





# **SUMMARY OF WORLD FOOD AND AGRICULTURAL STATISTICS**

**2004**

**Food and Agriculture Organization of the United Nations  
Rome, 2004**

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**FAO 2004**

This is the second edition of the “ Summary of the World Food and Agricultural Statistics”, a publication which arose following a request of the Director-General of FAO to compile a broad range of statistics pertaining to world food and agriculture. These statistics show, wherever appropriate, the differences between the developed and developing countries, the continents and the regions. Initially the related tables were compiled and regularly updated for the personal use of the Director-General. However, as the information presented has gathered general interest, it has been decided to publish the tables in the form of a document. It is hoped that managers and policy makers dealing in international issues relating to food and agriculture will find the document useful.

The tables are organized in sets corresponding to 10 sections entitled as follows:

- 1) Agriculture Macro-Economic Indicators
- 2) Population and Labour Force
- 3) Land Use and Agricultural Inputs
- 4) Water Resources and Irrigation
- 5) Agricultural Production and Trade
- 6) Forestry Production and Trade
- 7) Fishery Production and Trade
- 8) Food Nutrition and Food Security
- 9) Projections
- 10) Selected Food and Agricultural Indicators by Country

Section 10 relating to food and agricultural indicators consists of only one table presenting information at the country level. The tables in section 1 to 8 and 10 are generally based on the statistics compiled and disseminated by FAO as well as other international organizations such as World Food Programme (WFP), United Nations (UN) and its regional bodies, the International Monetary Fund (IMF), World Bank (WB) and its affiliated regional banks, Organization for Economic Cooperation and Development (OECD) and World Resources Institute (WRI). The tables in section 9 are based on the demographic projections prepared by UN, International Labour Office (ILO), and FAO and the food and agriculture sector projections prepared in connection with the FAO study *Agriculture: Towards 2015/2030*.

The set of tables contained in each section and the related data sources are listed in Annex II. With the exception of data from special studies, the sources quoted for the tables based on FAO data are generally FAOSTAT or FAO AQUASTAT. It should however be noted that both of the latter databases include information obtained through either collaboration or data exchange with other international organizations. For example the demographic estimates and projections are based on inter-agency collaborative work involving UN Population Division, ILO and FAO. The data on food aid are obtained from WFP and the data on water resources come from WRI.

The data presented in sections 1 to 8 generally refer to the most recent period for which data are available and, wherever pertinent, for selected historical periods. Growth rates are given wherever relevant. In the case of the projections in section 9, the time varies depending on the underlying studies. As regards the last table on selected food and agriculture indicators (section 10), which presents data by country, the figures refer to the most recent period for which data are available.

Explanatory information is provided in five annexes. Annex I explains the symbols and the acronyms used in the tables; Annex II includes the list of sources used for the compilation of this document; Annex III gives the country composition of regional aggregates shown in the tables; Annex IV refers to the concepts and definitions relating to the data presented and finally Annex V provides technical notes on certain measures and indicators.

The document has been prepared by the Socio-Economic Statistics and Analysis Service of FAO Statistics Division, Economic and Social Department. The preparation of the various tables has been facilitated by access to the statistics in FAO databases maintained not only by the Statistics Division, but also other units in FAO, in particular the Fishery Information, Data and Statistics Unit, Fisheries Department; the Water Resources, Development and Management Service of the Land and Water Development Division, Agriculture Department; and the Forestry Planning and Statistics Branch, Forestry Policy and Planning Division, Forestry Department

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## **AGRICULTURE MACRO-ECONOMIC INDICATORS**



### 1.1 Gross Domestic Product (GDP), Agriculture, value added and Gross National Income (GNI)

World/Region	GDP			Agriculture, value added			GNI per caput Atlas method		
	(US\$ billion)			(US\$ billion)			(current US\$)		
	1980	1990	2002	1980	1990	2002	1980	1990	2002
<b>WORLD</b>	11 594	22 660	32 252	823	1 310	1 141	2 736	4 299	5 170
<b>Developed countries</b>	9 274	18 977	25 842	455	779	461	8 318	15 079	19 193
Industrialized countries	8 100	17 127	24 870	289	440	399	10 883	20 292	26 754
Transition economies	1 173	1 850	971	166	340	61	3 068	4 486	2 139
<b>Developing countries</b>	2 321	3 682	6 411	368	530	680	718	899	1 321
Latin America and the Caribbean	766	1 160	1 793	72	91	103	2 113	2 341	3 417
Near East and North Africa	609	718	928	55	92	87	2 466	2 272	2 399
Sub-Saharan Africa	185	190	223	47	53	61	498	383	319
East and Southeast Asia	523	1 202	2 810	114	181	295	398	744	1 479
South Asia	230	399	640	78	111	134	264	378	458
Oceania developing	7	11	13	1	2	2	1 462	1 892	1 642
North America developing	1	2	3	0	0	0	9 556	26 320	...
<b>Continental groupings</b>									
Africa	394	475	549	64	81	93	778	725	653
Asia	2 330	5 253	8 309	275	438	551	986	1 823	2 324
Latin America	714	1 071	1 618	68	86	95	2 153	2 345	3 395
Caribbean	53	88	175	4	6	7	1 655	2 289	3 703
North America	3 038	6 327	11 100	85	126	157	12 838	23 078	34 123
Oceania	196	366	481	14	15	16	8 910	13 476	14 255
Europe	3 941	7 523	10 020	174	255	220	8 331	14 084	12 955

### 1.2 Agriculture, value added Growth and Share in total GDP

World/Region	Share of Agriculture Value Added in Total GDP (%)			Average Annual Rate of Growth (%)			
	1980	1990	2002	GDP		Agriculture, value added	
				1980-1990	1990-2002	1980-1990	1990-2002
<b>WORLD</b>	7.6	6.2	3.7	3.3	2.9	2.8	2.0
<b>Developed countries</b>	5.2	4.4	1.9	3.1	2.4	2.3	1.1
Industrialized countries	3.8	2.8	1.7	3.2	2.4	1.8	1.1
Transition economies	14.2	18.4	7.1	2.2	2.6	5.6	- 0.2
<b>Developing countries</b>	17.1	15.7	11.5	3.9	4.9	3.3	2.7
Latin America and the Caribbean	10.1	8.7	6.3	1.8	3.3	2.2	2.0
Near East and North Africa	10.1	14.3	9.8	1.6	3.2	3.2	2.6
Sub-Saharan Africa	26.7	29.6	29.1	2.4	2.7	2.1	3.2
East and Southeast Asia	22.9	16.2	11.5	7.8	6.9	4.3	2.9
South Asia	37.3	30.8	22.8	5.5	5.6	3.1	3.1
Oceania developing	19.7	14.5	12.5	3.1	2.6	1.8	2.8
North America developing	0.7	0.9	0.8	1.5	2.3	5.2	2.2
<b>Continental groupings</b>							
Africa	17.1	18.2	18.4	2.1	2.6	2.8	2.7
Asia	12.3	8.7	6.9	4.6	3.1	3.1	1.8
Latin America	10.3	8.8	6.5	1.7	3.3	2.4	2.1
Caribbean	7.6	6.9	4.4	3.1	2.6	0.0	0.6
North America	3.0	2.1	1.4	3.5	3.4	3.0	3.4
Oceania	7.8	4.6	3.7	3.2	3.8	3.2	3.5
Europe	4.8	3.7	2.5	2.5	2.1	1.3	1.3

Note: The growth rates are calculated using production data at constant prices in U.S. dollars. Regional sub-totals are obtained by summing values for countries with a complete time series of data for the period. Countries with an incomplete time series are excluded from the aggregates.

**1.3 Development Commitments to Agriculture (Broad Definition) by Donors**  
**Total Commitment by Donors (US\$ million)**

	1996	1997	1998	1999	2000	2001	2002 *
<b>Current Prices</b>							
<b>Total commitments (EAA)</b>	<b>11 642</b>	<b>12 340</b>	<b>12 605</b>	<b>10 700</b>	<b>10 172</b>	<b>10 024</b>	<b>9 987</b>
<b>Bilateral</b>	<b>5 203</b>	<b>4 260</b>	<b>4 612</b>	<b>4 150</b>	<b>3 947</b>	<b>4 070</b>	<b>3 818</b>
Japan	2 336	1 797	1 856	1 644	1 265	1 768	825
United States of America	396	389	455	464	519	493	611
Germany	409	402	467	301	379	363	419
United Kingdom	166	102	405	508	511	129	367
Others	1 895	1 569	1 429	1 234	1 272	1 318	1 598
<b>Multilateral</b>	<b>6 439</b>	<b>8 080</b>	<b>7 993</b>	<b>6 550</b>	<b>6 225</b>	<b>5 954</b>	<b>6 168</b>
World Bank	3 100	4 227	4 682	3 034	2 494	2 730	3 572
IBRD	1 853	2 795	3 285	1 603	986	1 413	782
IDA	1 247	1 431	1 397	1 431	1 508	1 317	2 791
IFAD	405	392	431	415	407	375	340
Regional Development Banks	1 991	2 302	1 656	2 083	2 153	1 638	1 216
OPEC multilateral	286	430	507	309	453	363	243
UNDP/CGIAR	491	508	518	508	518	331	452
FAO	166	222	200	200	200	200	200
<b>1995 Constant Prices</b>							
<b>Total commitments (EAA)</b>	<b>12 085</b>	<b>13 834</b>	<b>14 479</b>	<b>12 012</b>	<b>11 904</b>	<b>12 178</b>	<b>11 686</b>
<b>Bilateral</b>	<b>5 401</b>	<b>4 776</b>	<b>5 297</b>	<b>4 659</b>	<b>4 619</b>	<b>4 944</b>	<b>4 468</b>
Japan	2 425	2 015	2 132	1 845	1 481	2 147	965
United States of America	412	436	523	520	607	599	714
Germany	425	451	537	338	444	441	490
United Kingdom	172	115	465	570	598	157	429
Others	1 967	1 759	1 641	1 385	1 489	1 601	1 870
<b>Multilateral</b>	<b>6 684</b>	<b>9 058</b>	<b>9 182</b>	<b>7 353</b>	<b>7 285</b>	<b>7 234</b>	<b>7 218</b>
World Bank	3 218	4 738	5 378	3 406	2 919	3 316	4 180
IBRD	1 923	3 134	3 773	1 800	1 154	1 716	915
IDA	1 295	1 604	1 605	1 606	1 765	1 600	3 265
IFAD	421	439	495	466	476	456	398
Regional Development Banks	2 066	2 581	1 902	2 339	2 520	1 990	1 423
OPEC multilateral	297	482	583	347	530	442	284
UNDP/CGIAR	510	569	595	570	606	402	529
FAO	172	249	230	225	234	243	234
<b>Total Assistance</b>	<b>111 886</b>	<b>132 562</b>	<b>138 769</b>	<b>134 676</b>	<b>116 349</b>	<b>125 894</b>	<b>124 706</b>
<b>Share of EAA in total Assistance (%)</b>	<b>10.8</b>	<b>10.4</b>	<b>10.4</b>	<b>8.9</b>	<b>10.2</b>	<b>9.7</b>	<b>9.4</b>

\* Provisional as data from some donors are based on estimates, and therefore might change later.

Note: The constant price series has been derived by deflating the current price series using the DAC aggregate deflator with adjustment by using 1995 base year, and with further adjustments of growth rates.

#### 1.4 Development Commitments to Agriculture (Broad Definition) by Main Purposes

	Amount in Current Prices (US\$ million)							
	1995	1996	1997	1998	1999	2000	2001	2002
	<b>Total commitments</b>	<b>11 042</b>	<b>11 642</b>	<b>12 340</b>	<b>12 605</b>	<b>10 700</b>	<b>10 172</b>	<b>10 024</b>
Agriculture Services	469	402	220	725	761	521	423	121
Agro-Industries	166	419	93	88	18	47	171	226
Agriculture Others	1 789	2 132	3 018	2 049	3 005	1 810	2 715 <sup>1</sup>	2 348 <sup>2</sup>
Crop Production	283	522	232	225	160	372	389	613
Environment	861	602	701	1 248	827	744	709	735
Fishery	211	605	312	307	163	305	292	247
Forestry	364	619	748	494	180	667	392	971
Inputs	669	525	262	253	183	148	276	118
Land and Water	2 571	2 809	2 684	1 589	1 628	1 654	1 140	908
Livestock	176	295	123	141	43	218	96	68
Manufacturing of Inputs	101	0	0	0	49	0	12	1
Regional and River Development	471	177	353	599	393	186	16	127
Research/Training Extension	1 170	972	800	1 729	602	572	580	437
Rural Development	1 740	1 563	2 794	3 158	2 688	2 926	2 814	3 066

  

	Share in total commitments (%)							
	1995	1996	1997	1998	1999	2000	2001	2002
	<b>Total commitments</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Agriculture Services	4.2	3.5	1.8	5.8	7.1	5.1	4.2	1.2
Agro-Industries	1.5	3.6	0.8	0.7	0.2	0.5	1.7	2.3
Agriculture Others	16.2	18.3	24.5	16.3	28.1	17.8	27.1	23.5
Crop Production	2.6	4.5	1.9	1.8	1.5	3.7	3.9	6.1
Environment	7.8	5.2	5.7	9.9	7.7	7.3	7.1	7.4
Fishery	1.9	5.2	2.5	2.4	1.5	3.0	2.9	2.5
Forestry	3.3	5.3	6.1	3.9	1.7	6.6	3.9	9.7
Inputs	6.1	4.5	2.1	2.0	1.7	1.5	2.8	1.2
Land and Water	23.3	24.1	21.7	12.6	15.2	16.3	11.4	9.1
Livestock	1.6	2.5	1.0	1.1	0.4	2.1	1.0	0.7
Manufacturing of Inputs	0.9	0.0	0.0	0.0	0.5	0.0	0.1	0.0
Regional and River Development	4.3	1.5	2.9	4.8	3.7	1.8	0.2	1.3
Research/Training Extension	10.6	8.3	6.5	13.7	5.6	5.6	5.8	4.4
Rural Development	15.8	13.4	22.6	25.1	25.1	28.8	28.1	30.7

Notes:

1. Includes EAA from FAO

2. Includes EAA from FAO/UNDP/CGIAR

#### 1.5 Main Recipient Countries of Development Commitments to Agriculture, 2002

Country	Amount in Current Prices (US\$ million)
India	1 352
Congo, Dem. Republic of	457
Indonesia	447
China, Mainland	432
Pakistan	394
Ethiopia	315
Uganda	251
Viet Nam	250
Côte D'Ivoire	234
Mexico	213

### 1.6 Share of government expenditure on agriculture in total government expenditure

Region	Country	1990	1993	1996	1997	1998	1999	2000
<b>(%)</b>								
<b>Latin America and the Caribbean</b>								
	Argentina	...	1.4	1.3	1.2	1.2	0.8	0.7
	Bahamas	...	1.7	1.5	1.4	1.5	1.3	1.5
	Belize	12.8	6.8	4.8	6.2	...	...	...
	Bolivia	...	1.4	0.8	1.5	2.6	3.1	3.7
	Brazil	0.9	1.0	...	1.7	1.7	...	...
	Colombia	8.1	5.3	1.7	2.2	1.4	1.2	...
	Costa Rica	...	4.5	1.6	2.7	2.4	2.5	2.9
	Dominican Republic	14.5	12.4	8.9	9.1	9.2	9.8	...
	Ecuador	4.0	...	...	...	...	...	...
	El Salvador	...	3.4	2.9	2.2	2.6	1.5	5.6
	Grenada	...	9.1	...	...	...	...	...
	Guatemala	...	3.9	...	...	...	...	...
	Jamaica	...	3.1	1.7	1.5	1.9	1.6	1.7
	Mexico	2.5	3.3	3.1	3.4	2.8	3.1	...
	Netherlands Antilles	0.9	0.5	...	...	...	...	...
	Nicaragua	...	4.8	...	...	...	...	...
	Panama	2.5	2.1	1.5	1.8	2.0	2.0	...
	Paraguay	1.3	5.3	...	...	...	...	...
	St. Vincent and the Grenadines	...	4.6	3.2	5.0	2.9	2.9	3.3
	Trinidad and Tobago	...	4.7	...	...	...	...	...
	Uruguay	...	1.2	...	...	...	1.6	1.3
<b>Near East and North Africa</b>								
	Bahrain	...	0.2	0.7	0.7	0.6	0.5	0.4
	Cyprus	8.6	7.9	6.8	5.8	5.6	...	...
	Egypt	4.7	4.2	4.5	5.3	...	...	...
	Iran, Islamic Rep.	...	4.8	2.2	2.2	1.9	1.8	2.0
	Jordan	...	2.7	4.3	3.8	2.9	3.7	3.2
	Kuwait	...	...	0.6	0.7	0.8	0.7	...
	Lebanon	...	0.9	0.6	0.5	0.7	0.2	...
	Oman	...	2.3	1.7	1.5	1.3	1.3	1.1
	Sudan	...	...	...	...	1.1	0.9	...
	Syrian Arab Republic	11.0	9.9	10.0	9.7	9.0	...	...
	Turkey	...	1.3	0.8	6.6	3.4	4.1	3.4
	United Arab Emirates	0.7	0.8	0.7	0.7	0.8	0.7	...
	Yemen, Rep.	2.2	2.6	20.0	26.9	17.5	7.8	...
<b>Sub-Saharan Africa</b>								
	Botswana	6.7	6.8	10.0	...	...	...	...
	Burkina Faso	6.5	...	...	...	...	...	...
	Burundi	...	7.9	4.8	...	1.5	1.8	...
	Cameroon	4.1	5.1	...	...	2.9	2.8	...
	Congo, Dem. Rep.	...	...	50.7	0.4	...	...	...
	Ethiopia	6.9	13.0	10.5	...	...	...	...
	Gambia	6.4	...	...	...	...	...	...
	Ghana	4.1	3.5	...	...	...	...	...
	Kenya	5.9	6.9	5.0	5.4	5.7	...	...
	Lesotho	9.8	0.0	...	10.0	5.1	...	...
	Madagascar	...	3.7	11.6	13.1	13.1	11.0	...
	Mauritius	...	6.1	6.1	4.9	5.3	6.0	5.0

**1.6 Share of government expenditure on agriculture in total government expenditure  
(cont.ed)**

Region	Country	1990	1993	1996	1997	1998	1999	2000
		(%)						
	Seychelles	...	1.9	1.8	1.6	1.6	2.7	5.6
	Sierra Leone	3.0	...	...	...	...	...	...
	Sudan	...	...	...	...	1.1	0.9	...
	Swaziland	...	...	...	...	...	6.2	6.6
	Zambia	3.2	2.4	2.7	4.1	5.1	5.5	...
	Zimbabwe	...	9.1	2.5	2.8	...	...	...
<b>East and Southeast Asia</b>								
	China (Mainland)	5.4	7.2	8.5	8.9	9.7	9.2	...
	Indonesia	8.9	8.3	15.8	8.4	7.6	4.3	...
	Korea, Rep.	14.3	11.2	14.0	12.8	...	...	...
	Malaysia	5.6	4.9	4.1	3.9	...	...	...
	Mongolia	...	3.3	2.4	2.4	1.9	0.2	1.9
	Myanmar	9.3	7.5	13.1	13.4	14.4	12.7	...
	Philippines	...	9.3	7.1	6.5	6.1	5.5	5.7
	Singapore	...	0.3	0.2	0.3	0.2	0.3	0.8
	Thailand	...	9.8	9.7	8.2	5.7	5.9	8.3
<b>South Asia</b>								
	Bhutan	...	18.0	18.7	14.9	8.9	8.9	8.0
	India	...	12.3	11.1	11.4	10.4	7.7	7.4
	Maldives	...	9.3	4.9	1.1	1.0	0.9	1.3
	Nepal	...	10.5	7.2	6.1	6.1	5.9	5.8
	Sri Lanka	...	5.1	4.3	3.6	4.9	4.6	4.4
<b>Oceania</b>								
	Australia	2.4	2.2	2.0	1.9	2.0	...	...
	Fiji	6.7	4.7	3.6	...	...	...	...
	New Zealand	...	0.9	0.9	1.0	1.1	0.9	0.7
	Papua New Guinea	7.7	7.5	4.5	3.4	...	3.4	...
	Vanuatu	4.7	...	2.3	3.3	...	...	...

