area projections using constant base seed/area ratio.

*Food exports*—USDA data; projections are either based on the population growth rate or extrapolation of historical trends.

*Inputs*—fertilizer and capital projections are, in general, an extrapolation of historical growth data from FAO.

*Agricultural labor*—projections are based on United Nations population projections, accounting for urbanization growth.

*Food aid*—1988-2004 data from WFP.

*Gross Domestic Product*—World Bank data.

*Merchandise and service imports and exports*—World Bank data.

*Net foreign credit*—is assumed constant during the projection period.

*Value of exports*—projections are based on World Bank (*Global Economic Prospects and the Developing Countries*, various issues), IMF (*World Economic Outlook*, various issues), or an extrapolation of historical growth.

*Export deflator or terms of trade*—World Bank (*Commodity Markets—Projection of Inflation Indices for Developed Countries*).

*Income*—projected based on World Bank report (*Global Economic Prospects and the Developing Countries*, various issues); or extrapolation of historical growth.

*Income distribution*—World Bank data; Income distributions are assumed constant during the projection period.

Appendix table 1

**List of countries and their food gaps in 2005**

	2005 food gaps				2005 food gaps		
	Status quo <sup>1</sup>	Nutrition <sup>2</sup>	Distribution <sup>3</sup>		Status quo <sup>1</sup>	Nutrition <sup>2</sup>	Distribution <sup>3</sup>
	1,000 tons				1,000 tons		
Angola	142	0	68	Algeria	0	0	0
Benin	259	0	0	Egypt	0	0	0
Burkina Faso	80	0	221	Morocco	0	0	0
Burundi	73	502	583	Tunisia	0	0	0
Cameroon	0	0	66	<b>North Africa</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cape Verde	4	0	0				
Central African Republic	0	88	231	Afghanistan	0	220	833
Chad	319	393	530	Bangladesh	202	0	231
Congo, Dem. Rep.	642	4,260	4,709	India	0	0	1,152
Côte d'Ivoire	0	0	141	Indonesia	0	0	0
Eritrea	87	429	456	Korea, Dem. Rep.	284	7	362
Ethiopia	0	3,261	3,664	Nepal	983	0	223
Gambia	27	0	21	Pakistan	0	0	220
Ghana	0	0	34	Philippines	0	0	136
Guinea	129	0	88	Sri Lanka	0	0	0
Guinea-Bissau	16	28	58	Vietnam	0	0	0
Kenya	0	265	940	<b>Asia</b>	<b>1,469</b>	<b>226</b>	<b>3,158</b>
Lesotho	0	152	192				
Liberia	0	0	64	Bolivia	0	0	128
Madagascar	0	0	412	Colombia	0	0	440
Malawi	491	117	453	Dominican Republic	0	0	26
Mali	0	0	161	Ecuador	0	0	179
Mauritania	54	0	7	El Salvador	0	0	73
Mozambique	0	0	96	Guatemala	0	0	289
Niger	443	37	564	Haiti	0	0	221
Nigeria	0	0	0	Honduras	0	281	415
Rwanda	149	0	26	Jamaica	0	0	0
Senegal	0	0	105	Nicaragua	0	0	134
Sierra Leone	24	199	451	Peru	0	0	226
Somalia	161	550	587	<b>Latin America and</b>			
Sudan	327	31	592	<b>the Caribbean</b>	<b>0</b>	<b>281</b>	<b>2,132</b>
Swaziland	0	0	14				
Tanzania	0	706	1,208	Armenia	0	0	0
Togo	159	227	281	Azerbaijan	0	0	0
Uganda	816	0	205	Georgia	0	0	0
Zambia	0	428	663	Kazakhstan	0	0	0
Zimbabwe	68	685	862	Kyrgyzstan	0	0	0
<b>Sub-Saharan Africa</b>	<b>4,471</b>	<b>12,362</b>	<b>18,753</b>	Tajikistan	34	108	169
				Turkmenistan	0	0	0
				Uzbekistan	0	0	46
				<b>Commonwealth of</b>			
				<b>Independent States</b>	<b>34</b>	<b>108</b>	<b>215</b>
				<b>Total</b>	<b>5,974</b>	<b>12,977</b>	<b>24,257</b>

<sup>1</sup>Status quo gap: amount of food needed to support 2002-2004 levels of per capita consumption.

<sup>2</sup>Nutrition gap: gap between available food and food needed to support a minimum per capita nutritional standard.

<sup>3</sup>Distribution gap: amount of food needed to raise consumption in each income quintile to the minimum nutritional requirement.

Source: USDA, Economic Research Service.

Appendix table 2

**List of countries and their food gaps in 2015**

	2015 food gaps				2015 food gaps		
	Status quo <sup>1</sup>	Nutrition <sup>2</sup>	Distribution <sup>3</sup>		Status quo <sup>1</sup>	Nutrition <sup>2</sup>	Distribution <sup>3</sup>
	1,000 tons				1,000 tons		
Angola	589	0	176	Algeria	0	0	0
Benin	536	0	1	Egypt	0	0	0
Burkina Faso	98	0	291	Morocco	0	0	0
Burundi	278	882	985	Tunisia	0	0	0
Cameroon	0	0	38	<b>North Africa</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cape Verde	33	0	1				
Central African Republic	114	225	354	Afghanistan	247	834	1,542
Chad	81	180	443	Bangladesh	0	0	0
Congo, Dem. Rep.	1,409	6,302	6,884	India	0	0	676
Côte d'Ivoire	71	0	219	Indonesia	0	0	0
Eritrea	232	694	725	Korea, Dem. Rep.	368	63	429
Ethiopia	0	2,219	2,811	Nepal	50	0	33
Gambia	72	0	42	Pakistan	0	0	559
Ghana	0	0	26	Philippines	0	0	58
Guinea	246	0	151	Sri Lanka	0	0	0
Guinea-Bissau	33	49	85	Vietnam	0	0	0
Kenya	29	1,140	1,776	<b>Asia</b>	<b>665</b>	<b>897</b>	<b>3,298</b>
Lesotho	0	20	85				
Liberia	198	139	210	Bolivia	0	0	51
Madagascar	270	218	736	Colombia	0	0	128
Malawi	140	0	295	Dominican Rep.	0	0	0
Mali	0	0	131	Ecuador	0	0	87
Mauritania	346	86	126	El Salvador	0	0	0
Mozambique	0	0	40	Guatemala	0	0	233
Niger	978	416	1,006	Haiti	191	173	407
Nigeria	2,146	0	118	Honduras	0	269	442
Rwanda	493	74	180	Jamaica	97	0	0
Senegal	0	0	162	Nicaragua	0	0	86
Sierra Leone	302	524	775	Peru	0	0	76
Somalia	229	750	800	<b>Latin America and</b>			
Sudan	0	0	141	<b>the Caribbean</b>	<b>287</b>	<b>442</b>	<b>1,510</b>
Swaziland	0	0	1				
Tanzania	0	290	1,042	Armenia	0	0	0
Togo	70	157	243	Azerbaijan	0	0	0
Uganda	2,206	0	734	Georgia	0	0	0
Zambia	0	842	1,088	Kazakhstan	0	0	0
Zimbabwe	0	85	398	Kyrgyzstan	0	0	0
<b>Sub-Saharan Africa</b>	<b>11,198</b>	<b>15,292</b>	<b>23,320</b>	Tajikistan	2	88	168
				Turkmenistan	0	0	0
				Uzbekistan	0	0	0
				<b>Commonwealth of</b>			
				<b>Independent States</b>	<b>2</b>	<b>88</b>	<b>168</b>
				<b>Total</b>	<b>12,153</b>	<b>16,719</b>	<b>28,295</b>

<sup>1</sup>Status quo gap: amount of food needed to support 2002-2004 levels of per capita consumption.

<sup>2</sup>Nutrition gap: gap between available food and food needed to support a minimum per capita nutritional standard.

<sup>3</sup>Distribution gap: amount of food needed to raise consumption in each income quintile to the minimum nutritional requirement.

Source: USDA, Economic Research Service.