## **POPULATION AND LABOUR FORCE**

## 2.1 Total and Agricultural Population and Related Growth Rates

World/Region	Population						Average annual rate of growth	
	(million)			Share in total World (%)			(%)	
	1980	1990	2004	1980	1990	2004	1980-1990	1990-2004
<b>Population</b>								
<b>WORLD</b>	<b>4 434.7</b>	<b>5 263.6</b>	<b>6 377.6</b>				<b>1.7</b>	<b>1.4</b>
<b>Developed countries</b>	<b>1 171.4</b>	<b>1 257.0</b>	<b>1 332.6</b>	<b>26.4</b>	<b>23.9</b>	<b>20.9</b>	<b>0.7</b>	<b>0.4</b>
Industrialized countries	789.3	844.9	925.6	17.8	16.1	14.5	0.7	0.7
Transition economies	382.1	412.1	407.1	8.6	7.8	6.4	0.8	-0.1
<b>Developing countries</b>	<b>3 263.3</b>	<b>4 006.6</b>	<b>5 045.0</b>	<b>73.6</b>	<b>76.1</b>	<b>79.1</b>	<b>2.1</b>	<b>1.6</b>
Latin America and the Caribbean	361.4	441.5	550.8	8.1	8.4	8.6	2.0	1.6
Near East and North Africa	242.9	320.3	432.9	5.5	6.1	6.8	2.8	2.2
Sub-Saharan Africa	348.9	467.7	671.6	7.9	8.9	10.5	2.9	2.6
East and Southeast Asia	1 419.2	1 666.3	1 945.0	32.0	31.7	30.5	1.6	1.1
South Asia	885.5	1 104.1	1 435.8	20.0	21.0	22.5	2.2	1.9
Oceania developing	5.1	6.4	8.8	0.1	0.1	0.1	2.2	2.2
North America developing	0.1	0.1	0.1	0.0	0.0	0.0	0.9	0.5
<b>Continental groupings</b>								
Africa	469.6	622.4	869.2	10.6	11.8	13.6	2.8	2.4
Asia	2 632.3	3 167.8	3 870.5	59.4	60.2	60.7	1.9	1.4
Latin America	332.1	407.6	511.8	7.5	7.7	8.0	2.0	1.6
Caribbean	29.3	33.9	39.0	0.7	0.6	0.6	1.5	1.0
North America	256.1	283.5	328.9	5.8	5.4	5.2	1.0	1.1
Oceania	22.8	26.7	32.6	0.5	0.5	0.5	1.6	1.4
Europe	692.4	721.6	725.6	15.6	13.7	11.4	0.4	0.0
<b>Agricultural population</b>								
<b>WORLD</b>	<b>2 218.6</b>	<b>2 443.4</b>	<b>2 600.3</b>				<b>1.0</b>	<b>0.4</b>
<b>Developed countries</b>	<b>158.9</b>	<b>134.0</b>	<b>88.2</b>	<b>7.2</b>	<b>5.5</b>	<b>3.4</b>	<b>-1.7</b>	<b>-3.0</b>
Industrialized countries	68.5	52.8	33.5	3.1	2.2	1.3	-2.6	-3.3
Transition economies	90.3	81.1	54.7	4.1	3.3	2.1	-1.1	-2.8
<b>Developing countries</b>	<b>2 059.7</b>	<b>2 309.4</b>	<b>2 512.1</b>	<b>92.8</b>	<b>94.5</b>	<b>96.6</b>	<b>1.1</b>	<b>0.6</b>
Latin America and the Caribbean	127.1	117.0	104.0	5.7	4.8	4.0	-0.8	-0.8
Near East and North Africa	113.2	113.9	120.0	5.1	4.7	4.6	0.1	0.4
Sub-Saharan Africa	259.3	326.7	415.5	11.7	13.4	16.0	2.3	1.7
East and Southeast Asia	976.1	1 093.9	1 118.3	44.0	44.8	43.0	1.1	0.2
South Asia	580.3	653.5	748.8	26.2	26.7	28.8	1.2	1.0
Oceania developing	3.7	4.4	5.6	0.2	0.2	0.2	1.8	1.6
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>								
Africa	314.0	378.8	466.4	14.2	15.5	17.9	1.9	1.5
Asia	1 653.5	1 845.6	1 963.3	74.5	75.5	75.5	1.1	0.4
Latin America	117.3	107.1	95.0	5.3	4.4	3.7	-0.9	-0.9
Caribbean	9.8	10.0	9.0	0.4	0.4	0.3	0.2	-0.7
North America	10.3	8.7	6.5	0.5	0.4	0.3	-1.7	-2.0
Oceania	5.0	5.7	6.7	0.2	0.2	0.3	1.4	1.2
Europe	108.7	87.5	53.3	4.9	3.6	2.1	-2.2	-3.5

## 2.2 Total and Agricultural Labour Force and Related Growth Rates

World/Region	Labour Force						Average annual rate of growth	
	(million)			Share in total World (%)			(%)	
	1980	1990	2004	1980	1990	2004	1980-1990	1990-2004
<b>Total labour force</b>								
<b>WORLD</b>	<b>2 051.2</b>	<b>2 496.2</b>	<b>3 126.9</b>				<b>2.0</b>	<b>1.6</b>
<b>Developed countries</b>	<b>559.5</b>	<b>610.9</b>	<b>666.6</b>	<b>27.3</b>	<b>24.5</b>	<b>21.3</b>	<b>0.9</b>	<b>0.6</b>
Industrialized countries	363.7	408.4	455.4	17.7	16.4	14.6	1.2	0.8
Transition economies	195.8	202.5	211.2	9.5	8.1	6.8	0.3	0.3
<b>Developing countries</b>	<b>1 491.7</b>	<b>1 885.3</b>	<b>2 460.3</b>	<b>72.7</b>	<b>75.5</b>	<b>78.7</b>	<b>2.3</b>	<b>1.9</b>
Latin America and the Caribbean	130.6	176.0	240.4	6.4	7.0	7.7	3.0	2.2
Near East and North Africa	81.9	108.0	168.5	4.0	4.3	5.4	2.8	3.2
Sub-Saharan Africa	159.1	208.2	300.1	7.8	8.3	9.6	2.7	2.6
East and Southeast Asia	732.9	922.1	1 109.7	35.7	36.9	35.5	2.3	1.3
South Asia	384.9	468.1	637.2	18.8	18.8	20.4	2.0	2.2
Oceania developing	2.3	2.9	4.1	0.1	0.1	0.1	2.5	2.5
North America developing	0.1	0.1	0.1	0.0	0.0	0.0	1.4	0.5
<b>Continental groupings</b>								
Africa	199.6	261.4	378.2	9.7	10.5	12.1	2.7	2.6
Asia	1 253.0	1 553.7	1 962.7	61.1	62.2	62.8	2.2	1.7
Latin America	119.0	161.7	222.4	5.8	6.5	7.1	3.1	2.3
Caribbean	11.5	14.3	18.0	0.6	0.6	0.6	2.1	1.7
North America	124.4	143.9	168.7	6.1	5.8	5.4	1.5	1.1
Oceania	10.3	12.9	16.3	0.5	0.5	0.5	2.3	1.6
Europe	333.2	348.3	360.6	16.2	14.0	11.5	0.4	0.2
<b>Labour force in agriculture</b>								
<b>WORLD</b>	<b>1 067.5</b>	<b>1 220.5</b>	<b>1 347.3</b>				<b>1.3</b>	<b>0.7</b>
<b>Developed countries</b>	<b>74.6</b>	<b>62.3</b>	<b>42.9</b>	<b>7.0</b>	<b>5.1</b>	<b>3.2</b>	<b>-1.8</b>	<b>-2.7</b>
Industrialized countries	28.7	22.6	14.3	2.7	1.9	1.1	-2.4	-3.3
Transition economies	45.9	39.7	28.6	4.3	3.3	2.1	-1.4	-2.3
<b>Developing countries</b>	<b>993.0</b>	<b>1 158.2</b>	<b>1 304.4</b>	<b>93.0</b>	<b>94.9</b>	<b>96.8</b>	<b>1.5</b>	<b>0.8</b>
Latin America and the Caribbean	44.7	44.7	43.1	4.2	3.7	3.2	0.0	-0.3
Near East and North Africa	41.5	42.5	51.6	3.9	3.5	3.8	0.2	1.4
Sub-Saharan Africa	120.6	149.1	191.3	11.3	12.2	14.2	2.1	1.8
East and Southeast Asia	516.5	622.5	656.3	48.4	51.0	48.7	1.9	0.4
South Asia	268.0	297.3	359.5	25.1	24.4	26.7	1.0	1.4
Oceania developing	1.7	2.0	2.6	0.2	0.2	0.2	1.9	1.7
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	-1.4	-2.6
<b>Continental groupings</b>								
Africa	137.7	165.5	209.7	12.9	13.6	15.6	1.8	1.7
Asia	825.2	961.1	1 060.9	77.3	78.7	78.7	1.5	0.7
Latin America	40.8	40.7	39.1	3.8	3.3	2.9	0.0	-0.3
Caribbean	3.9	4.0	4.0	0.4	0.3	0.3	0.3	-0.1
North America	4.7	4.1	3.1	0.4	0.3	0.2	-1.3	-2.0
Oceania	2.2	2.6	3.2	0.2	0.2	0.2	1.6	1.3
Europe	53.0	42.5	27.3	5.0	3.5	2.0	-2.2	-3.1



### 2.3 Selected Indicators Relating to Rural Population and Agricultural Labour Force

World/Region	1980	1990	2004
	..... (%) .....		
<b>Rural population as a percentage of total population</b>			
<b>WORLD</b>	<b>61</b>	<b>57</b>	<b>51</b>
<b>Developed countries</b>	<b>32</b>	<b>30</b>	<b>28</b>
Industrialized countries	29	27	23
Transition economies	40	37	37
<b>Developing countries</b>	<b>71</b>	<b>65</b>	<b>58</b>
Latin America and the Caribbean	35	29	23
Near East and North Africa	54	46	41
Sub-Sahara Africa	79	74	65
East and Southeast Asia	77	70	58
South Asia	78	75	72
Oceania developing	78	77	76
North America developing	10	9	7
<b>Continental groupings</b>			
Africa	73	68	61
Asia	74	68	61
Latin America	34	28	22
Caribbean	46	41	36
North America	26	25	19
Oceania	29	30	27
Europe	31	28	27
<b>Labour force in agriculture as a percentage of total labour force</b>			
<b>WORLD</b>	<b>52</b>	<b>49</b>	<b>43</b>
<b>Developed countries</b>	<b>13</b>	<b>10</b>	<b>6</b>
Industrialized countries	8	6	3
Transition economies	23	20	14
<b>Developing countries</b>	<b>67</b>	<b>61</b>	<b>53</b>
Latin America and the Caribbean	34	25	18
Near East and North Africa	51	39	31
Sub-Sahara Africa	76	72	64
East and Southeast Asia	70	68	59
South Asia	70	64	56
Oceania developing	73	69	62
North America developing	4	3	2
<b>Continental groupings</b>			
Africa	69	63	55
Asia	66	62	54
Latin America	34	25	18
Caribbean	34	28	22
North America	4	3	2
Oceania	22	20	19
Europe	16	12	8

**2.3 Selected Indicators Relating to Rural Population and Agricultural Labour Force**  
(cont. ed)

World/Region	1980	1990	2004
	..... (%) .....		
<b>Females in agriculture labour force as a percentage of total agricultural labour force</b>			
<b>WORLD</b>	<b>42</b>	<b>43</b>	<b>44</b>
<b>Developed countries</b>	<b>43</b>	<b>38</b>	<b>35</b>
Industrialized countries	36	35	35
Transition economies	47	40	36
<b>Developing countries</b>	<b>42</b>	<b>43</b>	<b>44</b>
Latin America and the Caribbean	17	17	17
Near East and North Africa	41	43	52
Sub-Saharan Africa	47	47	48
East and Southeast Asia	45	46	47
South Asia	40	37	39
Oceania developing	44	43	47
North America developing	22	23	28
<b>Continental groupings</b>			
Africa	46	47	48
Asia	43	43	44
Latin America	16	16	16
Caribbean	26	26	28
North America	22	23	28
Oceania	38	40	45
Europe	43	39	34

## **LAND USE AND AGRICULTURAL INPUTS**

### 3.1 Total area, arable land and land under permanent crops

World/Region	Year	Total Area	Arable land	Land under permanent crops	Arable land over total area	Total Area	Arable land	Land under permanent crops
		(million ha)			(%)	Share in total World (%)		
<b>WORLD</b>								
	1980	13 433	1 342.8	96.6	10.0			
	1990	13 433	1 391.6	113.5	10.4			
	2002	13 428	1 404.1	130.3	10.5			
<b>Developed countries</b>								
	1980	5 651	651.3	24.1	11.5	42.1	48.5	24.9
	1990	5 651	649.5	23.6	11.5	42.1	46.7	20.8
	2002	5 640	611.5	23.8	10.8	42.0	43.6	18.3
Industrialized countries								
	1980	3 294	378.8	16.4	11.5	24.5	28.2	16.9
	1990	3 294	379.8	16.6	11.5	24.5	27.3	14.7
	2002	3 294	366.5	16.9	11.1	24.5	26.1	13.0
Transition economies								
	1980	2 357	272.5	7.7	11.6	17.5	20.3	8.0
	1990	2 357	269.7	7.0	11.4	17.5	19.4	6.1
	2002	2 345	245.0	6.9	10.4	17.5	17.5	5.3
<b>Developing countries</b>								
	1980	7 781	691.5	72.5	8.9	57.9	51.5	75.1
	1990	7 781	742.1	89.9	9.5	57.9	53.3	79.2
	2002	7 788	792.5	106.4	10.2	58.0	56.4	81.7
Latin America & the Caribbean								
	1980	2 055	127.8	17.7	6.2	15.3	9.5	18.3
	1990	2 055	134.5	18.2	6.5	15.3	9.7	16.0
	2002	2 055	148.1	20.5	7.2	15.3	10.5	15.8
Near East & North Africa								
	1980	1 267	82.4	8.3	6.5	9.4	6.1	8.6
	1990	1 267	86.4	10.1	6.8	9.4	6.2	8.9
	2002	1 267	88.7	11.4	7.0	9.4	6.3	8.8
Sub-Saharan Africa								
	1980	2 334	124.3	15.8	5.3	17.4	9.3	16.4
	1990	2 334	130.9	18.1	5.6	17.4	9.4	16.0
	2002	2 334	146.6	20.4	6.3	17.4	10.4	15.6
East & Southeast Asia								
	1980	1 588	161.6	22.8	10.2	11.8	12.0	23.6
	1990	1 588	193.7	34.3	12.2	11.8	13.9	30.2
	2002	1 588	213.1	42.4	13.4	11.8	15.2	32.6
South Asia								
	1980	449	195.1	7.0	43.5	3.3	14.5	7.2
	1990	449	196.0	8.2	43.7	3.3	14.1	7.2
	2002	449	195.4	10.6	43.6	3.3	13.9	8.1
Oceania developing								
	1980	55	0.4	0.9	0.7	0.4	0.0	1.0
	1990	55	0.5	1.0	0.9	0.4	0.0	0.9
	2002	55	0.6	1.1	1.1	0.4	0.0	0.9

### 3.1 Total area, arable land and land under permanent crops (cont. ed)

World/Region	Year	Total Area	Arable land	Land under permanent crops	Arable land over total area	Total Area	Arable land	Land under permanent crops
		(million ha)			(%)	Share in total World (%)		
<b>North America developing</b>								
	1980	34	0.0	0.0	0.0	0.3	0.0	0.0
	1990	34	0.0	0.0	0.0	0.3	0.0	0.0
	2002	41	0.0	0.0	0.0	0.3	0.0	0.0
<b>Continental groupings</b>								
<b>Africa</b>								
	1980	3 031	158.4	19.8	5.2	22.6	11.8	20.5
	1990	3 031	167.1	22.9	5.5	22.6	12.0	20.2
	2002	3 031	184.9	25.8	6.1	22.6	13.2	19.8
<b>Asia</b>								
	1980	...	...	...	...	...	...	...
	1990	...	...	...	...	...	...	...
	2002	3 187	511.7	61.7	16.1	23.7	36.4	47.4
<b>Caribbean</b>								
	1980	23	4.9	1.7	20.8	0.2	0.4	1.7
	1990	23	5.4	1.8	23.2	0.2	0.4	1.6
	2002	23	4.9	2.2	21.0	0.2	0.4	1.7
<b>Latin America</b>								
	1980	2 031	122.9	16.1	6.1	15.1	9.2	16.6
	1990	2 031	129.1	16.3	6.4	15.1	9.3	14.4
	2002	2 031	143.1	18.3	7.0	15.1	10.2	14.1
<b>North America</b>								
	1980	1 994	234.3	2.0	11.8	14.8	17.5	2.1
	1990	1 994	231.6	2.2	11.6	14.8	16.6	1.9
	2002	2 001	221.8	2.2	11.1	14.9	15.8	1.7
<b>Oceania</b>								
	1980	856	47.1	2.0	5.5	6.4	3.5	2.1
	1990	856	50.9	2.6	5.9	6.4	3.7	2.3
	2002	856	50.4	3.3	5.9	6.4	3.6	2.5
<b>Europe</b>								
	1980	...	...	...	...	...	...	...
	1990	...	...	...	...	...	...	...
	2002	2 298	287.2	16.8	12.5	17.1	20.5	12.9

Note: Data of total area in 2002 exclude the portion of land under Azov Sea and White Sea

### 3.2 Land availability per person ratios

World/Region	Year	Per person ratio		
		In total population	Dependent on agriculture	Economically active in agriculture
(ha)				
<b>WORLD</b>				
	1980	0.32	0.65	1.35
	1990	0.29	0.62	1.23
	2002	0.25	0.59	1.15
<b>Developed countries</b>				
	1980	0.58	4.25	9.06
	1990	0.54	5.02	10.80
	2002	0.48	6.77	14.03
Industrialized countries				
	1980	0.50	5.90	13.77
	1990	0.47	7.76	17.50
	2002	0.42	11.17	24.88
Transition economies				
	1980	0.73	3.05	6.11
	1990	0.67	3.34	6.97
	2002	0.62	4.24	8.44
<b>Developing countries</b>				
	1980	0.23	0.37	0.77
	1990	0.21	0.36	0.72
	2002	0.18	0.36	0.70
Latin America & the Caribbean				
	1980	0.40	1.14	3.26
	1990	0.35	1.30	3.41
	2002	0.32	1.59	3.88
Near East & North Africa				
	1980	0.37	0.80	2.19
	1990	0.30	0.85	2.27
	2002	0.24	0.84	1.99
Sub-Saharan Africa				
	1980	0.40	0.54	1.16
	1990	0.32	0.46	1.00
	2002	0.26	0.41	0.90
East & Southeast Asia				
	1980	0.13	0.19	0.36
	1990	0.14	0.21	0.37
	2002	0.13	0.23	0.39
South Asia				
	1980	0.23	0.35	0.75
	1990	0.18	0.31	0.69
	2002	0.15	0.28	0.59
Oceania developing				
	1980	0.26	0.36	0.80
	1990	0.24	0.35	0.77
	2002	0.20	0.31	0.69
North America developing				
	1980	0.03	0.80	2.00
	1990	0.03	1.00	2.00
	2002	0.03	1.33	2.00

### 3.2 Land availability per person ratios (cont. ed)

World/Region	Year	Per person ratio		
		In total population	Dependent on agriculture	Economically active in agriculture
(ha)				
<b>Continental groupings</b>				
Africa				
	1980	0.38	0.57	1.29
	1990	0.31	0.50	1.15
	2002	0.25	0.46	1.03
Asia				
	1980	...	...	...
	1990	...	...	...
	2002	0.15	0.29	0.55
Caribbean				
	1980	0.22	0.67	1.67
	1990	0.22	0.73	1.80
	2002	0.19	0.78	1.80
Latin America				
	1980	0.42	1.18	3.41
	1990	0.36	1.36	3.57
	2002	0.33	1.67	4.09
North America				
	1980	0.92	22.91	50.21
	1990	0.82	26.87	56.42
	2002	0.69	32.88	68.30
Oceania				
	1980	2.15	9.83	21.87
	1990	2.00	9.36	20.24
	2002	1.69	8.12	17.47
Europe				
	1980	...	...	...
	1990	...	...	...
	2002	0.42	5.30	10.42

### 3.3 Change in Forest Cover

World/Region	Land Area	Forest Cover		Annual Change	
	2000	1990	2000	1990-2000	
		(million ha)		(million ha)	(% per year)
<b>WORLD</b>	<b>13 063.9</b>	<b>3 963.4</b>	<b>3 869.5</b>	<b>-9.4</b>	<b>-0.2</b>
<b>Developed countries</b>	<b>5 461.2</b>	<b>1 716.1</b>	<b>1 729.1</b>	<b>1.3</b>	<b>0.1</b>
Industrialized countries	3 152.4	787.0	792.0	0.5	0.1
Transition economies	2 308.8	929.0	937.2	0.8	0.1
<b>Developing countries</b>	<b>7 602.6</b>	<b>2 247.4</b>	<b>2 140.3</b>	<b>-10.7</b>	<b>-0.5</b>
Latin America and the Caribbean	2 019.5	1 011.0	964.4	-4.7	-0.5
Near East and North Africa	1 252.6	28.2	28.8	0.1	0.2
Sub-Saharan Africa	2 282.0	687.7	634.8	-5.3	-0.8
East and Southeast Asia	1 547.3	406.4	400.5	-0.6	-0.1
South Asia	412.9	77.6	76.7	-0.1	-0.1
Oceania developing	54.1	36.4	35.1	-0.1	-0.3
North America developing	34.2	0.0	0.0	0.0	0.0
<b>Continental groupings</b>					
Africa	2 978.4	702.5	649.9	-5.3	-0.8
Asia	3 084.7	551.4	547.8	-0.4	-0.1
Latin America	1 996.7	1 005.5	958.6	-4.7	-0.5
Caribbean	22.8	5.6	5.7	0.0	0.2
North America	1 872.2	466.7	470.6	0.4	0.1
Oceania	849.1	201.3	197.6	-0.4	-0.2
Europe	2 260.0	1 030.5	1 039.3	0.9	0.1



### 3.4 World Fertilizer Production and Consumption

Fertilizer	Production			Consumption		
	1980/1981	1990/1991	2002/2003	1980/1981	1990/1991	2002/2003
(million MT)						
Nitrogen	63	82	87	61	77	85
Phosphate	35	39	34	32	36	34
Potash	27	27	26	24	25	23
<b>Total</b>	<b>125</b>	<b>148</b>	<b>147</b>	<b>117</b>	<b>138</b>	<b>142</b>

### 3.5 Leading Fertilizer Producing and Consuming Countries

Producers	Production	% of World	Consumers	Consumption	% of World
	(million MT)	production		(million MT)	consumption
2002/2003					
China	32	22	China	40	28
United States of America	18	12	United States of America	19	13
India	14	9	India	16	11
Russian Federation	13	8	Brazil	8	6
Canada	12	8	France	4	3
<b>Rest of the World</b>	<b>59</b>	<b>41</b>	<b>Rest of the World</b>	<b>55</b>	<b>39</b>

### 3.6 Fertilizer Consumption to Arable Land Ratio (kg nutrients/ha)

World/Region	1980/1981	1990/1991	2002/2003
<b>WORLD</b>	<b>87</b>	<b>99</b>	<b>101</b>
<b>Developed countries</b>	<b>120</b>	<b>112</b>	<b>82</b>
Industrialized countries	131	118	111
Transition economies	104	104	32
<b>Developing countries</b>	<b>56</b>	<b>87</b>	<b>115</b>
Latin America & the Caribbean	59	59	89
Near East & North Africa	45	67	73
Sub-Saharan Africa	8	10	9
East & Southeast Asia	120	180	231
South Asia	37	77	107
Oceania developing	59	73	51
North America developing	83	-	25
<b>Continental groupings</b>			
Africa	20	22	23
Asia	73	122	151
Latin America	56	56	90
Caribbean	132	137	60
North America	100	89	99
Oceania	35	30	63
Europe	247	212	76

### 3.7 Production of Pesticides (insecticides, fungicides, disinfectants, etc.)

Country	1990	1995	2000	Country	1990	1995	2000
(thousand MT)				(thousand MT)			
<b>Total</b>	<b>2 318</b>	<b>2 045</b>	<b>2 254</b>	Europe <sup>6/</sup>	1 377	1 042	718
Africa	60	73	106	Albania	9	0	0
Algeria	8	...	...	Austria	17	12	16
Burundi	4	...	...	Belgium <sup>7/</sup>	100	3	...
Egypt	21	25	55	Bulgaria	10	8	6
Kenya	3	1	...	Croatia	...	7	7
South Africa <sup>1/</sup>	23	36	...	Czech Republic	...	22	19
Tanzania, United Rep.	1	...	...	Czechoslovakia (former)	17	...	...
				Denmark <sup>8/</sup>	...	18	21
North America	127	169	244	Finland	14	14	4
Mexico	127	169	244	France	326	...	...
				Germany	...	128	84
South America	24	23	25	Germany (Fed.Rep.) <sup>9/</sup>	281	...	...
Colombia	...	21	...	Germany D.R. (former)	62	...	...
Ecuador	...	2	2	Greece <sup>10/</sup>	7	11	11
Asia <sup>2/</sup>	461	691	862	Hungary	56	19	15
Bangladesh <sup>3/</sup>	...	...	9.1	Latvia	...	0	0
China <sup>4/</sup>	228	607	625	Lithuania	...	1	0
Cyprus	...	0	...	Poland	20	24	30
Indonesia	19	18	...	Portugal	25	15	22
Iran, Islamic Rep of <sup>5/</sup>	...	...	16	Romania	24	15	4
Korea, Rep. of	182	168	164	Russian Federation	...	16	11
Turkey	23	32	30	Serbia and Montenegro	...	7	7
Uzbekistan	...	15	...	Slovakia	...	...	3
Viet Nam <sup>6/</sup>	9	16	22	Slovenia	...	6	1
				Spain <sup>11/</sup>	83	91	105
USSR (former)	205	...	...	Sweden	...	9	2
				T.F.Yug.Rep.Macedonia	...	0	0
				Ukraine	...	4	1
				United Kingdom	...	307	41

<sup>1/</sup> Excluding products usually measured in units of volume.

<sup>2/</sup> 1990 total excludes data for Bangladesh and Iran.

<sup>3/</sup> Insecticides only.

<sup>4/</sup> Data exclude those for Taiwan Province.

<sup>5/</sup> Production by establishments employing 10 or more persons.

Note: Global and regional totals refer to the countries shown only, and include estimates for missing data.

<sup>6/</sup> 1990 total excludes data for Latvia.

<sup>7/</sup> 1995 and 2000, incomplete coverage.

<sup>8/</sup> Sales.

<sup>9/</sup> Excluding disinfectants.

<sup>10/</sup> Insecticides for household use in 1990.

<sup>11/</sup> Including insecticides for household use in 1990.

### 3.8 Imports and Exports of Pesticides

World/Region	Value (US\$ million)		
	1980	1990	2002
<b>Imports</b>			
<b>WORLD</b>	<b>4 467</b>	<b>8 284</b>	<b>11 621</b>
<b>Developed countries</b>	<b>2 938</b>	<b>6 097</b>	<b>7 958</b>
Industrialized countries	2 308	4 937	6 626
Transition economies	630	1 159	1 332
<b>Developing countries</b>	<b>1 529</b>	<b>2 187</b>	<b>3 664</b>
Latin America & the Caribbean	406	670	1 628
Near East & North Africa	313	449	517
Sub-Saharan Africa	400	306	366
East & Southeast Asia	334	645	944
South Asia	65	102	190
Oceania developing	12	14	17
North America developing	1	1	2
<b>Continental groupings</b>			
Africa	567	484	592
Asia	...	...	1 893
Latin America	324	508	1 486
Caribbean	82	162	142
North America	449	511	1 113
Oceania	45	88	275
Europe	...	...	6 120
<b>Exports</b>			
<b>WORLD</b>	<b>4 063</b>	<b>7 432</b>	<b>10 906</b>
<b>Developed countries</b>	<b>3 775</b>	<b>6 839</b>	<b>8 826</b>
Industrialized countries	3 633	6 656	8 631
Transition economies	142	183	194
<b>Developing countries</b>	<b>288</b>	<b>593</b>	<b>2 080</b>
Latin America & the Caribbean	112	218	717
Near East & North Africa	8	23	57
Sub-Saharan Africa	32	21	38
East & Southeast Asia	130	270	961
South Asia	6	60	307
Oceania developing	0	0	0
North America developing	...	...	...
<b>Continental groupings</b>			
Africa	54	60	147
Asia	...	...	1 717
Latin America	104	214	699
Caribbean	8	3	19
North America	569	1 179	1 687
Oceania	10	27	106
Europe	...	...	6 109

### 3.9 Agricultural Tractors and Harvesters/Threshers in Use per 1000 ha of Arable Land

World/Region	Agricultural Tractors			Harvesters Threshers		
	1980	1990	2002	1980	1990	2002
	(number/1000 ha)					
<b>WORLD</b>	<b>16.3</b>	<b>19.2</b>	<b>19.0</b>	<b>2.6</b>	<b>2.9</b>	<b>2.9</b>
<b>Developed countries</b>	<b>28.5</b>	<b>32.7</b>	<b>31.7</b>	<b>5.1</b>	<b>5.5</b>	<b>4.8</b>
Industrialized countries	38.2	42.0	41.6	6.5	7.2	6.6
Transition economies	15.1	19.5	17.0	3.1	3.1	2.2
<b>Developing countries</b>	<b>4.8</b>	<b>7.3</b>	<b>9.2</b>	<b>0.3</b>	<b>0.6</b>	<b>1.5</b>
Latin America & the Caribbean	8.6	12.0	11.9	1.0	1.1	1.1
Near East & North Africa	9.1	15.0	19.6	0.5	0.5	0.6
Sub-Saharan Africa	0.9	1.1	1.1	0.0	0.0	0.0
East & Southeast Asia	5.5	5.7	8.2	0.4	1.3	4.4
South Asia	2.6	6.5	9.5	0.0	0.0	0.0
Oceania developing	18.0	19.2	18.8	0.9	0.9	0.8
North America developing	29.0	33.8	32.5	0.0	0.0	0.0
<b>Continental groupings</b>						
Africa	2.8	3.2	2.9	0.3	0.3	0.2
Asia	8.2	12.2	14.6	2.3	3.3	4.0
Latin America	8.3	11.8	11.7	1.0	1.1	1.1
Caribbean	16.9	16.9	18.8	1.2	1.3	1.5
North America	23.0	24.0	24.9	3.6	3.5	3.5
Oceania	9.1	7.9	8.0	1.3	1.2	1.2
Europe	67.0	83.1	38.2	6.4	6.4	3.5

## **WATER RESOURCES AND IRRIGATION**

#### 4.1 Large Rivers of the World

Continent/River	Average runoff (km <sup>3</sup> /year)	Area of basin (10 <sup>3</sup> km <sup>2</sup> )	Length (km)
<b>Africa</b>			
Congo	1 460	3 820	4 370
Niger	320	2 090	4 160
Nile	202	2 870	6 670
<b>North and Central America</b>			
Mississippi	580	3 220	5 985
St. Lawrence	439	1 290	3 060
Mackenzie	350	1 800	4 240
Columbia	267	669	1 950
Yukon	207	852	3 000
<b>South America</b>			
Amazon	6 930	6 915	6 280
Orinoco	914	1 000	2 740
Paraná	725	2 970	4 700
Magdalena	260	260	1 530
<b>Asia</b>			
Ganges (with Brahmaputra)	1 400	1 730	3 000
Yangzijiang	995	1 800	5 520
Yenisei	610	2 580	3 490
Mekong	510	810	4 500
Irrawaddy	486	410	2 300
Chutsyan	363	437	2 130
Indus	220	960	3 180
Salween	211	325	2 820
<b>Europe</b>			
Danube	214	817	2 860
<b>Former USSR</b>			
Lena	532	2 490	4 400
Ob	395	2 990	3 650
Amur	355	1 855	2 820
Volga	254	1 360	3 350

Note: Covering only rivers having mean annual runoff greater than 200 km<sup>3</sup>.

#### 4.2 Distribution of World Water Resources, 2000

Location	Water volume (10 <sup>3</sup> km <sup>3</sup> )	As % of fresh water	As % of total water
<b>Total Water</b>	<b>1 385 984.5</b>		<b>100</b>
<b>Fresh Water</b>	<b>35 029.1</b>	<b>100</b>	<b>2.5274</b>
Glaciers and ice caps	24 064.0	68.6972	1.7362
Groundwater	10 530.0	30.0607	0.7597
Underground ice (permafrost)	300.0	0.8564	0.0216
Fresh water lakes	91.0	0.2598	0.0066
Vadose (incl. soil moisture)	16.5	0.0471	0.0012
Atmospheric water	12.9	0.0368	0.0009
Swamps	11.5	0.0328	0.0008
Stream channels	2.1	0.0060	0.0002
Biological water	1.1	0.0031	0.0001
<b>Saline Water</b>	<b>1 350 955.4</b>		<b>97.4726</b>
Oceans	1 338 000.0		96.5379
Saline groundwater	12 870.0		0.9286
Saline lakes and inland seas	85.4		0.0062

#### 4.3 Freshwater Availability, 2000

World/Continent	Internal renewable freshwater resources		
	Volume per year (km <sup>3</sup> )	% of world freshwater resources	2000* per caput (1000 m <sup>3</sup> )
<b>WORLD</b>	<b>43 764</b>	<b>100.0</b>	<b>7.2</b>
<b>Developed countries</b>	<b>13 863</b>	<b>31.7</b>	<b>10.5</b>
Industrialized countries (a)	8 816	20.1	9.8
Transition economies	5 047	11.5	12.3
<b>Developing countries</b>	<b>29 901</b>	<b>68.3</b>	<b>6.3</b>
Latin America and the Caribbean	13 570	31.0	26.2
Near East and North Africa (b)	516	1.2	1.3
Sub-Saharan Africa (c)	3 856	8.8	6.3
East and Southeast Asia (d)	8 720	19.9	4.6
South Asia	1 761	4.0	1.3
Oceania developing	874	2.0	126.1
North America developing	603	1.4	5 067.2
<b>Continental groupings</b>	<b>43 764</b>	<b>100.0</b>	<b>7.2</b>
Africa	3 950	9.0	5.0
Asia	11 660	26.6	3.2
Latin America	13 477	30.8	28.0
Caribbean	93	0.2	2.5
North America	6 271	14.3	20.0
Oceania	1 693	3.9	56.7
Europe	6 619	15.1	9.0

\* Volume of internal renewable freshwater resources divided by total population in 2000.

(a) Including Japan, South Africa, Israel

(b) Excluding Israel

(c) Excluding South Africa

(d) Excluding Japan

#### 4.4 Freshwater Utilization by Purpose, 2000

World/Continent	Total volume of freshwater utilization km <sup>3</sup> /year	Freshwater utilization by purpose						Utilization* as % of resources
		Domestic use		Industrial use		Agricultural use		
		km <sup>3</sup> /year	%	km <sup>3</sup> /year	%	km <sup>3</sup> /year	%	
<b>WORLD</b>	<b>3 811.3</b>	<b>376.2</b>	<b>9.9</b>	<b>783.0</b>	<b>20.5</b>	<b>2 652.1</b>	<b>69.6</b>	<b>8.7</b>
<b>Developed countries</b>	<b>1 230.2</b>	<b>164.0</b>	<b>13.3</b>	<b>501.4</b>	<b>40.8</b>	<b>564.8</b>	<b>45.9</b>	<b>8.9</b>
Industrialized countries (a)	884.5	130.1	14.7	387.9	43.9	366.5	41.4	10.0
Transition economies	345.7	33.9	9.8	113.5	32.8	198.3	57.4	6.8
<b>Developing countries</b>	<b>2 581.1</b>	<b>212.2</b>	<b>8.2</b>	<b>281.6</b>	<b>10.9</b>	<b>2 087.3</b>	<b>80.9</b>	<b>8.6</b>
Latin America and the Caribbean	265.1	50.4	19.0	27.4	10.3	187.3	70.7	2.0
Near East and North Africa (b)	322.6	25.1	7.8	19.5	6.0	278.0	86.2	62.5
Sub-Saharan Africa (c)	98.1	6.9	7.0	2.8	2.9	88.3	90.1	2.5
East and Southeast Asia (d)	977.4	71.2	7.3	192.3	19.7	714.0	73.0	11.2
South Asia	917.8	58.7	6.4	39.6	4.3	819.6	89.3	52.1
Oceania developing	0.1	0.1	35.5	0.0	28.4	0.1	36.2	0.0
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>	<b>3 811.3</b>	<b>376.2</b>	<b>9.9</b>	<b>783.0</b>	<b>20.5</b>	<b>2 652.1</b>	<b>69.6</b>	<b>8.7</b>
Africa	208.4	18.0	8.6	15.2	7.3	175.2	84.1	5.3
Asia	2 377.1	171.5	7.2	270.2	11.4	1 935.5	81.4	20.4
Latin America	251.7	47.3	18.8	26.1	10.4	178.3	70.8	1.9
Caribbean	13.4	3.1	22.9	1.3	9.4	9.1	67.6	14.4
North America	525.3	69.9	13.3	252.3	48.0	203.2	38.7	8.4
Oceania	26.2	4.6	17.6	2.6	10.1	19.0	72.4	1.5
Europe	409.3	62.0	15.1	215.4	52.6	131.9	32.2	6.2

\* Freshwater utilization as percent of renewable fresh water resources given in Table 4.3.

(a) Including Japan, South Africa, Israel

(b) Excluding Israel

(c) Excluding South Africa

(d) Excluding Japan



#### 4.5 Irrigated Land and Percentage of Arable Land that is Irrigated

World/Continent	Irrigated Land					
	Area (1000 ha)			As % of arable land		
	1980	1990	2002	1980	1990	2002
<b>WORLD</b>	<b>210 222</b>	<b>244 988</b>	<b>276 719</b>	<b>15.7</b>	<b>17.6</b>	<b>19.7</b>
<b>Developed countries</b>	<b>58 926</b>	<b>66 286</b>	<b>68 060</b>	<b>9.0</b>	<b>10.2</b>	<b>11.1</b>
Industrialized countries	37 355	39 935	43 669	9.9	10.5	11.9
Transition economies	21 571	26 351	24 391	7.9	9.8	10.0
<b>Developing countries</b>	<b>151 296</b>	<b>178 702</b>	<b>208 659</b>	<b>21.9</b>	<b>24.1</b>	<b>26.3</b>
Latin America & the Caribbean	13 811	16 794	18 622	10.8	12.5	12.6
Near East & North Africa	17 982	24 864	28 642	21.8	28.8	32.3
Sub-Saharan Africa	3 980	4 885	5 225	3.2	3.7	3.6
East & Southeast Asia	59 722	65 624	74 748	37.0	33.9	35.1
South Asia	55 798	66 529	81 408	28.6	33.9	41.7
Oceania developing	3	6	14	0.7	1.2	2.4
North America developing	...	...	...	...	...	...
<b>Continental groupings</b>						
Africa	9 491	11 235	12 879	6.0	6.7	7.0
Asia	132 377	155 009	193 869	31.3	33.8	37.9
Caribbean	1 074	1 269	1 308	22.0	23.3	26.5
Latin America	12 737	15 525	17 314	10.4	12.0	12.1
North America	21 178	21 618	23 285	9.0	9.3	10.5
Oceania	1 686	2 118	2 844	3.6	4.2	5.6
Europe	14 479	17 414	25 220	11.5	14.0	8.8

## **AGRICULTURAL PRODUCTION AND TRADE**

### 5.1 Average Annual Rate of Growth of Total Agricultural Production

World/Region	Total Agricultural Production		
	1970-1980	1980-1990	1990-2002
	(%)		
<b>WORLD</b>	<b>2.4</b>	<b>2.4</b>	<b>2.3</b>
<b>Developed countries</b>	<b>2.0</b>	<b>1.0</b>	<b>0.2</b>
Industrialized countries	2.2	0.7	1.1
Transition economies	1.5	1.7	-2.6
<b>Developing countries</b>	<b>2.8</b>	<b>3.6</b>	<b>3.6</b>
Latin America and the Caribbean	3.4	2.3	3.2
Near East and North Africa	2.8	3.3	2.5
Sub-Saharan Africa	0.9	2.9	3.0
East and Southeast Asia	3.3	4.3	4.6
South Asia	2.6	3.8	2.8
Oceania developing	2.4	1.7	1.9
North America developing	-2.4	1.2	-0.6
<b>Continental groupings</b>			
Africa	1.2	2.9	2.8
Asia	...	...	...
Latin America	3.5	2.4	3.3
Caribbean	1.3	1.0	-0.1
North America	2.7	0.6	1.7
Oceania	1.8	1.6	2.7
Europe	...	...	...

Note: Production aggregates are calculated using constant 1999-2001 international commodity prices.

### 5.2 Average Annual Rate of Growth of Food Production and Per Caput Food Production

World/Region	Food Production					
	Total			Per caput		
	1970-1980	1980-1990	1990-2002	1970-1980	1980-1990	1990-2002
(%)						
<b>WORLD</b>	<b>2.5</b>	<b>2.4</b>	<b>2.4</b>	<b>0.6</b>	<b>0.6</b>	<b>1.0</b>
<b>Developed countries</b>	<b>2.0</b>	<b>1.0</b>	<b>0.2</b>	<b>1.2</b>	<b>0.3</b>	<b>-0.2</b>
Industrialized countries	2.3	0.7	1.1	1.4	0.0	0.4
Transition economies	1.5	1.8	-2.5	0.6	1.0	-2.4
<b>Developing countries</b>	<b>3.0</b>	<b>3.6</b>	<b>3.8</b>	<b>0.7</b>	<b>1.5</b>	<b>2.1</b>
Latin America and the Caribbean	3.6	2.5	3.3	1.1	0.4	1.7
Near East and North Africa	3.1	3.5	2.6	0.3	0.7	0.4
Sub-Saharan Africa	1.1	2.9	3.0	-1.7	-0.1	0.3
East and Southeast Asia	3.3	4.4	4.9	1.4	2.7	3.7
South Asia	2.7	3.8	2.9	0.4	1.5	1.0
Oceania developing	2.2	1.7	1.9	-0.1	-0.6	-0.4
North America developing	-2.3	1.2	-0.6	-3.5	0.3	-1.0
<b>Continental groupings</b>						
Africa	1.3	3.0	2.9	-1.4	0.1	0.5
Asia	...	...	...	...	...	...
Latin America	3.7	2.5	3.5	1.2	0.5	1.8
Caribbean	1.3	1.0	-0.1	-0.4	-0.4	-1.1
North America	2.8	0.6	1.8	1.8	-0.4	0.7
Oceania	2.2	1.3	3.2	0.6	-0.3	1.7
Europe	...	...	...	...	...	...

Note: Production aggregates are calculated using constant 1999-2001 international commodity prices.

### 5.3 Agricultural Production per Agricultural Worker, 1980, 1990 and 2002

World/Region	Agricultural production (1999-2001 Int. \$) per agricultural worker		
	1980	1990	2002
<b>WORLD</b>	<b>788</b>	<b>883</b>	<b>1 033</b>
<b>Developed countries</b>	<b>5 684</b>	<b>7 628</b>	<b>10 312</b>
Industrialized countries	10 571	14 837	23 749
Transition economies	2 627	3 514	3 379
<b>Developing countries</b>	<b>421</b>	<b>520</b>	<b>706</b>
Latin America and the Caribbean	1 965	2 476	3 685
Near East and North Africa	976	1 327	1 500
Sub-Saharan Africa	339	362	411
East and Southeast Asia	300	391	636
South Asia	345	457	510
Oceania developing	757	736	734
North America developing	1 088	1 291	1 213
<b>Continental groupings</b>			
Africa	427	466	524
Asia	...	...	648
Latin America	2 027	2 579	3 916
Caribbean	1 319	1 443	1 394
North America	25 885	33 646	49 638
Oceania	8 029	8 204	8 464
Europe	...	...	8 243

Note: The aggregate "agricultural production", expressed in international dollars, is the sum of crop and livestock commodities after deduction of seed and feed utilization. Practically all products are covered, with the exception of fodder crops. Production quantities are valued by constant 1999-2001 average international commodity prices. This method assigns a single constant price to each commodity regardless of the country where it was produced.

"Agricultural worker" refers to the estimates on agricultural labour force in 1980 and 1990 and the projections for 2002.

#### 5.4 Crop Production per ha of land in use, 1980, 1990 and 2002

World/Region	Crop production (1999-2001 Int. \$) per ha of land in use		
	1980	1990	2002
<b>WORLD</b>	<b>399</b>	<b>489</b>	<b>599</b>
<b>Developed countries</b>	<b>369</b>	<b>414</b>	<b>428</b>
Industrialized countries	435	486	529
Transition economies	275	310	273
<b>Developing countries</b>	<b>426</b>	<b>549</b>	<b>721</b>
Latin America and the Caribbean	381	455	570
Near East and North Africa	340	445	573
Sub-Sahara Africa	217	279	360
East and Southeast Asia	753	897	1 227
South Asia	343	479	581
Oceania developing	651	633	677
North America developing	125	183	175
<b>Continental groupings</b>			
Africa	242	302	385
Asia	...	...	860
Latin America	371	448	570
Caribbean	587	597	574
North America	328	389	430
Oceania	107	141	151
Europe	...	...	476

Note: The aggregate "crop production", expressed in international dollars, is the sum of crop commodities after deduction of seed utilization. Practically all products are covered, with the exception of fodder crops. Production quantities are valued by constant price to each commodity regardless of the country where it was produced.

"Land in use" refers to arable land and land under permanent crops.