Appendix table 3

**Country indicators**

Region and country	Population 2005	Population growth rate	Grain production		Root production growth 1980-2004	Projected annual growth in supply 2005-2015
			Growth 1980-2004	Coefficient of variation 1980-2005		
	1,000		Percent			
<b>North Africa:</b>						
Algeria	32,854	1.5	0.3	45.8	-0.7	2.3
Egypt	74,033	1.9	4.6	6.1	1.6	1.7
Morocco	31,478	1.5	0.7	45.2	2.8	1.9
Tunisia	10,102	1.1	1.5	43.8	3.9	1.9
<b>Central Africa:</b>						
Cameroon	16,322	1.9	2.7	12.7	1.2	2.2
Central African Rep.	4,038	1.3	1.6	14.3	0.3	0.4
Congo, Dem. Rep.	57,549	2.8	2.8	11.0	-0.1	2.6
<b>West Africa:</b>						
Benin	8,439	3.2	4.9	16.2	4.7	2.3
Burkina Faso	13,228	3.2	4.6	13.3	-1.9	2.9
Cape Verde	507	2.4	6.7	59.2	-3.7	0.9
Chad	9,749	3.5	3.7	16.1	-0.1	3.6
Côte d'Ivoire	18,154	1.6	2.2	11.1	2.1	1.5
Gambia	1,517	2.9	3.4	20.8	0.8	1.7
Ghana	22,113	2.2	5.5	16.7	4.6	2.0
Guinea	9,402	2.2	3.5	5.5	5.3	2.0
Guinea-Bissau	1,586	3.0	2.5	21.7	2.7	2.8
Liberia	3,283	1.4	-4.5	32.8	1.3	0.8
Mali	13,518	2.8	4.1	12.4	2.8	3.5
Mauritania	3,069	3.0	6.8	38.5	0.3	0.1
Niger	13,957	3.4	3.4	15.1	-6.9	2.3
Nigeria	131,530	2.3	5.1	10.7	7.5	1.6
Senegal	11,658	2.4	1.1	17.4	4.6	2.1
Sierra Leone	5,525	4.1	-4.0	17.4	3.9	0.7
Togo	6,145	2.8	4.7	13.1	2.8	3.0
<b>East Africa:</b>						
Burundi	7,548	3.1	-2.9	16.5	1.6	2.7
Eritrea	4,401	4.4	-1.0	55.4	-0.1	1.4
Ethiopia	77,431	2.5	3.5	17.0	1.5	3.5
Kenya	34,256	2.2	0.3	14.0	1.8	2.1
Rwanda	9,038	2.4	-2.0	19.2	3.5	1.3
Somalia	8,228	3.3	-2.6	35.5	3.9	2.7
Sudan	36,233	1.9	3.1	31.0	-1.6	2.8
Tanzania	38,329	2.0	1.6	12.5	2.1	2.6
Uganda	28,816	3.5	1.7	9.1	2.0	2.7

See note at end of table.

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**Country indicators--Continued**