**5.5 Value of Total Merchandise Trade, Agriculture Trade and Share of Agriculture Trade in Total Merchandise Trade**

World/Region	Total Merchandise			Agricultural Products			Share of Agricultural Products in Total Merchandise		
	1980	1990	2002	1980	1990	2002	1980	1990	2002
	(US\$ billion)						(%)		
<b>Imports</b>									
<b>WORLD</b>	<b>2 041.3</b>	<b>3 607.8</b>	<b>6 549.5</b>	<b>255.4</b>	<b>353.2</b>	<b>464.0</b>	<b>12.5</b>	<b>9.8</b>	<b>7.1</b>
<b>Developed countries</b>	<b>1 563.1</b>	<b>2 829.7</b>	<b>4 711.3</b>	<b>186.4</b>	<b>266.6</b>	<b>327.4</b>	<b>11.9</b>	<b>9.4</b>	<b>6.9</b>
Industrialized countries	1 412.9	2 634.8	4 382.3	158.7	239.2	298.7	11.2	9.1	6.8
Transition economies	150.2	194.9	329.0	27.7	27.5	28.7	18.4	14.1	8.7
<b>Developing countries</b>	<b>478.2</b>	<b>778.1</b>	<b>1 838.3</b>	<b>69.0</b>	<b>86.5</b>	<b>136.6</b>	<b>14.4</b>	<b>11.1</b>	<b>7.4</b>
Latin America and the Caribbean	125.6	120.4	288.7	14.6	14.8	29.5	11.6	12.3	10.2
Near East and North Africa	125.8	143.7	272.4	21.6	25.8	33.3	17.2	18.0	12.2
Sub-Saharan Africa	46.3	41.2	55.0	7.1	6.7	10.6	15.4	16.3	19.3
East and Southeast Asia	152.9	428.5	1 126.0	21.7	34.4	54.0	14.2	8.0	4.8
South Asia	23.3	38.1	84.3	3.2	3.9	8.1	13.8	10.3	9.6
Oceania developing	3.7	5.2	7.5	0.6	0.8	0.9	17.2	14.9	11.6
North America developing	0.7	1.1	4.3	0.1	0.2	0.2	18.7	14.7	4.3
<b>Continental groupings</b>									
Africa	94.7	95.1	137.2	15.2	16.0	22.3	16.0	16.8	16.3
Asia	...	...	1 816.4	...	...	122.5	...	...	6.7
Latin America	92.0	97.1	258.9	11.6	11.3	25.7	12.6	11.7	9.9
Caribbean	33.6	23.2	29.8	3.0	3.4	3.8	9.0	14.8	12.8
North America	301.1	634.3	1 428.7	23.1	34.4	57.9	7.7	5.4	4.1
Oceania	26.8	54.0	91.7	1.9	3.2	5.4	7.2	5.9	5.9
Europe	...	...	2 786.9	...	...	226.5	...	...	8.1
<b>Exports</b>									
<b>WORLD</b>	<b>2 024.7</b>	<b>3 495.3</b>	<b>6 400.5</b>	<b>234.2</b>	<b>326.2</b>	<b>442.1</b>	<b>11.6</b>	<b>9.3</b>	<b>6.9</b>
<b>Developed countries</b>	<b>1 434.6</b>	<b>2 687.1</b>	<b>4 438.1</b>	<b>161.4</b>	<b>236.6</b>	<b>310.8</b>	<b>11.3</b>	<b>8.8</b>	<b>7.0</b>
Industrialized countries	1 286.6	2 513.5	4 104.8	150.2	226.3	291.7	11.7	9.0	7.1
Transition economies	148.0	173.7	333.3	11.2	10.3	19.1	7.6	5.9	5.7
<b>Developing countries</b>	<b>590.1</b>	<b>808.2</b>	<b>1 962.4</b>	<b>72.8</b>	<b>89.6</b>	<b>131.3</b>	<b>12.3</b>	<b>11.1</b>	<b>6.7</b>
Latin America and the Caribbean	115.2	134.0	272.8	32.0	35.0	53.3	27.8	26.1	19.5
Near East and North Africa	256.7	174.7	328.3	5.4	7.8	11.3	2.1	4.5	3.4
Sub-Saharan Africa	51.2	44.0	59.8	10.2	8.8	10.0	19.8	20.0	16.8
East and Southeast Asia	151.7	425.0	1 225.5	20.2	32.6	48.4	13.3	7.7	4.0
South Asia	12.7	27.0	70.6	4.3	5.0	7.7	33.8	18.6	10.9
Oceania developing	2.3	2.8	4.0	0.7	0.5	0.5	30.8	16.8	13.3
North America developing	0.2	0.6	1.3	0.0	0.0	0.0	1.8	0.1	0.3
<b>Continental groupings</b>									
Africa	122.2	105.6	136.6	14.2	12.2	14.4	11.6	11.5	10.6
Asia	...	...	2 042.9	...	...	70.2	...	...	3.4
Latin America	86.4	119.0	257.1	26.0	28.9	51.2	30.1	24.3	19.9
Caribbean	28.9	15.1	15.7	6.0	6.1	2.1	20.9	40.4	13.5
North America	282.0	521.8	947.4	50.0	54.4	72.1	17.7	10.4	7.6
Oceania	28.4	49.6	84.0	13.2	17.0	23.3	46.7	34.3	27.7
Europe	...	...	2 916.8	...	...	208.7	...	...	7.2

### 5.6 Average Annual Rate of Growth of Total Merchandise and Agricultural Trade

World/Region	Total merchandise		Agricultural products		Total merchandise		Agricultural products	
	1980-1990	1990-2002	1980-1990	1990-2002	1980-1990	1990-2002	1980-1990	1990-2002
	(%)							
	<b>Imports</b>				<b>Exports</b>			
<b>WORLD</b>	<b>5.9</b>	<b>5.1</b>	<b>3.3</b>	<b>2.3</b>	<b>5.6</b>	<b>5.2</b>	<b>3.4</b>	<b>2.6</b>
<b>Developed countries</b>	<b>6.1</b>	<b>4.3</b>	<b>3.6</b>	<b>1.7</b>	<b>6.5</b>	<b>4.3</b>	<b>3.9</b>	<b>2.3</b>
Industrialized countries	6.4	4.3	4.2	1.9	6.9	4.2	4.2	2.1
Transition economies	2.6	4.5	-0.1	0.4	1.6	5.6	-0.8	5.3
<b>Developing countries</b>	<b>5.0</b>	<b>7.4</b>	<b>2.3</b>	<b>3.9</b>	<b>3.2</b>	<b>7.7</b>	<b>2.1</b>	<b>3.2</b>
Latin America and the Caribbean	-0.4	7.6	0.1	5.9	1.5	6.1	0.9	3.6
Near East and North Africa	1.3	5.5	1.8	2.2	-3.8	5.4	3.7	3.1
Sub-Saharan Africa	-1.2	2.4	-0.6	3.9	-1.5	2.6	-1.4	1.1
East and Southeast Asia	10.9	8.4	4.7	3.8	10.8	9.2	4.9	3.4
South Asia	5.0	6.9	2.0	6.3	7.8	8.3	1.6	3.6
Oceania developing	3.5	3.1	2.1	1.0	2.3	3.0	-3.7	1.0
North America developing	5.1	11.9	2.6	0.9	8.3	7.0	-17.6	15.5
<b>Continental groupings</b>								
Africa	0.0	3.1	0.5	2.8	-1.4	2.2	-1.5	1.4
Asia	...	...	...	...	...	...	...	...
Latin America	0.5	8.5	-0.2	7.1	3.3	6.6	1.1	4.9
Caribbean	-3.6	2.1	1.3	0.8	-6.3	0.4	0.1	-8.4
North America	7.7	7.0	4.0	4.5	6.3	5.1	0.8	2.4
Oceania	7.2	4.5	5.0	4.6	5.7	4.5	2.5	2.7
Europe	...	...	...	...	...	...	...	...

### 5.7 Exports of Agricultural Commodities by Major Group

Main Groups	Value (billion US\$)			% of all groups		
	1980	1990	2002	1980	1990	2002
<b>World</b>						
Live animals	6	9	9	2.6	2.7	2.1
Meat and meat preparations	21	34	46	9.1	10.6	10.5
Dairy products and Eggs	14	21	27	5.8	6.5	6.2
Cereals and preparation	44	46	58	18.9	14.1	13.1
Fruit and Vegetables	27	51	75	11.5	15.6	17.0
Sugar and Honey	17	17	17	7.2	5.2	3.8
Coffee, Tea, Cocoa and Spices	23	21	29	9.9	6.5	6.5
Beverages	11	22	39	4.6	6.7	8.8
Tobacco	8	18	21	3.4	5.6	4.7
Crude materials	39	51	56	16.8	15.6	12.7
Animal and Vegetable Oils	11	13	23	4.6	4.0	5.3
Other agricultural export	13	23	41	5.6	7.0	9.4
<b>All groups</b>	<b>234</b>	<b>326</b>	<b>442</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Developed countries</b>						
Live animals	5	7	7	3.0	2.8	2.4
Meat and meat preparations	18	30	38	11.3	12.6	13.0
Dairy products and Eggs	13	21	25	8.3	8.7	9.0
Cereals and preparation	39	40	45	23.9	16.9	14.5
Fruit and Vegetables	18	33	48	10.9	13.8	15.0
Sugar and Honey	6	8	9	4.0	3.3	2.9
Coffee, Tea, Cocoa and Spices	5	8	14	2.8	3.2	4.2
Beverages	10	20	34	6.3	8.5	10.3
Tobacco	6	14	14	3.8	5.7	4.7
Crude materials	26	34	37	16.0	14.3	11.8
Animal and Vegetable Oils	6	7	11	3.7	2.9	2.9
Other agricultural export	10	17	30	6.1	7.1	9.5
<b>All groups</b>	<b>161</b>	<b>237</b>	<b>311</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Developing countries</b>						
Live animals	1	2	2	1.9	2.3	1.6
Meat and meat preparations	3	5	9	4.1	5.2	6.7
Dairy products and Eggs	0	1	2	0.4	0.7	1.5
Cereals and preparation	6	6	13	7.7	6.6	9.9
Fruit and Vegetables	9	18	27	13.0	20.4	21.6
Sugar and Honey	11	9	8	14.4	10.3	6.8
Coffee, Tea, Cocoa and Spices	19	13	15	25.5	15.0	10.6
Beverages	1	2	5	0.8	1.9	4.0
Tobacco	2	5	7	2.6	5.3	5.7
Crude materials	14	17	19	18.6	18.8	14.8
Animal and Vegetable Oils	5	6	13	6.5	6.8	7.8
Other agricultural export	3	6	11	4.5	6.7	9.2
<b>All groups</b>	<b>73</b>	<b>90</b>	<b>131</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>



### 5.8 Quantities of Exports of Selected Agricultural Commodities

	World			Developed countries			Developing countries		
	1980	1990	2002	1980	1990	2002	1980	1990	2002
	(thousand MT)								
Wheat	99 632	108 251	133 067	93 948	99 455	113 727	5 684	8 796	19 340
Rice	12 940	12 471	27 524	5 171	4 025	5 062	7 769	8 446	22 463
Coarse Grain	110 620	105 513	119 119	101 437	94 457	94 534	9 182	11 055	24 585
Coffee	3 747	5 043	5 909	185	365	765	3 561	4 678	5 144
Meat	8 102	11 571	23 270	6 931	9 589	17 595	1 170	1 982	5 676
Cocoa Beans	1 065	1 896	2 447	51	39	247	1 014	1 857	2 199

	World		Developed countries		Developing countries	
	1980-1990	1990-2002	1980-1990	1990-2002	1980-1990	1990-2002
	(%)					
Wheat	0.8	1.7	0.6	1.1	4.5	6.8
Rice	-0.4	6.8	-2.5	1.9	0.8	8.5
Coarse Grain	-0.5	1.0	-0.7	0.0	1.9	6.9
Coffee	3.0	1.3	7.0	6.4	2.8	0.8
Meat	3.6	6.0	3.3	5.2	5.4	9.2
Cocoa Beans	5.9	2.1	-2.5	16.5	6.2	1.4

**Notes:**

Exports of wheat consist of wheat and wheat flour (wheat flour is included in terms of wheat equivalent).

Exports of rice consist of paddy rice, husked rice, milled/husked rice, milled/paddy rice and broken rice, all in milled rice equivalent.

Coarse grain: data refer to all cereals except wheat and rice.

Exports of meat consist of fresh, frozen and chilled meat.

Exports of coffee consist of green coffee, roasted coffee and coffee substitutes containing coffee.

### 5.9 Cereal Production

World/Region	Production (million MT)				Average Annual Rate of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>1 192.7</b>	<b>1 550.2</b>	<b>1 951.6</b>	<b>2 086.0</b>	<b>2.7</b>	<b>2.3</b>	<b>0.6</b>
<b>Developed countries</b>	<b>605.7</b>	<b>784.0</b>	<b>913.4</b>	<b>848.7</b>	<b>2.6</b>	<b>1.5</b>	<b>-0.6</b>
Industrialized countries	378.0	527.0	610.7	654.1	3.4	1.5	0.6
Transition economies	227.8	257.0	302.7	194.6	1.2	1.7	-3.6
<b>Developing countries</b>	<b>586.9</b>	<b>766.2</b>	<b>1 038.2</b>	<b>1 237.2</b>	<b>2.7</b>	<b>3.1</b>	<b>1.5</b>
Latin America and the Caribbean	71.4	88.4	99.1	133.9	2.2	1.1	2.5
Near East and North Africa	45.0	60.7	81.2	82.0	3.0	2.9	0.1
Sub-Sahara Africa	37.8	42.8	58.5	76.7	1.2	3.2	2.3
East and Southeast Asia	284.5	388.8	548.2	634.3	3.2	3.5	1.2
South Asia	148.2	185.4	251.2	310.3	2.3	3.1	1.8
Oceania developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	60.5	72.6	92.9	114.0	1.8	2.5	1.7
Asia	...	...	...	1 036.1	...	...	...
Latin America	70.1	87.0	97.7	132.0	2.2	1.2	2.5
Caribbean	1.3	1.5	1.4	1.9	1.4	-0.4	2.4
North America	215.5	311.5	369.2	389.6	3.8	1.7	0.4
Oceania	13.5	17.2	23.9	36.3	2.4	3.4	3.5
Europe	...	...	...	376.1	...	...	...

### 5.10 Exports and Imports of Cereals and Preparation

World/Region	Quantity (thousand MT)				Average Annual Rate of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>Exports</b>							
<b>WORLD</b>	<b>115 830</b>	<b>226 410</b>	<b>233 174</b>	<b>297 859</b>	<b>6.9</b>	<b>0.3</b>	<b>2.1</b>
<b>Developed countries</b>	<b>94 908</b>	<b>203 356</b>	<b>204 108</b>	<b>229 474</b>	<b>7.9</b>	<b>0.0</b>	<b>1.0</b>
Industrialized countries	85 706	197 053	199 480	187 774	8.7	0.1	-0.5
Transition economies	9 202	6 302	4 629	41 700	-3.7	-3.0	20.1
<b>Developing countries</b>	<b>20 921</b>	<b>23 054</b>	<b>29 066</b>	<b>68 385</b>	<b>1.0</b>	<b>2.3</b>	<b>7.4</b>
Latin America and the Caribbean	12 229	10 736	11 874	23 165	-1.3	1.0	5.7
Near East and North Africa	1 261	1 194	1 966	3 898	-0.5	5.1	5.9
Sub-Saharan Africa	752	474	1 422	954	-4.5	11.6	-3.3
East and Southeast Asia	5 904	8 748	12 391	28 018	4.0	3.5	7.0
South Asia	775	1 892	1 409	12 335	9.3	-2.9	19.8
Oceania developing	1	8	4	15	20.6	-6.7	12.1
North America developing	0	0	0	0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	3 019	4 418	3 784	2 984	3.9	-1.5	-2.0
Asia	...	...	...	49 784	...	...	...
Latin America	12 225	10 691	11 819	23 092	-1.3	1.0	5.7
Caribbean	4	45	55	74	27.1	2.1	2.5
North America	55 463	135 483	116 877	101 437	9.3	-1.5	-1.2
Oceania	8 442	19 989	15 505	20 011	9.0	-2.5	2.1
Europe	...	...	...	100 477	...	...	...
<b>Imports</b>							
<b>WORLD</b>	<b>113 674</b>	<b>223 065</b>	<b>229 906</b>	<b>297 045</b>	<b>7.0</b>	<b>0.3</b>	<b>2.2</b>
<b>Developed countries</b>	<b>71 751</b>	<b>125 700</b>	<b>111 681</b>	<b>118 245</b>	<b>5.8</b>	<b>-1.2</b>	<b>0.5</b>
Industrialized countries	64 010	80 080	73 308	108 037	2.3	-0.9	3.3
Transition economies	7 741	45 620	38 373	10 208	19.4	-1.7	-10.4
<b>Developing countries</b>	<b>41 924</b>	<b>97 366</b>	<b>118 225</b>	<b>178 800</b>	<b>8.8</b>	<b>2.0</b>	<b>3.5</b>
Latin America and the Caribbean	8 052	26 600	22 423	46 378	12.7	-1.7	6.2
Near East and North Africa	6 893	24 746	41 978	60 107	13.6	5.4	3.0
Sub-Saharan Africa	3 368	8 844	8 942	18 968	10.1	0.1	6.5
East and Southeast Asia	16 201	32 752	39 528	48 022	7.3	1.9	1.6
South Asia	7 229	4 068	4 893	4 587	-5.6	1.9	-0.5
Oceania developing	173	347	453	730	7.2	2.7	4.1
North America developing	8	9	8	9	1.9	-1.4	1.0
<b>Continental groupings</b>							
Africa	6 582	21 323	28 011	51 358	12.5	2.8	5.2
Asia	...	...	...	116 844	...	...	...
Latin America	6 246	22 741	18 202	41 261	13.8	-2.2	7.1
Caribbean	1 806	3 859	4 221	5 117	7.9	0.9	1.6
North America	1 141	1 912	3 760	11 983	5.3	7.0	10.1
Oceania	216	425	823	1 398	7.0	6.8	4.5
Europe	...	...	...	69 085	...	...	...

### 5.11 Wheat Production

World/Region	Production (million MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>310.7</b>	<b>440.2</b>	<b>592.2</b>	<b>573.5</b>	<b>3.5</b>	<b>3.0</b>	<b>-0.3</b>
<b>Developed countries</b>	<b>216.4</b>	<b>289.4</b>	<b>357.7</b>	<b>309.5</b>	<b>3.0</b>	<b>2.1</b>	<b>-1.2</b>
Industrialized countries	101.7	165.6	214.4	179.2	5.0	2.6	-1.5
Transition economies	114.7	123.8	143.4	130.3	0.8	1.5	-0.8
<b>Developing countries</b>	<b>94.3</b>	<b>150.8</b>	<b>234.5</b>	<b>264.0</b>	<b>4.8</b>	<b>4.5</b>	<b>1.0</b>
Latin America and the Caribbean	11.5	15.1	20.8	21.4	2.7	3.2	0.2
Near East and North Africa	23.9	34.6	46.7	55.6	3.8	3.0	1.5
Sub-Sahara Africa	1.4	1.4	2.0	2.5	0.0	4.0	1.6
East and Southeast Asia	29.8	55.7	99.1	90.7	6.5	5.9	-0.7
South Asia	27.8	44.0	65.9	93.9	4.7	4.1	3.0
Oceania developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	8.1	8.9	13.6	16.4	1.0	4.3	1.5
Asia	...	...	...	253.3	...	...	...
Latin America	11.5	15.1	20.8	21.4	2.7	3.2	0.2
Caribbean	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North America	45.8	84.1	106.4	60.3	6.3	2.4	-4.6
Oceania	8.2	11.2	15.3	10.4	3.2	3.2	-3.2
Europe	...	...	...	211.8	...	...	...

### 5.12 Leading Wheat Producing Countries, 2002

Country	Production (million MT)	Country	Production (million MT)
China	90	Germany	21
India	73	Ukraine	21
Russian Federation	51	Turkey	20
United States of America	44	Pakistan	18
France	39	Canada	16

### 5.13 Leading Wheat Exporting Countries, 2002

Country	Quantity (million MT)	Value (million US\$)
United States of America	25	3 780
Australia	15	2 299
France	15	1 862

Note: Exports of wheat consist of wheat and wheat flour  
(wheat flour is included in terms of wheat equivalent)

### 5.14 Rice, Paddy Production

World/Region	Production (million MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>316.4</b>	<b>396.9</b>	<b>518.2</b>	<b>569.5</b>	<b>2.3</b>	<b>2.7</b>	<b>0.8</b>
<b>Developed countries</b>	<b>23.5</b>	<b>23.9</b>	<b>25.7</b>	<b>25.7</b>	<b>0.1</b>	<b>0.7</b>	<b>0.0</b>
Industrialized countries	22.1	21.1	23.4	24.6	-0.5	1.0	0.4
Transition economies	1.4	2.8	2.3	1.2	7.0	-1.7	-5.7
<b>Developing countries</b>	<b>292.9</b>	<b>373.0</b>	<b>492.5</b>	<b>543.8</b>	<b>2.4</b>	<b>2.8</b>	<b>0.8</b>
Latin America and the Caribbean	11.9	16.4	15.6	22.2	3.3	-0.5	3.0
Near East and North Africa	4.5	4.5	5.9	9.5	0.1	2.7	4.0
Sub-Saharan Africa	4.7	6.2	9.2	11.2	2.8	4.0	1.7
East and Southeast Asia	184.4	235.3	312.5	341.6	2.5	2.9	0.7
South Asia	87.3	110.5	149.3	159.2	2.4	3.1	0.5
Oceania developing	0.0	0.0	0.0	0.0	3.1	-1.8	-3.1
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	7.3	8.6	12.3	16.9	1.6	3.7	2.6
Asia	...	...	...	516.4	...	...	...
Latin America	11.2	15.4	14.5	20.6	3.2	-0.6	3.0
Caribbean	0.7	1.0	1.0	1.5	4.1	0.3	3.2
North America	3.8	6.6	7.1	9.6	5.7	0.7	2.5
Oceania	0.3	0.6	1.0	1.3	9.0	3.9	2.7
Europe	...	...	...	3.2	...	...	...

### 5.15 Leading Rice Producing Countries, 2002

Country	Production (million MT)	Country	Production (million MT)
China	176	Thailand	26
India	108	Myanmar	23
Indonesia	51	Philippines	13
Bangladesh	38	Japan	11
Viet Nam	34	Brazil	10

### 5.16 Leading Rice Exporting Countries, 2002

Country	Quantity (million MT)	Value (million US\$)
Thailand	7	1 632
Viet Nam	5	1 212
United States of America	3	775

Note: Exports of rice consist of paddy rice, husked rice, milled/husked rice, milled/paddy rice and broken rice, all in milled rice equivalent

### 5.17 Coarse Grain Production

World/Region	Production (million MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>565.5</b>	<b>713.1</b>	<b>841.1</b>	<b>886.0</b>	<b>2.3</b>	<b>1.7</b>	<b>0.4</b>
<b>Developed countries</b>	<b>365.8</b>	<b>470.7</b>	<b>529.9</b>	<b>511.2</b>	<b>2.6</b>	<b>1.2</b>	<b>-0.3</b>
Industrialized countries	254.1	340.3	373.0	393.4	3.0	0.9	0.4
Transition economies	111.7	130.4	157.0	117.8	1.6	1.9	-2.4
<b>Developing countries</b>	<b>199.7</b>	<b>242.4</b>	<b>311.2</b>	<b>374.8</b>	<b>2.0</b>	<b>2.5</b>	<b>1.6</b>
Latin America and the Caribbean	47.9	56.9	62.7	94.6	1.7	1.0	3.5
Near East and North Africa	16.6	21.6	28.6	29.6	2.7	2.8	0.3
Sub-Saharan Africa	31.7	35.2	47.3	62.4	1.0	3.0	2.3
East and Southeast Asia	70.3	97.8	136.6	157.8	3.4	3.4	1.2
South Asia	33.2	31.0	36.0	30.3	-0.7	1.5	-1.4
Oceania developing	0.0	0.0	0.0	0.0	6.6	-0.6	7.6
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	45.1	55.1	66.9	82.9	2.0	2.0	1.8
Asia	...	...	...	213.3	...	...	...
Latin America	47.3	56.4	62.4	94.0	1.8	1.0	3.5
Caribbean	0.6	0.5	0.4	0.6	-2.7	-2.2	4.4
North America	165.9	220.8	255.7	265.3	2.9	1.5	0.3
Oceania	5.1	5.4	7.7	8.1	0.6	3.7	0.4
Europe	...	...	...	221.8	...	...	...

Note: Coarse grain: data refer to all cereals except wheat and rice.

### 5.18 Leading Coarse Grain Producing Countries, 2002

Country	Production (million MT)	Country	Production (million MT)
United States of America	245	India	26
China	133	Mexico	25
Brazil	37	Germany	23
Russian Federation	34	Canada	20
France	31	Argentina	19

Note: Coarse grain: data refer to all cereals except wheat and rice

### 5.19 Leading Coarse Grain Exporting Countries, 2002

Country	Quantity (million MT)	Value (million US\$)
United States of America	54	5 838
France	13	1 825
China	12	1 201

Note: Coarse grain: data refer to all cereals except wheat and rice

## 5.20 Meat Production

World/Region	Production (million MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>100.6</b>	<b>136.8</b>	<b>180.1</b>	<b>247.8</b>	<b>3.1</b>	<b>2.8</b>	<b>2.7</b>
<b>Developed countries</b>	<b>69.8</b>	<b>89.9</b>	<b>104.8</b>	<b>108.4</b>	<b>2.6</b>	<b>1.5</b>	<b>0.3</b>
Industrialized countries	51.1	65.1	74.5	90.9	2.4	1.4	1.7
Transition economies	18.7	24.8	30.3	17.5	2.8	2.0	-4.5
<b>Developing countries</b>	<b>30.8</b>	<b>46.9</b>	<b>75.3</b>	<b>139.3</b>	<b>4.3</b>	<b>4.8</b>	<b>5.3</b>
Latin America and the Caribbean	11.1	15.9	20.2	35.1	3.6	2.4	4.7
Near East and North Africa	2.3	3.2	5.5	8.1	3.2	5.7	3.3
Sub-Saharan Africa	3.5	4.5	5.4	6.9	2.4	1.8	2.1
East and Southeast Asia	10.8	19.4	38.1	80.4	6.0	7.0	6.4
South Asia	2.9	3.7	5.8	8.4	2.7	4.5	3.1
Oceania developing	0.2	0.2	0.3	0.4	2.4	2.6	2.5
North America developing	0.0	0.0	0.0	0.0	-2.4	1.4	0.1
<b>Continental groupings</b>							
Africa	5.0	6.5	8.6	11.5	2.7	2.8	2.4
Asia	...	...	...	99.4	...	...	...
Latin America	10.6	15.2	19.3	34.1	3.7	2.4	4.9
Caribbean	0.5	0.6	0.9	0.9	2.1	3.0	0.6
North America	23.4	27.0	31.4	43.1	1.4	1.5	2.7
Oceania	3.3	4.2	4.6	5.9	2.4	1.1	2.0
Europe	...	...	...	52.8	...	...	...

Note: Data related to total meat production refer to both commercial and farm slaughter. Data are given in terms of dressed carcass weight, excluding offal and slaughter fats. Pig meat includes bacon and ham in fresh equivalent.

## 5.21 Leading Meat Producing Countries, 2002

Country	Production (million MT)	Country	Production (million MT)
China	68	India	6
United States of America	38	Spain	5
Brazil	17	Canada	5
France	7	Mexico	5
Germany	7	Russian Federation	5

## 5.22 Leading Meat Exporting Countries, 2002

Country	Quantity (million MT)	Value (million US\$)
United States of America	4	5 770
Brazil	3	2 741
Netherlands	2	2 920

Note: Exports of meat consists of fresh, frozen and chilled meat

### 5.23 Oil Crop Production (in oil equivalent)

World/Region	Production (million MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>34.9</b>	<b>49.3</b>	<b>75.4</b>	<b>114.0</b>	<b>3.5</b>	<b>4.3</b>	<b>3.5</b>
<b>Developed countries</b>	<b>14.9</b>	<b>20.1</b>	<b>25.7</b>	<b>32.7</b>	<b>3.1</b>	<b>2.5</b>	<b>2.0</b>
Industrialized countries	10.3	15.8	20.1	26.5	4.3	2.4	2.3
Transition economies	4.5	4.4	5.6	6.1	-0.4	2.6	0.8
<b>Developing countries</b>	<b>20.1</b>	<b>29.2</b>	<b>49.7</b>	<b>81.4</b>	<b>3.8</b>	<b>5.5</b>	<b>4.2</b>
Latin America and the Caribbean	3.0	6.5	10.1	18.6	7.9	4.6	5.2
Near East and North Africa	1.0	1.5	1.8	2.1	4.1	1.5	1.6
Sub-Sahara Africa	3.8	3.7	4.5	6.3	-0.3	1.8	2.9
East and Southeast Asia	7.4	12.7	24.7	45.8	5.6	6.9	5.3
South Asia	4.6	4.4	8.2	7.9	-0.4	6.5	-0.3
Oceania developing	0.3	0.4	0.5	0.6	3.5	2.1	2.6
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	4.4	4.5	5.4	7.3	0.3	1.8	2.6
Asia	...	...	...	56.0	...	...	...
Latin America	2.9	6.4	10.0	18.5	8.0	4.6	5.3
Caribbean	0.1	0.1	0.1	0.1	0.8	0.0	1.7
North America	8.0	11.9	13.3	18.1	4.0	1.1	2.6
Oceania	0.3	0.5	0.7	1.1	4.5	2.9	4.2
Europe	...	...	...	12.9	...	...	...

Note: Oil crops, or oilbearing crops, are those crops yielding seeds, nuts or fruits which are used mainly for the extraction of culinary or industrial oils, excluding essential oils.

### 5.24 Leading Soyabean and Groundnut Producing Countries, 2002

Country	Production (million MT)	Country	Production (million MT)
<b>Soyabean</b>		<b>Groundnut (in shell)</b>	
United States of America	75	China	15
Brazil	42	India	4
Argentina	30	Nigeria	3
China	17	United States of America	2
India	5	Indonesia	1

### 5.25 Leading Soyabean and Groundnut Products Exporting Countries, 2002

Country	Value (million US\$)	Country	Value (million US\$)
<b>Soyabean &amp; products</b>		<b>Groundnut &amp; products</b>	
United States of America	7 343	China	453
Brazil	6 009	United States of America	216
Argentina	5 026	Argentina	167

Note: Exporting data for soyabean and products refer to oil, cake, sauce, paste and curd. Exporting data for groundnut and products refer to groundnuts in shell, shelled, oil, cake and prepared groundnuts.



### 5.26 Coffee Production

World/Region	Production (thousand MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>3 849.6</b>	<b>4 836.9</b>	<b>6 072.1</b>	<b>8 561.5</b>	<b>2.3</b>	<b>2.3</b>	<b>2.9</b>
<b>Developed countries</b>	<b>1.6</b>	<b>0.5</b>	<b>1.0</b>	<b>3.4</b>	<b>- 10.3</b>	<b>6.8</b>	<b>10.5</b>
Industrialized countries	1.6	0.5	1.0	3.4	- 10.3	6.8	10.5
Transition economies	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Developing countries</b>	<b>3 848.1</b>	<b>4 836.4</b>	<b>6 071.0</b>	<b>8 558.1</b>	<b>2.3</b>	<b>2.3</b>	<b>2.9</b>
Latin America and the Caribbean	2 189.4	2 986.6	3 883.0	5 480.0	3.2	2.7	2.9
Near East and North Africa	4.9	4.7	7.4	11.5	-0.6	4.8	3.7
Sub-Sahara Africa	1 295.0	1 161.3	1 255.3	993.9	-1.1	0.8	-1.9
East and Southeast Asia	259.1	466.6	738.7	1 683.1	6.1	4.7	7.1
South Asia	70.9	161.5	125.7	326.9	8.6	-2.5	8.3
Oceania developing	28.7	55.7	61.0	62.6	6.9	0.9	0.2
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	1 295.0	1 161.3	1 255.3	993.9	- 1.1	0.8	-1.9
Asia	...	...	...	2 021.5	...	...	...
Latin America	2 074.1	2 848.0	3 744.7	5 371.4	3.2	2.8	3.1
Caribbean	115.4	138.6	138.3	108.6	1.9	0.0	-2.0
North America	1.6	.5	1.0	3.4	- 10.4	6.9	10.6
Oceania	28.7	55.7	61.0	62.6	6.9	0.9	0.2
Europe	...	...	...	0.0	...	...	...

Note: Production figures for coffee refer to green coffee beans.

### 5.27 Leading Coffee Producing Countries, 2002

Country	Production (thousand MT)	Country	Production (thousand MT)
Brazil	2 650	India	317
Costa Rica	788	Mexico	313
Viet Nam	700	Guatemala	222
Indonesia	699	Ethiopia	220
Colombia	691	Uganda	189

### 5.28 Leading Coffee Exporting Countries, 2002

Country	Quantity (thousand MT)	Value (million US\$)
Brazil	1 557	1 201
Viat Nam	719	322
Colombia	579	782

Note: Exports of coffee consist of green coffee, roasted coffee and coffee substitutes containing coffee

### 5.29 Cocoa Beans Production

World/Region	Production (thousand MT)				Average Annual Rates of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>1 543.4</b>	<b>1 666.3</b>	<b>2 531.9</b>	<b>3 107.0</b>	<b>0.8</b>	<b>4.3</b>	<b>1.7</b>
<b>Developed countries</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Industrialized countries	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Transition economies	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Developing countries</b>	<b>1 543.4</b>	<b>1 666.3</b>	<b>2 531.9</b>	<b>3 107.0</b>	<b>0.8</b>	<b>4.3</b>	<b>1.7</b>
Latin America and the Caribbean	381.4	552.7	555.1	469.1	3.8	0.0	-1.4
Near East and North Africa	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-Saharan Africa	1 120.8	1 025.8	1 521.8	2 076.9	-0.9	4.0	2.6
East and Southeast Asia	9.3	50.1	399.6	504.7	18.4	23.1	2.0
South Asia	2.3	4.0	10.2	8.9	5.7	9.8	-1.1
Oceania developing	29.6	33.7	45.2	47.3	1.3	3.0	0.4
North America developing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	1 120.8	1 025.8	1 521.8	2 076.9	-0.9	4.0	2.6
Asia	...	...	...	513.6	...	...	...
Latin America	327.6	513.6	497.9	409.8	4.6	-0.3	-1.6
Caribbean	53.9	39.1	57.2	59.3	-3.1	3.9	0.3
North America	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oceania	29.6	33.7	45.2	47.3	1.3	3.0	0.4
Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Production figures for coffee refer to green coffee beans.

### 5.30 Leading Cocoa Bean Producing Countries, 2002

Country	Production (thousand MT)	Country	Production (thousand MT)
Côte d'Ivoire	1 225	Cameroon	125
Indonesia	450	Ecuador	88
Ghana	341	Dominican Rp	50
Nigeria	340	Colombia	48
Brazil	175	Malaysia	48

### 5.31 Leading Cocoa Bean Exporting Countries, 2002

Country	Quantity (thousand MT)	Value (million US\$)
Côte d'Ivoire	1 004	1 767
Indonesia	366	521
Ghana	311	481

## **FORESTRY PRODUCTION AND TRADE**

## 6.1 Round Wood Production

World/Region	Production (million m <sup>3</sup> )				Average Annual Rate of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>	<b>2 644</b>	<b>2 978</b>	<b>3 382</b>	<b>3 335</b>	<b>1.2</b>	<b>1.3</b>	<b>-0.1</b>
<b>Developed countries</b>	<b>1 255</b>	<b>1 340</b>	<b>1 534</b>	<b>1 321</b>	<b>0.7</b>	<b>1.4</b>	<b>-1.2</b>
Industrialized countries	785	901	1 074	1 019	1.4	1.8	-0.4
Transition economies	470	440	460	302	-0.7	0.4	-3.4
<b>Developing countries</b>	<b>1 389</b>	<b>1 638</b>	<b>1 848</b>	<b>2 015</b>	<b>1.7</b>	<b>1.2</b>	<b>0.7</b>
Latin America and the Caribbean	229	303	357	439	2.8	1.6	1.8
Near East and North Africa	68	55	50	50	-2.1	-1.1	0.0
Sub-Saharan Africa	301	359	441	552	1.8	2.1	1.9
East and Southeast Asia	529	593	616	565	1.2	0.4	-0.7
South Asia	257	319	377	401	2.2	1.7	0.5
Oceania developing	5	8	9	9	4.2	1.4	-0.6
North America developing	0	0	0	0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	339	404	495	610	1.8	2.1	1.8
Asia	...	...	...	1 003	...	...	...
Latin America	224	297	350	432	2.8	1.6	1.8
Caribbean	5	6	7	7	2.2	1.4	0.6
North America	450	571	672	643	2.4	1.7	-0.4
Oceania	26	35	42	63	3.0	1.9	3.4
Europe	...	...	...	578	...	...	...

## 6.2 Exports and Imports of Round Wood

World/Region	Quantity (thousand m <sup>3</sup> )				Average Annual Rate of Growth (%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>Exports</b>							
<b>WORLD</b>	<b>87 016</b>	<b>93 845</b>	<b>83 880</b>	<b>120 377</b>	<b>0.8</b>	<b>-1.1</b>	<b>3.1</b>
<b>Developed countries</b>	<b>49 267</b>	<b>52 325</b>	<b>54 666</b>	<b>102 855</b>	<b>0.6</b>	<b>0.4</b>	<b>5.4</b>
Industrialized countries	30 103	32 638	40 628	45 074	0.8	2.2	0.9
Transition economies	19 164	19 687	14 039	57 782	0.3	-3.3	12.5
<b>Developing countries</b>	<b>37 749</b>	<b>41 520</b>	<b>29 213</b>	<b>17 522</b>	<b>1.0</b>	<b>-3.5</b>	<b>-4.2</b>
Latin America and the Caribbean	781	1 198	3 015	2 727	4.4	9.7	-0.8
Near East and North Africa	33	9	19	12	-12.1	7.6	-3.6
Sub-Sahara Africa	6 848	6 140	4 143	5 096	-1.1	-3.9	1.7
East and Southeast Asia	29 554	33 086	20 633	7 416	1.1	-4.6	-8.2
South Asia	112	164	48	8	3.9	-11.6	-14.0
Oceania developing	422	923	1 356	2 263	8.1	3.9	4.4
North America developing	0	0	0	0	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	6 864	6 183	4 164	5 482	-1.0	-3.9	2.3
Asia	...	...	...	7 599	...	...	...
Latin America	399	1 198	3 013	2 723	11.6	9.7	-0.8
Caribbean	382	0	3	4	-100.0	-	4.0
North America	16 945	18 121	22 863	16 416	0.7	2.4	-2.7
Oceania	2 255	1 971	3 054	11 447	-1.3	4.5	11.6
Europe	...	...	...	76 706	...	...	...
<b>Imports</b>							
<b>WORLD</b>	<b>84 183</b>	<b>96 459</b>	<b>83 430</b>	<b>121 173</b>	<b>1.4</b>	<b>-1.4</b>	<b>3.2</b>
<b>Developed countries</b>	<b>75 904</b>	<b>79 110</b>	<b>60 790</b>	<b>81 867</b>	<b>0.4</b>	<b>-2.6</b>	<b>2.5</b>
Industrialized countries	72 705	74 424	58 997	77 210	0.2	-2.3	2.3
Transition economies	3 200	4 686	1 793	4 657	3.9	-9.2	8.3
<b>Developing countries</b>	<b>8 279</b>	<b>17 349</b>	<b>22 641</b>	<b>39 306</b>	<b>7.7</b>	<b>2.7</b>	<b>4.7</b>
Latin America and the Caribbean	372	267	174	153	-3.3	-4.2	-1.1
Near East and North Africa	609	1 059	1 180	1 398	5.7	1.1	1.4
Sub-Sahara Africa	87	96	46	117	1.0	-7.2	8.2
East and Southeast Asia	7 114	15 830	19 822	35 333	8.3	2.3	4.9
South Asia	97	94	1 417	2 297	-0.3	31.2	4.1
Oceania developing	0	4	1	7	0.0	-9.2	14.7
North America developing	0	0	0	1	0.0	0.0	0.0
<b>Continental groupings</b>							
Africa	517	793	301	361	4.4	-9.2	1.5
Asia	...	...	...	51 721	...	...	...
Latin America	342	188	68	101	-5.8	-9.6	3.3
Caribbean	30	80	106	52	10.4	2.9	-5.8
North America	4 695	4 939	1 795	10 431	0.5	-9.6	15.8
Oceania	145	9	10	15	-24.7	2.0	2.9
Europe	...	...	...	58 493	...	...	...

## **FISHERY PRODUCTION AND TRADE**

**Table 7.1 Fish Production**

World/Region	Production				Average annual rate of growth		
	(million MT)				(%)		
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002
<b>WORLD</b>							
Marine	59.3	64.2	83.3	100.4	0.8	2.6	1.6
Inland	6.0	7.7	14.5	32.6	2.4	6.6	7.0
<b>Total</b>	<b>65.3</b>	<b>71.9</b>	<b>97.8</b>	<b>133.0</b>	<b>1.0</b>	<b>3.1</b>	<b>2.6</b>
<b>Developed countries</b>							
Marine	32.3	37.5	39.0	29.7	1.5	0.4	-2.2
Inland	1.5	1.7	2.1	1.5	1.3	2.2	-2.8
<b>Total</b>	<b>33.7</b>	<b>39.2</b>	<b>41.1</b>	<b>31.2</b>	<b>1.5</b>	<b>0.5</b>	<b>-2.3</b>
Industrialized countries							
Marine	25.1	27.6	28.9	25.5	0.9	0.5	-1.0
Inland	0.5	0.7	0.9	0.9	3.9	2.4	0.2
<b>Total</b>	<b>25.6</b>	<b>28.3</b>	<b>29.8</b>	<b>26.4</b>	<b>1.0</b>	<b>0.5</b>	<b>-1.0</b>
Transition economies							
Marine	7.1	9.9	10.2	4.2	3.3	0.3	-7.0
Inland	1.0	1.0	1.2	0.6	-0.2	2.1	-6.0
<b>Total</b>	<b>8.1</b>	<b>10.9</b>	<b>11.3</b>	<b>4.8</b>	<b>3.0</b>	<b>0.4</b>	<b>-6.9</b>
<b>Developing countries</b>							
Marine	27.0	26.7	44.3	70.7	-0.1	5.2	4.0
Inland	4.6	6.0	12.5	31.1	2.8	7.5	7.9
<b>Total</b>	<b>31.6</b>	<b>32.7</b>	<b>56.7</b>	<b>101.8</b>	<b>0.4</b>	<b>5.7</b>	<b>5.0</b>
Latin America & the Caribbean							
Marine	15.2	9.2	15.8	18.4	-4.9	5.5	1.3
Inland	0.2	0.3	0.5	0.8	8.1	4.3	4.0
<b>Total</b>	<b>15.4</b>	<b>9.6</b>	<b>16.3</b>	<b>19.2</b>	<b>-4.6</b>	<b>5.5</b>	<b>1.4</b>
Near East & North Africa							
Marine	0.8	1.2	1.8	2.7	4.4	3.7	3.5
Inland	0.1	0.2	0.4	0.9	5.1	8.0	7.2
<b>Total</b>	<b>0.9</b>	<b>1.4</b>	<b>2.1</b>	<b>3.5</b>	<b>4.5</b>	<b>4.3</b>	<b>4.3</b>
Sub-Saharan Africa							
Marine	1.0	1.1	1.8	2.7	0.0	5.7	3.1
Inland	1.0	1.2	1.7	1.9	1.4	3.6	0.8
<b>Total</b>	<b>2.1</b>	<b>2.2</b>	<b>3.5</b>	<b>4.5</b>	<b>0.7</b>	<b>4.7</b>	<b>2.1</b>
East & Southeast Asia							
Marine	8.4	12.8	21.5	42.0	4.3	5.3	5.7
Inland	2.0	2.8	7.5	23.0	3.7	10.3	9.7
<b>Total</b>	<b>10.4</b>	<b>15.7</b>	<b>29.1</b>	<b>65.0</b>	<b>4.2</b>	<b>6.4</b>	<b>6.9</b>
South Asia							
Marine	1.4	2.1	3.1	4.4	3.8	3.8	3.0
Inland	1.3	1.5	2.3	4.6	1.3	4.5	5.9
<b>Total</b>	<b>2.8</b>	<b>3.6</b>	<b>5.4</b>	<b>9.0</b>	<b>2.7</b>	<b>4.1</b>	<b>4.3</b>
Oceania developing							
Marine	0.1	0.1	0.2	0.4	8.7	2.8	6.7
Inland	-	0.0	0.0	0.0	-	9.0	0.2
<b>Total</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>9.4</b>	<b>3.3</b>	<b>6.2</b>