Region and country	Population 2005	Population growth rate	Grain production		Root production growth 1980-2004	Projected annual growth in supply 2004-2015
			Growth 1980-2004	Coefficient of variation 1980-2005		
	1,000		Percent			
<b>Southern Africa:</b>						
Angola	15,941	2.9	2.5	23.3	2.9	2.1
Lesotho	1,795	0.1	-0.9	32.4	7.6	2.9
Madagascar	18,606	2.8	1.2	5.6	0.9	2.3
Malawi	12,884	2.3	1.7	28.5	5.6	2.7
Mozambique	19,792	2.0	6.8	24.8	0.5	2.7
Swaziland	1,032	0.2	0.7	27.8	1.2	2.4
Zambia	11,668	1.7	-0.4	31.2	5.8	1.4
Zimbabwe	13,010	0.7	-1.9	34.4	4.4	2.2
<b>Asia:</b>						
Afghanistan	29,863	4.7	-1.6	24.9	-1.1	2.7
Bangladesh	141,822	1.9	2.7	7.1	2.2	2.4
India	1,103,371	1.6	2.3	5.8	1.4	1.7
Indonesia	222,781	1.3	1.7	3.8	-0.2	1.3
Korea, Dem. Rep.	27,137	1.1	-2.7	13.4	5.3	0.0
Nepal	27,133	2.1	3.0	6.3	3.8	2.7
Pakistan	157,935	2.1	2.5	5.1	4.3	2.0
Philippines	83,054	1.9	2.0	5.8	-0.4	2.1
Sri Lanka	20,743	0.9	1.0	8.3	-3.5	0.9
Vietnam	84,238	1.4	4.9	4.9	-1.8	3.4
<b>Latin America and the Caribbean:</b>						
Bolivia	9,182	2.0	2.7	10.2	-0.1	2.9
Colombia	45,600	1.6	-0.7	11.8	0.5	3.4
Dominican Republic	8,895	1.5	-0.3	11.3	0.7	8.8
Ecuador	13,228	1.5	2.6	19.5	1.3	2.7
El Salvador	6,881	1.8	1.3	10.9	5.2	7.0
Guatemala	12,599	2.4	0.1	9.2	0.6	2.9
Haiti	8,528	1.4	0.8	14.9	0.0	0.4
Honduras	7,205	2.3	0.8	17.3	3.5	2.4
Jamaica	2,651	0.5	-5.6	53.1	-1.3	-0.5
Nicaragua	5,487	2.0	3.1	18.1	4.0	2.6
Peru	27,968	1.5	4.1	17.2	1.6	3.6
<b>Commonwealth of Independent States</b>						
Armenia	3,016	-0.4	1.2	38.1	0.4	1.2
Azerbaijan	8,411	0.6	3.2	33.6	14.3	2.3
Georgia	4,474	-1.1	1.1	43.1	6.0	1.6
Kazakhstan	14,825	-0.3	-4.2	71.5	-3.9	1.1
Kyrgyzstan	5,264	1.2	0.7	40.7	9.9	1.9
Tajikistan	6,507	1.1	6.4	32.4	10.9	1.3
Turkmenistan	4,833	1.4	11.7	41.2	19.4	1.0
Uzbekistan	26,593	1.5	9.2	20.3	1.0	2.5

See note at end of table.

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**Country indicators--Continued**

Region and country	Macroeconomic indicators					
	Per capita GNI 2004	Per capita GDP growth 2003-04	GDP growth 2003	Export earnings growth 2003	Official development assistance as a share of GNI 2003	External debt: present value as a share of GNI 2003
	<i>U.S. dollars</i>	<i>Percent</i>				
<b>North Africa:</b>						
Algeria	2,230	3.4	6.8	8.6	0.4	38.0
Egypt	1,310	2.5	3.2	14.0	1.0	33.4
Morocco	1,520	1.9	5.2	0.6	1.3	47.7
Tunisia	2,630	4.5	5.6	0.3	1.4	69.8
<b>Central Africa:</b>						
Cameroon	800	2.8	4.7	3.8	8.7	90.6
Central African Rep.	310	-0.8	-7.3	--	4.9	130.3
Congo, Dem. Rep.	120	3.2	5.6	8.0*	99.2	205.9
<b>West Africa:</b>						
Benin	530	0.2	4.8	7.1	9.9	61.5
Burkina Faso	360	1.6	6.5	10.1	12.6	51.4
Cape Verde	1,170	2.9	5.0	6.7	21.3	71.1
Chad	260	27.4	11.3	63.6	11.9	72.3
Côte d'Ivoire	770	-4.0	-3.8	-0.9	2.3	109.6
Gambia	290	6.2	6.7	-14.3	15.4	162.4
Ghana	380	3.3	5.2	2.7	13.8	121.5
Guinea	460	0.5	1.2	2.3	7.0	102.1
Guinea-Bissau	160	1.3	0.6	8.0	71.8	368.5
Liberia	110	-0.2	-29.5	--	30.1	722.9
Mali	360	-0.3	6.0	-10.4	15.4	91.3
Mauritania	420	4.5	4.9	-9.5	21.2	206.5
Niger	230	-1.9	5.3	--	19.0	88.9
Nigeria	390	1.1	10.7	32.4	0.7	73.5
Senegal	670	3.8	6.5	0.5	8.1	79.4
Sierra Leone	200	5.4	6.6	20.0	36.8	199.6
Togo	380	0.8	2.7	6.6	2.9	111.7
<b>East Africa:</b>						
Burundi	90	3.5	-1.2	10.0	35.7	208.6
Eritrea	180	-0.2	3.0	-32.0	36.1	74.6
Ethiopia	110	11.2	-3.7	18.9	23.7	112.5
Kenya	460	0.4	1.8	9.9	3.8	52.9
Rwanda	220	3.5	3.2	3.0	18.2	84.3
Somalia	--	--	--	--	--	--
Sudan	530	3.5	6.0	19.3	4.0	114.0
Tanzania	330	4.3	7.1	18.3	15.7	70.5
Uganda	270	3.1	4.7	8.0	15.4	72.9