**Table 7.1 Fish Production (cont. ed)**

World/Region	Production (million MT)				Average annual rate of growth (%)			
	1970	1980	1990	2002	1970-1980	1980-1990	1990-2002	
<b>North America developing</b>								
Marine	0.0	0.1	0.2	0.2	9.5	3.7	1.8	
Inland	-	-	-	-	-	-	-	
Total	0.0	0.1	0.2	0.2	9.5	3.7	1.8	
<b>Continental groupings</b>								
<b>Africa</b>								
Marine	2.6	2.4	3.2	4.8	-0.8	3.0	3.3	
Inland	1.1	1.3	1.9	2.5	1.8	4.1	2.1	
Total	3.7	3.7	5.2	7.3	0.0	3.4	2.9	
<b>Asia</b>								
Marine	19.0	25.9	35.8	52.9	3.2	3.3	3.3	
Inland	3.5	4.6	10.4	28.0	2.8	8.5	8.6	
Total	22.5	30.5	46.2	80.9	3.1	4.2	4.8	
<b>Latin America</b>								
Marine	15.1	9.0	15.5	18.2	-5.0	5.6	1.4	
Inland	0.2	0.3	0.5	0.8	7.9	4.0	4.1	
Total	15.2	9.3	16.0	19.0	-4.8	5.6	1.5	
<b>Caribbean</b>								
Marine	0.1	0.2	0.3	0.2	5.2	0.5	-3.3	
Inland	0.0	0.0	0.0	0.0	26.3	11.7	2.5	
Total	0.2	0.3	0.3	0.2	5.5	1.2	-2.5	
<b>North America</b>								
Marine	4.1	5.0	7.4	6.4	2.0	4.1	-1.2	
Inland	0.2	0.2	0.3	0.4	2.2	5.0	2.6	
Total	4.2	5.2	7.7	6.8	2.0	4.1	-1.0	
<b>Oceania</b>								
Marine	0.2	0.4	0.8	1.2	6.8	6.3	4.2	
Inland	0.0	0.0	0.0	0.0	25.9	8.1	0.0	
Total	0.2	0.4	0.8	1.3	7.1	6.3	4.1	
<b>Europe</b>								
Marine	18.0	21.0	20.3	16.4	1.5	-0.3	-1.8	
Inland	1.1	1.2	1.3	0.8	0.9	0.6	-3.7	
Total	19.1	22.2	21.6	17.2	1.5	-0.3	-1.9	

Note: Including fish and aquaculture production; excluding aquatic plants



**Table 7.2 Aquaculture**

World/Region	Production			Average annual rate	
	(thousand MT)			of growth (%)	
	1980	1990	2002	1980-1990	1990-2002
<b>WORLD</b>	<b>4 707</b>	<b>13 080</b>	<b>39 799</b>	<b>10.8</b>	<b>9.7</b>
<b>Developed countries</b>	<b>1 685</b>	<b>2 867</b>	<b>3 703</b>	<b>5.5</b>	<b>2.2</b>
Industrialized countries	1 419	2 327	3 458	5.1	3.4
Transition economies	266	540	245	7.3	- 6.4
<b>Developing countries</b>	<b>3 022</b>	<b>10 213</b>	<b>36 096</b>	<b>12.9</b>	<b>11.1</b>
Latin America & the Caribbean	27	193	1 123	21.7	15.8
Near East & North Africa	34	103	536	11.8	14.7
Sub-Saharan Africa	7	14	68	6.8	14.4
East & Southeast Asia	2 490	8 668	31 349	13.3	11.3
South Asia	464	1 235	3 016	10.3	7.7
Oceania developing	-	1	4	-	12.6
North America developing	-	-	-	-	-
<b>Continental groupings</b>					
Africa	26	81	452	12.0	15.4
Asia	3 553	10 806	35 379	11.8	10.4
Latin America	25	179	1 087	22.0	16.2
Caribbean	2	13	36	18.9	8.7
North America	172	357	670	7.6	5.4
Oceania	12	42	129	13.1	9.8
Europe	916	1 602	2 046	5.7	2.1

Note: Production excludes aquatic plants

**Table 7.3 Capture Fisheries**

World/Region	Production			Average annual rate	
	(thousand MT)			of growth (%)	
	1980	1990	2002	1980-1990	1990-2002
<b>WORLD</b>	<b>67 177</b>	<b>84 765</b>	<b>93 191</b>	<b>2.4</b>	<b>0.8</b>
<b>Developed countries</b>	<b>37 479</b>	<b>38 229</b>	<b>27 474</b>	<b>0.2</b>	<b>- 2.7</b>
Industrialized countries	26 874	27 427	22 924	0.2	- 1.5
Transition economies	10 604	10 802	4 550	0.2	- 7.0
<b>Developing countries</b>	<b>29 699</b>	<b>46 537</b>	<b>65 716</b>	<b>4.6</b>	<b>2.9</b>
Latin America & the Caribbean	9 534	16 094	18 106	5.4	1.0
Near East & North Africa	1 360	2 027	2 987	4.1	3.3
Sub-Saharan Africa	2 234	3 517	4 448	4.6	2.0
East & Southeast Asia	13 186	20 392	33 640	4.5	4.3
South Asia	3 136	4 157	5 951	2.9	3.0
Oceania developing	133	184	377	3.3	6.2
North America developing	116	167	207	3.7	1.8
<b>Continental groupings</b>					
Africa	3 663	5 075	6 799	3.3	2.5
Asia	26 985	35 390	45 495	2.7	2.1
Latin America	9 279	15 818	17 929	5.5	1.0
Caribbean	255	276	177	0.8	- 3.6
North America	5 001	7 366	6 158	3.9	- 1.5
Oceania	411	740	1 131	6.1	3.6
Europe	21 287	20 023	15 164	- 0.6	- 2.3

Note: Production excludes aquatic plants

**Table 7.4 Capture Fisheries - Leading Countries in 2002**

Country	Production	% of World
	(thousand MT)	production
China (Mainland)	16 553	17.8
Peru	8 767	9.4
United States of America	4 937	5.3
Indonesia	4 505	4.8
Japan	4 443	4.8
Chile	4 271	4.6
India	3 771	4.0
Russian Federation	3 232	3.5
Thailand	2 921	3.1
Norway	2 743	2.9
<b>Rest of the World</b>	<b>37 046</b>	<b>39.8</b>

**Table 7.5 Aquaculture - Leading Countries in 2002**

Country	Production	% of World
	(thousand MT)	production
China (Mainland)	27 767	69.8
India	2 192	5.5
Indonesia	914	2.3
Japan	828	2.1
Bangladesh	787	2.0
Thailand	645	1.6
Norway	554	1.4
Chile	546	1.4
Viet Nam	519	1.3
United States of America	497	1.2
<b>Rest of the World</b>	<b>4 550</b>	<b>11.4</b>

**Table 7.6 Capture Fisheries - Leading Species in 2002**

<b>Species</b>	<b>Production (thousand MT)</b>	<b>% of World production</b>
Anchoveta(=Peruvian anchovy)	9 703	10.4
Alaska pollock(=Walleye poll.)	2 655	2.8
Skipjack tuna	2 031	2.2
Capelin	1 962	2.1
Atlantic herring	1 872	2.0
Japanese anchovy	1 854	2.0
Chilean jack mackerel	1 750	1.9
Blue whiting(=Poutassou)	1 603	1.7
Chub mackerel	1 471	1.6
Largehead hairtail	1 452	1.6
<b>Other species</b>	<b>66 839</b>	<b>71.7</b>

**Table 7.7 Aquaculture - Leading Species in 2002**

<b>Species</b>	<b>Production (thousand MT)</b>	<b>% of World production</b>
Pacific cupped oyster	4 216	10.6
Silver carp	4 072	10.2
Grass carp(=White amur)	3 573	9.0
Common carp	3 203	8.0
Japanese carpet shell	2 363	5.9
Bighead carp	1 723	4.3
Crucian carp	1 703	4.3
Nile tilapia	1 217	3.1
Yesso scallop	1 208	3.0
Atlantic salmon	1 085	2.7
<b>Other species</b>	<b>15 437</b>	<b>38.8</b>

### 7.8 Value of Exports and Imports of Fish and Fishery Products

World/Region	Value (US\$ million)			Average annual rate of growth (%)	
	1980	1990	2002	1980-1990	1990-2002
	<b>Exports</b>				
<b>WORLD</b>	<b>15 398</b>	<b>35 487</b>	<b>58 211</b>	<b>8.7</b>	<b>4.2</b>
<b>Developed countries</b>	<b>9 225</b>	<b>20 132</b>	<b>29 508</b>	<b>8.1</b>	<b>3.2</b>
Industrialized countries	8 794	18 940	27 323	8.0	3.1
Transition economies	431	1 192	2 185	10.7	5.2
<b>Developing countries</b>	<b>6 173</b>	<b>15 355</b>	<b>28 704</b>	<b>9.5</b>	<b>5.4</b>
Latin America & the Caribbean	2 127	3 305	6 641	4.5	6.0
Near East & North Africa	243	868	1 438	13.6	4.3
Sub-Saharan Africa	289	720	1 781	9.6	7.8
East & Southeast Asia	2 861	9 191	16 410	12.4	4.9
South Asia	383	790	1 986	7.5	8.0
Oceania developing	119	80	207	- 3.9	8.2
North America developing	151	401	241	10.3	- 4.2
<b>Continental groupings</b>					
Africa	541	1 482	3 153	10.6	6.5
Asia	4 247	11 018	19 597	10.0	4.9
Latin America	1 980	3 111	6 425	4.6	6.2
Caribbean	147	194	215	2.8	0.9
North America	2 247	5 691	6 536	9.7	1.2
Oceania	545	1 044	1 815	6.7	4.7
Europe	5 691	12 947	20 469	8.6	3.9
<b>Imports</b>					
<b>WORLD</b>	<b>15 981</b>	<b>39 477</b>	<b>61 446</b>	<b>9.5</b>	<b>3.8</b>
<b>Developed countries</b>	<b>13 525</b>	<b>34 306</b>	<b>50 154</b>	<b>9.8</b>	<b>3.2</b>
Industrialized countries	13 084	33 830	48 517	10.0	3.1
Transition economies	442	475	1 637	0.7	10.9
<b>Developing countries</b>	<b>2 456</b>	<b>5 171</b>	<b>11 292</b>	<b>7.7</b>	<b>6.7</b>
Latin America and the Caribbean	470	552	969	1.6	4.8
Near East and North Africa	282	274	700	- 0.3	8.1
Sub-Saharan Africa	737	644	863	- 1.3	2.5
East and Southeast Asia	859	3 568	8 559	15.3	7.6
South Asia	24	46	121	6.5	8.4
Oceania developing	78	75	69	- 0.4	- 0.7
North America developing	5	12	11	8.5	- 0.7
<b>Continental groupings</b>					
Africa	879	883	1 070	0.1	1.6
Asia	4 271	14 531	23 027	13.0	3.9
Latin America	291	365	747	2.3	6.2
Caribbean	179	186	221	0.4	1.4
North America	2 940	6 206	11 430	7.8	5.2
Oceania	272	455	680	5.3	3.4
Europe	7 149	16 851	24 271	9.0	3.1

### 7.9 Leading Fishery Exporters and Importers, 2002

Country	Exporters		Country	Importers	
	Value of exports (US\$ million)	% of World exports		Value of imports (US\$ million)	% of World imports
China (Mainland)	4 485	8	Japan	13 646	22
Thailand	3 676	6	United States of America	10 065	16
Norway	3 569	6	Spain	3 853	6
United States of America	3 260	6	France	3 207	5
Canada	3 035	5	Italy	2 906	5
Denmark	2 872	5	Germany	2 420	4
Viet Nam	2 030	3	United Kingdom	2 328	4
Spain	1 890	3	China (Mainland)	2 198	4
Chile	1 869	3	Korea, Rep. of	1 861	3
Netherlands	1 803	3	Denmark	1 806	3
China (Taiwan Province of)	1 664	3	China H. Kong SAR	1 766	3
Indonesia	1 491	3	Canada	1 354	2
<b>Rest of the World</b>	<b>26 566</b>	<b>46</b>	<b>Rest of the World</b>	<b>14 038</b>	<b>23</b>

### 7.10 Fish Utilization

World/Region	Total fish production	Utilization	
		Human consumption	Other purposes
(million MT)			
<b>WORLD</b>			
1970	65	40	25
1980	72	51	21
1990	98	70	28
2002	133	101	32
<b>Developed countries</b>			
1970	34	24	10
1980	39	27	12
1990	41	29	12
2002	31	24	7
<b>Developing countries</b>			
1970	32	16	15
1980	33	24	9
1990	57	41	16
2002	102	77	25



**FOOD, NUTRITION AND FOOD SECURITY**

### 8.1 Dietary Energy Consumption

World/Region	1969-1971	1979-1981	1989-1991	2000-2002
..... (kcal/person/day) .....				
<b>WORLD</b>	<b>2 410</b>	<b>2 550</b>	<b>2 700</b>	<b>2 790</b>
<b>Developed countries</b>	<b>3 140</b>	<b>3 220</b>	<b>3 290</b>	<b>3 280</b>
Industrialized countries	3 050	3 130	3 290	3 450
Transition economies	3 320	3 390	3 280	2 920
<b>Developing countries</b>	<b>2 110</b>	<b>2 310</b>	<b>2 520</b>	<b>2 660</b>
Latin America and the Caribbean	2 470	2 700	2 690	2 840
Near East and North Africa	2 380	2 830	3 010	2 970
Sub-Sahara Africa	2 100	2 080	2 110	2 200
East and Southeast Asia	2 010	2 320	2 630	2 870
South Asia	2 070	2 080	2 330	2 400
Oceania developing	2 220	2 390	2 460	2 520
North America developing	2 550	2 420	2 300	2 280
<b>Continental groupings</b>				
Africa	2 180	2 270	2 340	2 420
Asia	2 090	2 290	2 550	2 690
Latin America	2 480	2 710	2 710	2 860
Caribbean	2 340	2 530	2 430	2 520
North America	3 020	3 160	3 420	3 750
Oceania	3 010	2 930	3 040	2 960
Europe	3 210	3 320	3 390	3 290

## 8.2 Contribution of Food Groups to Food Availability in Calorie Terms

World/Region	Period	Roots and Vegetable							All Food
		Cereals	Tubers	Meat and Offals	Oils and Fats	Sugar and Products	Milk and Products	Other	
(%)									
<b>World</b>	1979-1981	51	6	6	7	9	4	16	100
	1989-1991	51	5	7	8	9	4	16	100
	2000-2002	48	5	8	9	9	4	17	100
<b>Developed countries</b>	1979-1981	31	4	11	10	13	9	22	100
	1989-1991	31	4	11	11	13	9	22	100
	2000-2002	31	4	10	13	13	9	20	100
Industrialized countries	1979-1981	27	4	11	12	14	9	24	100
	1989-1991	27	4	11	13	13	9	23	100
	2000-2002	27	3	11	14	13	9	22	100
Transition economies	1979-1981	39	6	9	6	13	7	20	100
	1989-1991	38	5	11	7	13	7	19	100
	2000-2002	41	6	8	8	11	9	16	100
<b>Developing countries</b>	1979-1981	61	7	4	6	7	2	13	100
	1989-1991	59	5	5	7	7	3	13	100
	2000-2002	53	6	7	8	7	3	16	100
Latin America and the Caribbean	1979-1981	39	5	8	9	17	5	17	100
	1989-1991	38	4	8	11	16	5	17	100
	2000-2002	36	4	10	9	17	6	17	100
Near East and North Africa	1979-1981	58	2	3	9	10	5	14	100
	1989-1991	58	2	3	10	9	4	14	100
	2000-2002	57	2	4	10	9	4	15	100
Sub-Saharan Africa	1979-1981	45	19	3	8	4	3	19	100
	1989-1991	47	20	3	8	4	3	17	100
	2000-2002	46	20	3	8	4	2	16	100
East and Southeast Asia	1979-1981	69	9	5	4	3	0	11	100
	1989-1991	65	5	7	6	4	1	12	100
	2000-2002	55	5	11	7	4	1	17	100
South Asia	1979-1981	66	2	1	6	9	4	12	100
	1989-1991	65	2	1	7	9	4	13	100
	2000-2002	60	2	1	9	9	5	14	100
Oceania developing	1979-1981	22	27	12	4	6	1	27	100
	1989-1991	24	24	12	6	5	1	28	100
	2000-2002	29	20	12	6	5	1	26	100
North America developing	1979-1981	20	2	19	7	12	8	32	100
	1989-1991	20	3	19	10	10	6	31	100
	2000-2002	22	3	15	14	12	5	29	100



## 8.2 Contribution of Food Groups to Food Availability in Calorie Terms (cont. ed)

World/Region	Period	Roots and Tubers		Meat and	Vegetable	Sugar and	Milk and	Other	All Food
		Cereals		Offals	Oils and Fats	Products	Products		
(%)									
<b>Continental groupings</b>									
<b>Africa</b>									
	1979-1981	49	13	3	8	7	3	16	100
	1989-1991	51	14	3	8	6	3	15	100
	2000-2002	50	14	3	8	6	3	15	100
<b>Asia</b>									
	1979-1981	66	6	4	5	6	2	12	100
	1989-1991	63	4	5	6	6	2	13	100
	2000-2002	56	4	7	8	6	3	16	100
<b>Latin America</b>									
	1979-1981	39	5	8	9	17	5	17	100
	1989-1991	38	4	8	11	16	5	16	100
	2000-2002	36	4	10	9	17	6	17	100
<b>Caribbean</b>									
	1979-1981	35	6	6	7	17	6	23	100
	1989-1991	35	5	6	10	17	5	22	100
	2000-2002	36	6	6	10	18	4	21	100
<b>North America</b>									
	1979-1981	20	3	12	15	17	11	22	100
	1989-1991	23	3	12	16	17	11	20	100
	2000-2002	23	3	12	16	17	10	19	100
<b>Oceania</b>									
	1979-1981	23	7	15	8	15	9	23	100
	1989-1991	22	7	15	11	13	10	23	100
	2000-2002	24	7	15	12	12	9	21	100
<b>Europe</b>									
	1979-1981	29	5	12	10	11	9	25	100
	1989-1991	28	4	12	12	11	9	24	100
	2000-2002	31	5	11	12	11	9	21	100

### 8.3 Prevalence of Undernutrition in Developing Regions

Region	Undernourished							
	Percentage of Population				Number (million)			
	1969-1971	1979-1981	1990-1992	2000-2002	1969-1971	1979-1981	1990-1992	2000-2002
<b>WORLD</b>	...	...	...	14	...	...	...	852
<b>Developed countries</b>	...	...	...	3	...	...	...	38
Industrialized countries	...	...	...	1	...	...	...	9
Transition economies	...	...	...	7	...	...	...	28
<b>Developing countries</b>	<b>37</b>	<b>29</b>	<b>20</b>	<b>17</b>	<b>961</b>	<b>925</b>	<b>824</b>	<b>815</b>
Latin America and the Caribbean	20	13	13	10	55	46	59	53
Near East and North Africa	23	9	8	10	42	20	25	39
Sub-Saharan Africa	36	37	36	33	93	128	170	203
East and Southeast Asia	43	28	16	12	504	401	277	217
South Asia	37	37	26	22	265	329	291	301
Oceania developing	...	...	...	...	...	...	...	...
North America developing	...	...	...	...	...	...	...	...
<b>Continental groupings</b>								
Africa	32	29	28	26	114	137	178	212
Asia 1/	40	30	20	16	793	744	588	551
Latin America	19	12	12	9	50	41	52	46
Caribbean	26	20	27	21	5	5	8	7
North America	...	...	...	...	...	...	...	...
Oceania 1/	...	...	...	...	...	...	...	...
Europe	...	...	...	...	...	...	...	...

1/ Developing countries only

#### 8.4 Food Aid Received (Shipments) - Cereals

World/Region	1970/1971	1980/1981	1990/1991	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003
(thousand MT)								
<b>WORLD 1/</b>	<b>12 938</b>	<b>8 942</b>	<b>12 269</b>	<b>10 783</b>	<b>10 628</b>	<b>8 885</b>	<b>7 417</b>	<b>8 610</b>
<b>Developed countries</b>	<b>948</b>	<b>270</b>	<b>1 164</b>	<b>2 490</b>	<b>3 378</b>	<b>1 078</b>	<b>942</b>	<b>454</b>
Industrialized countries	819	270	1	-	-	18	9	78
Transition economies	128	-	1 163	2 490	3 378	1 061	933	376
<b>Developing countries</b>	<b>11 776</b>	<b>8 652</b>	<b>11 105</b>	<b>8 293</b>	<b>7 250</b>	<b>7 807</b>	<b>6 476</b>	<b>8 156</b>
Latin America and the Caribbean	1 008	583	1 919	950	787	599	757	704
Near East and North Africa	2 548	2 442	3 874	403	689	1 204	881	2 319
Sub-Sahara Africa	606	2 399	3 190	2 194	2 501	3 084	1 997	3 124
East and Southeast Asia	3 865	1 499	345	2 835	1 836	2 144	1 793	1 447
South Asia	3 735	1 722	1 774	1 901	1 437	776	1 047	562
Oceania developing	14	7	3	9	-	-	-	-
North America developing	-	-	-	-	-	-	-	-
<b>Continental groupings</b>								
Africa	1 737	4 512	6 174	2 245	2 605	3 419	2 070	3 204
Asia	9 824	3 560	3 011	5 251	4 193	4 283	4 108	4 549
Latin America	895	385	1 596	746	453	462	564	559
Caribbean	113	198	324	204	333	136	193	145
North America	-	-	-	-	-	-	-	-
Oceania	14	7	3	9	-	-	-	-
Europe	140	260	1 142	2 329	3 043	585	483	153
<b>LIFDC</b>	<b>6 477</b>	<b>7 033</b>	<b>8 529</b>	<b>7 749</b>	<b>7 133</b>	<b>7 493</b>	<b>6 119</b>	<b>7 431</b>
<b>(Low-income food deficit countries)</b>								

1/ Incl. shipments channelled through multilateral organizations for which breakdown by recipients is not available

#### 8.5 Food Aid Shipments (Cereals) to Main Recipient Countries in 2002/2003 (July/June)

Country	Quantity (thousand MT)	% of total food aid	Country	Quantity (thousand MT)	% of total food aid
Iraq	1 333	15.5	Peru	124	1.4
Ethiopia	1 218	14.2	Tajikistan	121	1.4
Korea Dem. People's Rep.	975	11.3	Uzbekistan	119	1.4
Afghanistan	388	4.5	Guatemala	118	1.4
Bangladesh	353	4.1	Uganda	113	1.3
Angola	217	2.5	China	107	1.2
Jordan	205	2.4	Mozambique	95	1.1
Indonesia	204	2.4	Gaza Strip	87	1.0
Yemen	184	2.1	Kenya	84	1.0
Eritrea	184	2.1	Sri Lanka	81	0.9
Zimbabwe	174	2.0	Bolivia	77	0.9
Malawi	156	1.8	El Salvador	70	0.8
Haiti	144	1.7	Philippines	68	0.8
India	128	1.5	Mauritania	63	0.7
Sudan	126	1.5	Ecuador	63	0.7

## 8.6 Selected Cereal Market Indicators

	Average 1997-1998— 2001/2002	2002/2003	2003/2004	2004/2005 forecast
<b>1. Ratio of World Stocks to</b>				
<i>Utilization</i>				
<i>Wheat</i>	40.3	33.2	26.1	25.8
<i>Coarse grains</i>	24.0	17.0	15.0	15.0
<i>Rice</i>	36.3	28.9	24.9	22.9
<i>Cereals (total)</i>	31.5	24.4	20.5	20.0
<b>2. Ratio of Five Major Grain Exporters</b>				
<b>Supplies to Normal Market Requirements</b>	1.22	1.09	1.16	1.31
<b>3. Closing Stocks as a percentage of</b>				
<b>Total Disappearance of Major Exporters</b>				
<i>Wheat</i>	19.9	18.1	17.9	19.6
<i>Coarse grains</i>	16.3	12.6	10.4	11.1
<i>Rice</i>	52.8	45.0	37.9	36.4
<i>Cereals (total)</i>	29.7	25.2	22.1	22.4
	<b>Annual Trend Growth Rate</b>	<b>Percentage Change from Previous Year</b>		
	<b>1994-2003</b>	<b>2002</b>	<b>2003</b>	<b>2004 forecast</b>
<b>4. Changes in World Cereal Production</b>	0.64	-3.91	2.75	5.37
<b>5. Changes in Cereal Production in the Low-income Food deficit Countries (LIFDCs)</b>	0.80	-2.37	1.97	2.99
<b>6. Changes in Cereal Production in LIFDCs less China and India</b>	2.52	1.93	8.02	-1.55
		<b>Percentage Change from Previous Year</b>		
		<b>2001/2002</b>	<b>2002/2003</b>	<b>2003/2004</b>
<b>7. Selected cereal Price Indices</b>				
<i>Wheat (July/June)</i>		2.7	21.3	-1.1
<i>Maize (July/June)</i>		4.8	18.6	7.1
<i>Rice (Jan./Dec.)</i>		-3.9	14.7	33.9

### Notes:

*Utilization* is defined as the sum of food use, feed and other uses.

*Cereals* refer to wheat, coarse grains and rice; *Grains* refer to wheat and coarse grains.

*Major Grain Exporters* are Argentina, Australia, Canada, the EU, and the United States; *Major Rice Exporters* are China, Pakistan, Thailand, the United States, and Viet Nam.

*Normal Market Requirements* for major grain exporters are defined as the average of domestic utilization plus exports in the three preceding seasons.

*Disappearance* is defined as domestic utilization plus exports for any given season.

*Price indices*: The wheat price index has been constructed based on the IGC wheat price index, rebased to July/June 1997/98-1999/00 = 100; For maize, the U.S. maize No. 2 Yellow (delivered U.S. Gulf ports) with base July/June, 1997/98-1999/00 = 100; For rice, the FAO Rice Price Index, 1998-2000=100, is based on 16 rice export quotations. For 2003/04, the indices are calculated based on average selected prices from the beginning of the seasons up to June 2004 for Wheat and Maize and up to August 2004 for Rice. Rice index refers to the second year shown.



## **PROJECTIONS**

### 9.1 Projections of Total Population

World / Region	Total population (million)						
	1995	2000	2010	2020	2030	2040	2050
<b>WORLD</b>	<b>5 674</b>	<b>6 071</b>	<b>6 830</b>	<b>7 540</b>	<b>8 130</b>	<b>8 594</b>	<b>8 919</b>
<b>Developed countries</b>	<b>1 290</b>	<b>1 317</b>	<b>1 351</b>	<b>1 374</b>	<b>1 383</b>	<b>1 378</b>	<b>1 363</b>
Industrialized countries	877	906	949	981	1 004	1 015	1 020
Transition economies	413	411	402	393	380	363	343
<b>Developing countries</b>	<b>4 384</b>	<b>4 754</b>	<b>5 479</b>	<b>6 166</b>	<b>6 747</b>	<b>7 215</b>	<b>7 556</b>
Latin America and the Caribbean	481	520	594	659	711	748	768
Near East and North Africa	362	399	487	576	658	733	794
Sub-Saharan Africa	536	610	770	949	1 140	1 334	1 518
East and Southeast Asia	1 776	1 874	2 042	2 175	2 250	2 273	2 248
South Asia	1 221	1 342	1 575	1 795	1 976	2 112	2 213
Oceania developing	7	8	10	11	13	15	16
North America developing	0	0	0	0	0	0	0
<b>Continental groupings</b>							
Africa	707	796	984	1 188	1 398	1 608	1 803
Asia	3 430	3 680	4 149	4 570	4 887	5 103	5 222
Latin America	445	483	553	616	666	702	722
Caribbean	36	38	41	44	45	46	46
North America	299	316	348	380	408	430	448
Oceania	29	31	35	38	41	44	46
Europe	727	728	720	705	685	661	632

### 9.2 Annual growth rate of total population projections

World / Region	Average annual rate of growth (%)					
	1995-2000	2000-2010	2010-2020	2020-2030	2030-2040	2040-2050
<b>WORLD</b>	<b>1.3</b>	<b>1.2</b>	<b>1.0</b>	<b>0.8</b>	<b>0.6</b>	<b>0.4</b>
<b>Developed countries</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>-0.1</b>
Industrialized countries	0.6	0.5	0.3	0.2	0.1	0.0
Transition economies	-0.1	-0.2	-0.2	-0.4	-0.5	-0.6
<b>Developing countries</b>	<b>1.6</b>	<b>1.4</b>	<b>1.2</b>	<b>0.9</b>	<b>0.7</b>	<b>0.5</b>
Latin America and the Caribbean	1.6	1.3	1.0	0.8	0.5	0.3
Near East and North Africa	2.0	2.0	1.7	1.3	1.1	0.8
Sub-Saharan Africa	2.6	2.3	2.1	1.8	1.6	1.3
East and Southeast Asia	1.1	0.9	0.6	0.3	0.1	-0.1
South Asia	1.9	1.6	1.3	1.0	0.7	0.5
Oceania developing	2.2	1.9	1.6	1.4	1.0	0.7
North America developing	0.4	0.5	0.3	0.1	0.0	-0.1
<b>Continental groupings</b>						
Africa	2.4	2.1	1.9	1.6	1.4	1.1
Asia	1.4	1.2	1.0	0.7	0.4	0.2
Latin America	1.6	1.4	1.1	0.8	0.5	0.3
Caribbean	1.0	0.8	0.6	0.4	0.2	0.0
North America	1.1	1.0	0.9	0.7	0.5	0.4
Oceania	1.4	1.1	0.9	0.8	0.6	0.4
Europe	0.0	-0.1	-0.2	-0.3	-0.4	-0.4

### 9.3 Agricultural Population Projections and Related Growth rates

World / Region	Agricultural Population			Average annual rate of growth	
	(million)			(%)	
	1990	2000	2010	1990-2000	2000-2010
<b>WORLD</b>	<b>2 443</b>	<b>2 573</b>	<b>2 621</b>	<b>0.5</b>	<b>0.2</b>
<b>Developed countries</b>	<b>134</b>	<b>100</b>	<b>73</b>	<b>-3.0</b>	<b>-3.1</b>
Industrialized countries	51	37	26	-3.3	-3.6
Transition economies	83	63	48	-2.8	-2.8
<b>Developing countries</b>	<b>2 309</b>	<b>2 474</b>	<b>2 547</b>	<b>0.7</b>	<b>0.3</b>
Latin America and the Caribbean	117	108	97	-0.8	-1.1
Near East and North Africa	114	119	121	0.4	0.2
Sub-Saharan Africa	327	391	450	1.8	1.4
East and Southeast Asia	1 094	1 122	1 102	0.3	-0.2
South Asia	653	728	772	1.1	0.6
Oceania developing	4	5	6	1.7	1.1
North America developing	0	0	0	-2.9	-4.1
<b>Continental groupings</b>					
Africa	379	443	499	1.6	1.2
Asia	1 825	1 947	1 969	0.6	0.1
Latin America	107	99	88	-0.8	-1.2
Caribbean	10	9	9	-0.7	-0.8
North America	9	7	6	-2.0	-2.0
Oceania	6	6	7	1.3	0.8
Europe	51	62	43	1.9	-3.6

### 9.4 Total Labour Force Projections and Related Growth Rates

World / Region	Total Labour Force			Average annual rate of growth	
	(million)			(%)	
	1990	2000	2010	1990-2000	2000-2010
<b>WORLD</b>	<b>2 496</b>	<b>2 947</b>	<b>3 404</b>	<b>1.7</b>	<b>1.4</b>
<b>Developed countries</b>	<b>611</b>	<b>655</b>	<b>682</b>	<b>0.7</b>	<b>0.4</b>
Industrialized countries	408	447	466	0.9	0.4
Transition economies	203	208	216	0.3	0.4
<b>Developing countries</b>	<b>1 885</b>	<b>2 291</b>	<b>2 723</b>	<b>2.0</b>	<b>1.7</b>
Latin America and the Caribbean	176	222	269	2.3	1.9
Near East and North Africa	108	149	202	3.2	3.0
Sub-Saharan Africa	208	272	346	2.7	2.4
East and Southeast Asia	922	1 061	1 180	1.4	1.1
South Asia	468	584	720	2.2	2.1
Oceania developing	3	4	5	2.4	2.5
North America developing	0	0	0	0.6	0.4
<b>Continental groupings</b>					
Africa	261	342	436	2.7	2.4
Asia	1 525	1 845	2 142	1.9	1.5
Latin America	162	205	250	2.4	2.0
Caribbean	14	17	19	1.8	1.3
North America	144	162	178	1.2	0.9
Oceania	13	15	18	1.7	1.3
Europe	233	360	361	4.3	0.0

### 9.5 Agricultural Labour Force Projections and Related Growth rates

World / Region	Agricultural Labour Force			Average annual rate of growth	
	(million)			(%)	
	1990	2000	2010	1990-2000	2000-2010
<b>WORLD</b>	<b>1 221</b>	<b>1 318</b>	<b>1 382</b>	<b>0.8</b>	<b>0.5</b>
<b>Developed countries</b>	<b>62</b>	<b>48</b>	<b>37</b>	<b>-2.7</b>	<b>-2.6</b>
Industrialized countries	23	17	11	-3.1	-3.7
Transition economies	40	31	25	-2.4	-2.1
<b>Developing countries</b>	<b>1 158</b>	<b>1 270</b>	<b>1 345</b>	<b>0.9</b>	<b>0.6</b>
Latin America and the Caribbean	45	44	41	-0.2	-0.6
Near East and North Africa	43	49	55	1.5	1.1
Sub-Saharan Africa	149	179	209	1.8	1.5
East and Southeast Asia	622	653	654	0.5	0.0
South Asia	297	342	383	1.4	1.1
Oceania developing	2	2	3	1.6	1.6
North America developing	0	0	0	0.0	-6.9
<b>Continental groupings</b>					
Africa	165	197	228	1.8	1.4
Asia	953	1 039	1 084	0.9	0.4
Latin America	41	40	38	-0.2	-0.6
Caribbean	4	4	4	-0.1	-0.2
North America	4	3	3	-1.9	-2.1
Oceania	3	3	3	1.2	1.2
Europe	24	31	23	2.5	-3.2

### 9.6 Average Annual Rates of Growth of Value of Gross Agricultural Production and Domestic Demand

World/Region	Production				Domestic Demand (all uses)			
	Total		Per Caput		Total		Per Caput	
	1992-2001	1997/99	1992-2001	1997/99	1992-2001	1997/99	1992-2001	1997/99
	– 2015		– 2015		– 2015		– 2015	
	(%)							
<b>WORLD</b>	<b>2.6</b>	<b>1.6</b>	<b>1.2</b>	<b>0.4</b>	<b>2.3</b>	<b>1.6</b>	<b>0.9</b>	<b>0.4</b>
<b>Developed countries</b>	<b>0.3</b>	<b>0.8</b>	<b>-0.1</b>	<b>0.6</b>	<b>0.2</b>	<b>0.7</b>	<b>-0.2</b>	<b>0.5</b>
Industrialized countries	1.3	0.8	0.7	0.5	1.1	0.7	0.5	0.4
Transition economies	-2.7	0.6	-2.6	0.9	-2.4	0.5	-2.3	0.7
<b>Developing countries</b>	<b>4.2</b>	<b>2.0</b>	<b>2.5</b>	<b>0.6</b>	<b>3.8</b>	<b>2.2</b>	<b>2.1</b>	<b>0.7</b>
Latin America and the Caribbean	3.3	2.1	1.7	0.8	2.8	2.1	1.2	0.8
Near East and North Africa	5.9	2.1	3.6	0.2	2.6	2.4	0.4	0.5
Sub-Saharan Africa	3.2	2.8	0.5	0.2	3.4	2.9	0.8	0.3
East and Southeast Asia	4.6	1.7	3.5	0.8	4.8	1.8	3.6	0.9
South Asia	2.9	2.5	1.0	0.9	3.2	2.6	1.3	1.0
<b>Continental groupings</b>								
Africa	6.1	2.5	3.5	0.3	3.2	2.6	0.7	0.3
Asia	3.6	1.9	2.1	0.7	3.7	2.0	2.3	0.8
Latin America	3.4	2.1	1.7	0.8	2.9	2.1	1.2	0.7
Caribbean	0.7	1.9	-0.4	1.0	2.4	1.8	1.3	0.9
North America, developed	1.8	1.3	0.7	0.4	1.6	1.1	0.6	0.3
Oceania, developed	3.9	1.1	2.7	0.2	2.5	0.8	1.3	0.0
Europe	-0.7	0.3	-0.7	0.5	-0.5	0.3	-0.5	0.5



### 9.7 Projections of Total Cereal Production

World/Region	Cereals Production *					Average Annual Growth Rates (%)		
	1992/1994	1997/1999	1999/2001	2015	2030	1992/1994	1997/99	2015
	(million tons)					-2001	- 2015	- 2030
<b>WORLD</b>	<b>1 767</b>	<b>1 889</b>	<b>1 883</b>	<b>2 387</b>	<b>2 839</b>	<b>1.0</b>	<b>1.4</b>	<b>1.2</b>
<b>Developed countries</b>	<b>842</b>	<b>863</b>	<b>858</b>	<b>1 033</b>	<b>1 186</b>	<b>0.5</b>	<b>1.1</b>	<b>0.9</b>
Industrialized countries	594	652	647	785	899	1.4	1.1	0.9
Transition economies	248	210	211	248	287	-2.1	1.0	1.0
<b>Developing countries</b>	<b>924</b>	<b>1 026</b>	<b>1 026</b>	<b>1 354</b>	<b>1 652</b>	<b>1.5</b>	<b>1.6</b>	<b>1.3</b>
Latin America and the Caribbean	111	125	133	188	244	2.6	2.4	1.7
Near East and North Africa	84	83	80	107	133	-0.3	1.5	1.5
Sub-Saharan Africa	61	71	72	114	168	2.3	2.8	2.6
East and Southeast Asia	454	507	487	622	714	0.9	1.2	0.9
South Asia	214	239	254	323	393	2.4	1.8	1.3
<b>Continental groupings</b>								
Africa	95	107	108	163	230	2.3	2.5	2.3
Asia	766	832	828	1 052	1 237	1.1	1.4	1.1
Latin America	110	124	132	186	242	2.6	2.4	1.7
Caribbean	1	1	1	2	2	3.1	1.8	1.7
North America, developed	369	389	381	483	572	0.8	1.3	1.1
Oceania, developed	23	33	36	39	45	6.1	0.9	1.1
Europe	400	400	396	460	509	0.1	0.8	0.7

\* Including rice in milled form.

### 9.8 Projections of Harvested Land

World/Region	1997/99	2015	2030
	(million ha)		
<b>WORLD</b>	<b>1 401</b>	<b>1 505</b>	<b>1 609</b>
<b>Developed countries</b>	<b>514</b>	<b>526</b>	<b>543</b>
Industrialized countries	310	317	326
Transition economies	203	209	217
<b>Developing countries</b>	<b>887</b>	<b>979</b>	<b>1 066</b>
Latin America and the Caribbean	127	151	174
Near East and North Africa	70	77	84
Sub-Saharan Africa	155	186	217
East and Southeast Asia	304	317	329
South Asia	230	248	262
<b>Continental groupings</b>			
Africa	184	218	252
Asia	622	661	693
Latin America	123	146	168
Caribbean	4	5	5
North America, developed	173	182	194
Oceania, developed	41	41	40
Europe	252	252	257

### 9.9 Projections of Availability of Arable Land (including permanent crops)

Region	1997/99		2015		2030	
	Total (million ha)	per person (ha)	Total (million ha)	per person (ha)	Total (million ha)	per person (ha)
<b>Developing countries</b>	<b>956</b>	<b>0.21</b>	<b>1,017</b>	<b>0.17</b>	<b>1,076</b>	<b>0.16</b>
Latin America and the Caribbean	203	0.41	223	0.36	244	0.34
Near East and North Africa	86	0.23	89	0.17	93	0.14
Sub-Saharan Africa	228	0.40	262	0.30	288	0.23
East and Southeast Asia	232	0.13	233	0.11	237	0.10
South Asia	207	0.16	210	0.13	216	0.11
<b>Continental groupings</b>						
Africa (excl. South Africa)	254	0.34	288	0.27	315	0.22
Asia (excl. Japan)	499	0.15	506	0.12	518	0.11
Latin America	197	0.42	217	0.37	238	0.35
Caribbean	6	0.19	6	0.16	6	0.15

Note: projections of arable land only for developing countries

### 9.10 Projections of Irrigated Land

Region	Irrigated land in use			Irrigated land harvested		
	1997/99	2015	2030	1997/99	2015	2030
	(million ha)			(million ha)		
<b>Developing countries</b>	<b>202</b>	<b>221</b>	<b>242</b>	<b>257</b>	<b>306</b>	<b>341</b>
Latin America and the Caribbean	18	20	22	16	19	22
Near East and North Africa	26	29	33	27	32	37
Sub-Saharan Africa	5	6	7	5	6	7
East and Southeast Asia	71	78	85	110	131	144
South Asia	81	87	95	100	117	131
<b>Continental groupings</b>						
Africa (excl. South Africa)	11	13	15	13	15	18
Asia (excl. Japan)	172	188	206	229	271	301
Latin America	17	19	21	15	18	21
Caribbean	1	1	1	1	1	1

Note: projections of irrigated land only for developing countries

### 9.11 Projections of Per Caput Food Availability and Percentage and Number of Undernourished

Region	Per caput food availability			Undernourished					
	(kcal/day)			Percentage of population			Number (million)		
	1997/99	2015	2030	1997/99	2015	2030	1997/99	2015	2030
<b>Developing countries</b>	<b>2 681</b>	<b>2 846</b>	<b>2 984</b>	<b>17</b>	<b>11</b>	<b>6</b>	<b>776</b>	<b>610</b>	<b>443</b>
Latin America and the Caribbean	2 824	2 983	3 136	11	6	4	54	40	25
Near East and North Africa	3 006	3 092	3 165	9	7	5	32	37	34
Sub-Saharan Africa	2 195	2 360	2 543	34	23	15	194	205	183
East and Southeast Asia	2 923	3 064	3 192	11	6	4	193	135	82
South Asia	2 403	2 700	2 901	24	12	6	303	195	119
<b>Continental groupings</b>									
Africa (excl. South Africa)	2 385	2 517	2 660	28	20	13	200	211	189
Asia (excl. Japan)	2 719	2 907	3 057	16	9	5	522	361	229
Latin America	2 858	3 009	3 156	10	6	3	45	34	22
Caribbean	2 340	2 584	2 808	28	16	9	9	6	4

**SELECTED FOOD AND AGRICULTURE INDICATORS BY  
COUNTRY**

## 10.1 Selected Food and Agriculture Indicators by Country

Region/Country	Population 2004 (thousands)	Per caput food availability 2000-2002 (kcal/day)	Per caput GNI 2002 (US\$) (a)	Agricultural labour force in total labour force 2004 (%)	Agricultural exports in total export value 2002 (%)
<b>WORLD</b>					
<b>DEVELOPED COUNTRIES</b>					
<b>Industrialized countries</b>					
Andorra	73	...	...	...	...
Australia	19 913	3 090	19 530	4	25
Austria	8 120	3 740	23 860	4	5
Belgium	10 340	3 580	22 940	2	9
Canada	31 744	3 560	22 390	2	7
Denmark	5 375	3 410	30 260	3	17
Faeroe Islands	47	...	...	...	2
Finland	5 215	3 120	23 890	5	3
France	60 434	3 630	22 240 (c)	3	10
Germany	82 526	3 470	22 740	2	4
Gibraltar	27	...	...	...	...
Greece	10 977	3 690	11 660	15	24
Holy See	1	...	...	...	...
Iceland	292	3 220	27 960	7	2
Ireland	3 999	3 660	23 030	9	7
Israel	6 560	3 640	16 020	2	3
Italy	57 346	3 690	19 080	4	7
Japan	127 800	2 780	34 010	3	
Liechtensten	34	...	...	...	...
Luxembourg	459	3 590	39 470	2	6
Malta	396	3 540	9 260	1	4
Monaco	35	...	...	...	...
Netherlands	16 227	3 350	23 390	3	13
New Zealand	3 904	3 220	13 260	9	45
Norway	4 552	3 420	38 730	4	1
Portugal	10 072	3 750	10 720	11	7
San Marino	28	...	...	...	...
South Africa	45 214	2 920	2 500	8	8
Spain	41 128	3 360	14 580	6	14
Sweden	8 886	3 140	25 970	3	3
Switzerland	7 164	3 470	36 170	4	3
United Kingdom	59 427	3 400	25 510	2	5
United States of America	297 043	3 790	35 400	2	8
<b>Transition Economies</b>					
Albania	3 194	2 860	1 450	46	8
Armenia	3 052	2 190	790	11	11
Azerbaijan	8 447	2 480	710	25	4
Belarus	9 852	3 010	1 360	11	8
Bosnia and Herzegovina	4 186	2 760	1 310	4	6
Bulgaria	7 829	2 800	1 770	5	12
Croatia	4 416	2 770	4 540	7	10
Czech Republic	10 226	3 120	5 480	7	4
Estonia	1 308	2 990	4 190	10	9
Georgia	5 074	2 280	650	18	37
Hungary	9 831	3 470	5 290	9	8
Kazakstan	15 403	2 550	1 520	16	7
Kyrgyzstan	5 208	2 950	290	23	26
Latvia	2 286	2 960	3 480	11	12
Lithuania	3 422	3 360	3 670	10	10
Macedonia, Former Yug. Rep. of	2 066	2 640	1 710	10	11
Moldova, Rep. of	4 263	2 720	460	20	65
Poland	38 551	3 380	4 570	20	7
Romania	22 280	3 410	1 870	12	3