See note at end of table.

Continued—

**Country indicators--Continued**

Region and country	Macroeconomic indicators					
	Per capita GNI 2004	Per capita GDP growth 2003-04	GDP growth 2003	Export earnings growth 2003	Official development assistance as a share of GNI 2003	External debt: present value as a share of GNI 2003
	<i>U.S. dollars</i>	<i>Percent</i>				
<b>Southern Africa:</b>						
Angola	1,030	7.7	4.5	4.9	5.0	96.9
Lesotho	740	2.1	3.3	30.5	7.3	64.9
Madagascar	300	2.6	9.8	58.6	11.1	102.1
Malawi	170	1.8	4.4	-3.2	27.5	173.4
Mozambique	250	5.9	7.1	16.2	26.4	126.2
Swaziland	1,660	0.8	2.2	39.9	1.8	27
Zambia	450	3.2	5.1	22.8	14.1	161.3
Zimbabwe	--	-6.7	--	--	--	70.5
<b>Asia:</b>						
Afghanistan	--	--	--	--	--	--
Bangladesh	440	10.6	5.3	6.9	2.5	34.1
India	620	5.4	8.6	7.0	0.2	19.9
Indonesia	1,140	3.7	4.1	4.0	1.0	77.4
Korea, Dem. Rep.	--	--	--	--	--	--
Nepal	260	1.6	3.1	--	8.0	55.4
Pakistan	600	3.9	5.1	28.4	1.4	46.9
Philippines	1,170	4.3	4.5	3.3	0.8	71.4
Sri Lanka	1,010	4.8	5.9	4.8	3.8	57.4
Vietnam	550	6.4	7.2	20.8	4.6	40.8
<b>Latin America and the Caribbean:</b>						
Bolivia	960	1.6	2.5	10.1	11.7	71.7
Colombia	2,000	2.3	3.9	5.0	1.0	40.9
Dominican Republic	2,080	0.6	-0.4	30.7	0.4	33.8
Ecuador	2,180	5.0	2.7	3.2	0.7	70.9
El Salvador	2,350	-0.2	1.8	3.8	1.3	46.3
Guatemala	2,130	0.1	2.1	5.2	1.1	21.2
Haiti	390	-5.5	0.4	35.6	6.0	39.1
Honduras	1,030	2.1	3.0	-2.5	5.8	83.5
Jamaica	2,900	1.2	2.3	15.0	0.0	70.8
Nicaragua	790	1.4	2.3	8.1	20.4	169.4
Peru	2,360	3.5	3.8	5.9	0.9	51.3
<b>Commonwealth of Independent States:</b>						
Armenia	1,120	10.3	13.9	28.2	8.6	39.0
Azerbaijan	950	3.7	11.2	-4.4	4.4	25.0
Georgia	1,040	9.6	11.1	4.8	5.6	49.2
Kazakhstan	2,260	8.8	9.2	5.9	1.0	86.1
Kyrgyzstan	400	6.1	6.7	2.5	11.5	117.7
Tajikistan	280	9.4	10.2	6.8	10.7	86.8
Turkmenistan	1,340	15.4	16.9	20.9	0.5	--
Uzbekistan	460	6.3	4.4	8.3	1.8	46.4

Note: -- = Data unavailable or not applicable due to inconsistent data set.

\* = 2002 data.

Source: USDA, Economic Research Service, using data from FAOSTAT (population; (<http://faostat.org>)) and World Bank (macroeconomic indicators; World Development Indicators, 2005, and World Development Report 2005).