### 10.1 Selected Food and Agriculture Indicators by Country (cont. ed)

Region/Country	Population 2004 (thousands)	Per caput food availability 2000-2002 (kcal/day)	Per caput GNI 2002 (US\$) (a)	Agricultural labour force in total labour force 2004 (%)	Agricultural exports in total export value 2002 (%)
Russian Federation	142 397	3 000	2 130	9	2
Serbia and Montenegro	10 519	2 660	1 400	17	20
Slovakia	5 407	2 880	3 970	8	4
Slovenia	1 982	3 010	10 370	1	4
Tajikistan	6 298	1 840	180	31	19
Turkmenistan	4 940	2 720	...	32	5
Ukraine	48 151	2 980	780	13	14
Uzbekistan	26 479	2 270	310	25	29

#### DEVELOPING COUNTRIES

Latin America and the Caribbean					
Anguilla	12	...	...	...	...
Antigua and Barbuda	73	2 340	9 720	...	...
Argentina	38 871	3 070	4 220	9	43
Aruba	101	...	...	...	1
Bahamas	317	2 750	...	3	1
Barbados	271	3 060	8 790	4	30
Belize	261	2 840	2 970	30	60
Bolivia	8 973	2 250	900	43	29
British Virgin Island	21	...	...	...	...
Brazil	180 654	3 010	2 830	15	28
Cayman Islands	42	...	...	...	...
Chile	15 996	2 850	4 250	15	20
Colombia	44 914	2 580	1 820	18	23
Costa Rica	4 250	2 860	4 070	18	30
Cuba	11 328	3 000	...	13	48
Dominica	79	2 750	3 000	...	39
Dominican Republic	8 872	2 320	...	14	71
Ecuador	13 192	2 740	1 490	23	34
El Salvador	6 614	2 550	2 110	26	15
Falkland Is. (Malvinas)	3	...	...	...	97
French Guiana	182	...	...	...	...
Grenada	80	2 870	3 530	...	36
Guadeloupe	443	...	...	2	...
Guatemala	12 661	2 190	1 760	44	55
Guyana	767	2 710	860	16	32
Haiti	8 437	2 080	440	60	6
Honduras	7 099	2 350	930	28	40
Jamaica	2 676	2 670	2 690	19	21
Martinique	395	...	...	3	...
Mexico	104 931	3 160	5 920	19	9
Montserrat	4	...	...	...	1
Netherlands Antille	223	2 560	...	...	1
Nicaragua	5 597	2 280	710	17	62
Panama	3 177	2 240	4 020	18	32
Paraguay	6 018	2 560	1 170	33	37
Peru	27 567	2 550	2 020	28	10
Puerto Rico	3 898	...	...	2	...
Saint Kitts and Nevis	42	2 640	6 540	...	18
Saint Lucia	150	2 940	3 750	...	92
Saint Vincent/Grenadines	121	2 530	2 820	...	83
Suriname	439	2 630	1 940	18	10
Trinidad and Tobago	1 307	2 730	6 750	8	6
Turks and Caicos Islands	21	...	...	...	...
Uruguay	3 439	2 830	4 340	12	43
US Virgin Islands	112	...	...	...	...

### 10.1 Selected Food and Agriculture Indicators by Country (cont. ed)

Region/Country	Population 2004 (thousands)	Per caput food availability 2000-2002 (kcal/day)	Per caput GNI 2002 (US\$) (a)	Agricultural labour force in total labour force 2004 (%)	Agricultural exports in total export value 2002 (%)
Venezuela	26 170	2 350	4 080	7	1
<b>Near East and North Africa</b>					
Afghanistan	24 926	...	...	66	...
Algeria	32 339	2 990	1 720	23	
Bahrain	739	...	10 500	1	1
Cyprus	808	3 250	12 871	7	29
Egypt	73 390	3 340	1 470	31	12
Iran, Islamic Rep. of	69 788	3 070	1 720	25	5
Iraq	25 856	...	...	8	...
Jordan	5 614	2 670	1 760 (d)	10	15
Kuwait	2 595	3 050	16 340	1	
Lebanon	3 708	3 180	3 990	3	11
Libyan Arab Jamahiriya	5 659	3 320	...	5	
Morocco	31 064	3 040	1 170	33	10
Palestinian, O.T.	3 685	2 190	7 830	10	26
Oman	2 935	...	1 110	33	6
Qatar	619	...	...	1	
Saudi Arabia	24 919	2 840	8 530	7	1
Syrian Arab Republic	18 223	3 040	1 130	26	19
Tunisia	9 937	3 270	1 990	23	6
Turkey	72 320	3 360	2 490	43	10
United Arab Emirates	3 051	3 200	...	4	2
Yemen	20 733	2 040	490	46	2
<b>Sub-Saharan Africa</b>					
Angola	14 078	2 040	710	71	
Benin	6 918	2 520	380	50	56
Botswana	1 795	2 160	3 010	44	2
Burkina Faso	13 393	2 410	250	92	65
Burundi	7 068	1 640	100	90	72
Cameroon	16 296	2 270	550	55	24
Cape Verde	473	3 210	1 250	20	3
Central African Republic	3 912	1 980	250	69	19
Chad	8 854	2 150	210	71	54
Comoros	790	1 750	390	72	22
Congo, Democratic Rep.	54 417	1 630	100	61	6
Congo, Rep. of	3 818	2 090	610	37	1
Côte d'Ivoire	16 897	2 620	620	45	58
Djibouti	712	2 200	850	...	89
Equatorial Guinea	507	...	...	69	
Eritrea	4 297	1 520	190	76	5
Ethiopia	72 420	1 840	100	81	72
Gabon	1 351	2 610	3 060	33	
Gambia	1 462	2 270	270	78	65
Ghana	21 377	2 620	270	56	40
Guinea	8 620	2 380	410	82	4
Guinea-Bissau	1 538	2 100	130	82	137
Kenya	32 420	2 110	360	74	28
Lesotho	1 800	2 620	550	38	2
Liberia	3 487	2 000	140	66	16
Madagascar	17 901	2 060	230	72	106
Malawi	12 337	2 150	160	81	83
Mali	13 409	2 200	240	79	29
Mauritania	2 980	2 770	280	52	9
Mauritius	1 233	2 960	3 860	10	18
Mozambique	19 182	2 030	200	80	9
Namibia	2 011	2 270	1 790	38	18
Niger	12 415	2 130	180	87	29

### 10.1 Selected Food and Agriculture Indicators by Country (cont. ed)

Nigeria	127 117	2 700	300	30	3
Reunion	767	...	...	2	...
Rwanda	8 481	2 050	230	90	43
Saint Helena	5	...	...	...	...
Sao Tome and Principe	165	2 390	300	...	39
Senegal	10 339	2 280	470	72	12
Seychelles	82	2 450	6 780	...	...
Sierra Leone	5 168	1 930	140	60	8
Somalia	10 312	...	...	69	...
Sudan	34 333	2 260	370	57	22
Swaziland	1 083	2 360	1 240	32	15
Tanzania, United Rep.	37 671	1 960	290	(e) 79	39
Togo	5 017	2 300	270	57	35
Uganda	26 699	2 360	240	78	57
Western Sahara	316	...	...	...	...
Zambia	10 924	1 900	340	67	8
Zimbabwe	12 932	2 020	...	60	28
<b>East and Southeast Asia</b>					
Brunei Darussalam	366	2 860	...	1	...
Cambodia	14 482	2 060	300	69	2
China	1 320 892	2 960	960	(f) 64	3
Timor Leste	820	2 810	520	81	21
Indonesia	222 611	2 910	710	46	11
Korea, Dem. People's Rep	22 776	2 140	...	27	3
Korea, Republic of	47 951	3 060	9 930	8	1
Laos	5 787	2 290	310	76	5
Malaysia	24 876	2 890	3 540	16	8
Mongolia	2 630	2 240	430	22	16
Myanmar	50 101	2 880	...	69	16
Philippines	81 408	2 380	1 030	37	4
Singapore	4 315	...	20 690	...	2
Thailand	63 465	2 450	2 000	53	12
Viet Nam	82 481	2 530	430	66	13
<b>South Asia</b>					
Bangladesh	149 664	2 190	380	52	2
Bhutan	2 325	...	600	94	14
India	1 081 229	2 420	470	58	11
Maldives	328	2 540	2 170	19	...
Nepal	25 725	2 440	230	93	14
Pakistan	157 315	2 430	420	45	10
Sri Lanka	19 218	2 390	850	44	21
<b>Oceania Developing</b>					
American Samoa	63	...	...	...	...
Cook Islands	18	...	...	...	4
Fiji Islands	847	2 890	2 130	38	31
French Polynesia	248	2 880	...	...	4
Guam	165	...	...	...	...
Kiribati	89	2 850	960	...	26
Marshall Islands	54	...	2 380	...	17
Micronesia, Fed.States of	110	...	1 970	...	11
Nauru	13	...	...	...	...
New Caledonia	233	2 790	...	...	...
Niue Island	2	...	...	...	94
Northern Mariana Is.	83	...	...	...	...
Palau	21	...	6 820	...	...



**10.1 Selected Food and Agriculture Indicators by Country (cont. ed)**

Region/Country	Population 2004 (thousands)	Per caput food availability 2000-2002 (kcal/day)	Per caput GNI 2002 (US\$) (a)	Agricultural labour force in total labour force 2004 (%)	Agricultural exports in total export value 2002 (%)
Papua New Guinea	5 836	2 460	530	72	18
Samoa	180	2 900	1 430	...	39
Solomon Islands	491	2 240	580	72	48
Tokelau Islands	2	...	...	...	...
Tonga	105	...	1 440	...	39
Tuvalu	11	...	...	...	4
Vanuatu	217	2 570	1 070	...	50
Wallis and Futuna Is.	15	...	...	...	...
<b>North America Developing</b>					
Bermuda	82	2 260	...	...	...
Greenland	57	...	...	...	1
Saint Pierre and Miquelon	6	...	...	...	...

(a) Source: World Bank. 2004. World Development Indicators

Data calculated using the Atlas method

(b) Data refer to Belgium and Luxembourg

(c) Including French overseas departments of French Guiana, Guadeloupe, Martinique and Reunion

(d) Data refer to East Bank

(e) Data refer to Tanzania Mainland

(f) Data refer to China Mainland

## **ANNEXES**

## Annex I: Glossary of Symbols and Acronyms used

US\$	United States dollars
%	percent
Int.\$	International dollars
MLN	million
ha	hectare
MT	metric tonne
m	metre
km	kilometre
km <sup>3</sup>	cubic kilometres
m <sup>3</sup>	cubic metres
kcal/day	calories per day
...	data not available
0 or 0.0	zero or less than half of unit shown

To divide decimals from whole numbers, a full stop (.) is used

ECLAC	Economic Commission for Latin America and the Caribbean
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
ESSA	Socio-Economic Statistics and Analysis Service of Statistics Division (FAO)
ILO	International Labour Organization
IMF	International Monetary Fund
OECD	Organisation for Economic Co-operation and Development
UN	United Nations

## Annex II: Sources

The majority of tables are based on data available in the FAO Statistical database (FAOSTAT) as of mid October 2004. Other sources used are listed below:

Table	Source
1.1, 1.2	<b>World Bank</b> , <i>World Development Indicators, 2004</i> (CD Rom) UN Statistics Division and its regional bodies (Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific (ESCAP), Economic and Social Commission for Western Asia (ESCWA)) (Statistical Yearbooks) Regional Development Banks (African, Asian and the Caribbean) Economist Intelligence Unit. Statistical Database ( <a href="http://www.eiu.com">www.eiu.com</a> ) Organisation for Economic Co-operation and Development (OECD) Quarterly National Accounts, 2004/1 National statistical yearbooks and other national sources
1.3-1.5	Socio-Economic Statistics and Analysis Service of Statistics Division (ESSA). External Assistance to Agriculture Database
1.6	<b>International Monetary Fund (IMF)</b> . 2003. <i>Government Finance Statistics Yearbook, 2003</i> . Washington DC.
3.3 3.7	<b>FAO</b> . 2001. <i>Global Forest Resource Assessment 2000 – Main Report</i> . Rome <b>United Nations (UN)</b> . 2002. <i>Industrial Commodity Statistics, Yearbook, Vol.33, 1999</i> . New York
4.2	<b>I.A. Shikomanov</b> . 1996. <i>Assessment of water resources and water availability in the world (Scientific and Technical Report)</i> . St. Petersburg, Russia. State Hydrological Institute
4.3, 4.4	FAO AQUASTAT ( <a href="http://www.fao.org/waicent/faoinfo/agricult/agl/aglw/aquastat/main/index.stm">http://www.fao.org/waicent/faoinfo/agricult/agl/aglw/aquastat/main/index.stm</a> )
7.1 - 7.10	FAO FISHSTAT ( <a href="http://www.fao.org/fi/default_all.asp">http://www.fao.org/fi/default_all.asp</a> )
8.3 8.6	ESSA estimates <b>FAO</b> . 2004. <i>Assessment of the World Food Security Situation. Committee on World Food Security</i> . Rome (CFS: 2004/2 – corr. 1)
9.6 - 9.11	<b>FAO</b> . 2002. <i>Agriculture: Towards 2015/30 – Summary Report</i> . Rome
10.1	<b>World Bank</b> , <i>World Development Indicators, 2004</i> (CD Rom) (for Gross National Income (GNI) data)

## **Annex III: Country Group Composition**

### **Developed Countries**

#### Industrialized Countries

Andorra	Greece	Netherlands
Australia	Holy See	New Zealand
Austria	Iceland	Norway
Belgium	Ireland	Portugal
Canada	Israel	San Marino
Denmark	Italy	South Africa
Faeroe Islands	Japan	Spain
Finland	Liechtenstein	Sweden
France	Luxembourg	Switzerland
Germany	Malta	United Kingdom
Gibraltar	Monaco	United States of America

#### Transition Economies

Albania	Fmr Yug. Rep. of Macedonia	Romania
Armenia	Georgia	Russian Federation
Azerbaijan	Hungary	Serbia and Montenegro
Belarus	Kazakhstan	Slovakia
Bosnia and Herzegovina	Kyrgyzstan	Slovenia
Bulgaria	Latvia	Tajikistan
Croatia	Lithuania	Turkmenistan
Czech Republic	Moldova, Republic of	Ukraine
Estonia	Poland	Uzbekistan

### **Developing Countries**

#### Latin America and Caribbean

Anguilla	Dominican Republic	Nicaragua
Antigua and Barbuda	Ecuador	Panama
Argentina	El Salvador	Paraguay
Aruba	Falkland Islands	Peru
Bahamas	French Guiana	Puerto Rico
Barbados	Grenada	St. Kitts and Nevis
Belize	Guadeloupe	St. Lucia
Bolivia	Guatemala	St. Vincent/Grenadines
Brazil	Guyana	Suriname
British Virgin Islands	Haiti	Trinidad and Tobago
Cayman Islands	Honduras	Turks and Caicos Islands
Chile	Jamaica	Uruguay
Colombia	Martinique	US Virgin Islands
Costa Rica	Mexico	Venezuela
Cuba	Montserrat	
Dominica	Netherlands Antilles	

#### Near East and North Africa

Afghanistan	Egypt	Kuwait
Algeria	Iran, Islamic Republic of	Lebanon
Bahrain	Iraq	Libyan Arab Jamahiriya
Cyprus	Jordan	Morocco

Oman  
Palestinian, O. T.  
Qatar

Saudi Arabia  
Syrian Arab Republic  
Tunisia

Turkey  
United Arab Emirates  
Yemen

#### Sub-Saharan Africa

Angola  
Benin  
Botswana  
British Indian Ocean Terr.  
Burkina Faso  
Burundi  
Cameroon  
Cape Verde  
Central African Republic  
Chad  
Comoros  
Congo, Dem. Republic of  
Congo, Republic of  
Côte d'Ivoire  
Djibouti  
Equatorial Guinea  
Eritrea

Ethiopia  
Gabon  
Gambia  
Ghana  
Guinea  
Guinea-Bissau  
Kenya  
Lesotho  
Liberia  
Madagascar  
Malawi  
Mali  
Mauritania  
Mauritius  
Mozambique  
Namibia  
Niger

Nigeria  
Réunion  
Rwanda  
Sao Tome and Principe  
Senegal  
Seychelles  
Sierra Leone  
Somalia  
St. Helena  
Sudan  
Swaziland  
Tanzania, United Republic of  
Togo  
Uganda  
Western Sahara  
Zambia  
Zimbabwe

#### East and Southeast Asia

Brunei Darussalam  
Cambodia  
China  
Indonesia  
Korea, Dem. People's Republic

Korea, Republic of  
Laos  
Malaysia  
Mongolia  
Myanmar

Philippines  
Singapore  
Thailand  
Timor-Leste  
Viet Nam

#### South Asia

Bangladesh  
India  
Nepal

Sri Lanka  
Bhutan  
Maldives

Pakistan

#### Oceania, developing

American Samoa  
Canton and Enderbury Islands  
Christmas Island  
Cocos Islands  
Cook Islands  
Fiji Islands  
French Polynesia  
Guam  
Johnston Island  
Kiribati  
Marshall Islands

Micronesia, Federal States of  
Midway Islands  
Nauru  
New Caledonia  
Niue Island  
Norfolk Island  
Northern Mariana Islands  
Pacific Islands (Trust Terr.)  
Palau  
Papua New Guinea  
Pitcairn Island

Samoa  
Solomon Islands  
Tokelau  
Tonga  
Tuvalu  
US Minor Islands  
Vanuatu  
Wake Island  
Wallis and Futuna Islands

#### North America, developing

Bermuda

Greenland

St. Pierre et Miquelon

## Continental Groupings

### Africa

Algeria	Ethiopia	Nigeria
Angola	Gabon	Réunion
Benin	Gambia	Rwanda
Botswana	Ghana	Sao Tome and Principe
British Indian Ocean Terr.	Guinea	Senegal
Burkina Faso	Guinea-Bissau	Seychelles
Burundi	Kenya	Sierra Leone
Cameroon	Lesotho	Somalia
Cape Verde	Liberia	South Africa
Central African Republic	Libyan Arab Jamahiryia	St. Helena
Chad	Madagascar	Sudan
Comoros	Malawi	Swaziland
Congo, Dem. Republic of	Mali	Tanzania, United Republic of
Congo, Republic of	Mauritania	Togo
Côte d'Ivoire	Mauritius	Tunisia
Djibouti	Morocco	Uganda
Egypt	Mozambique	Western Sahara
Equatorial Guinea	Namibia	Zambia
Eritrea	Niger	Zimbabwe

### Asia

Afghanistan	Japan	Pakistan
Armenia	Jordan	Philippines
Azerbaijan	Kazakhstan	Qatar
Bahrain	Korea, Dem. People's Republic	Saudi Arabia
Bangladesh	Korea, Republic of	Singapore
Bhutan	Kuwait	Sri Lanka
Brunei Darussalam	Kyrgyzstan	Syrian Arab Republic
Cambodia	Laos	Tajikistan
China	Lebanon	Thailand
Cyprus	Malaysia	Timor-Leste
Georgia	Maldives	Turkey
India	Mongolia	Turkmenistan
Indonesia	Myanmar	United Arab Emirates
Iran, Islamic Republic of	Nepal	Uzbekistan
Iraq	Oman	Viet Nam
Israel	Palestinian, O. T.	Yemen

### Latin America

Argentina	El Salvador	Panama
Belize	Falkland Islands	Paraguay
Bolivia	French Guiana	Peru
Brazil	Guatemala	Suriname
Chile	Guyana	Uruguay
Colombia	Honduras	Venezuela
Costa Rica	Mexico	
Ecuador	Nicaragua	

### Caribbean

Anguilla	Bahamas	Cayman Islands
Antigua and Barbuda	Barbados	Cuba
Aruba	British Virgin Islands	Dominica

Dominican Republic  
Grenada  
Guadeloupe  
Haiti  
Jamaica

Martinique  
Montserrat  
Netherlands Antilles  
Puerto Rico  
St. Kitts and Nevis

St. Lucia  
St. Vincent/Grenadines  
Trinidad and Tobago  
Turks and Caicos Islands  
US Virgin Islands

### North America

Bermuda  
Canada

Greenland  
St. Pierre et Miquelon

United States of America

### Oceania

American Samoa  
Australia  
Canton and Enderbury Islands  
Christmas Island  
Cocos Islands  
Cook Islands  
Fiji Islands  
French Polynesia  
Guam  
Johnston Island  
Kiribati

Marshall Islands  
Micronesia, Federal States of  
Midway Islands  
Nauru  
New Caledonia  
New Zealand  
Niue Island  
Norfolk Island  
Northern Mariana Islands  
Pacific Islands (Trust Terr.)  
Palau

Papua New Guinea  
Pitcairn Island  
Samoa  
Solomon Islands  
Tokelau  
Tonga  
Tuvalu  
US Minor Islands  
Vanuatu  
Wake Island  
Wallis and Futuna Islands

### Europe

Albania  
Andorra  
Austria  
Belarus  
Belgium  
Bosnia and Herzegovina  
Bulgaria  
Croatia  
Czech Republic  
Denmark  
Estonia  
Faeroe Islands  
Finland  
Former Yug. Republic of  
Macedonia  
France

Germany  
Gibraltar  
Greece  
Holy See  
Hungary  
Iceland  
Ireland  
Italy  
Latvia  
Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Moldova, Republic of  
Monaco  
Netherlands

Norway  
Poland  
Portugal  
Romania  
Russian Federation  
San Marino  
Serbia and Montenegro  
Slovakia  
Slovenia  
Spain  
Sweden  
Switzerland  
United Kingdom  
Ukraine



## **Annex IV: Concepts and Definitions**

### **Macroeconomic**

#### Agriculture, value added

Agriculture corresponds to the International Standard Industrial Classification (ISIC) divisions 1-5 and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production. Value added is the net output of the sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by ISIC, revision 3. Data are in current U.S. dollars.

#### Gross National Income (GNI) per caput, Atlas method

GNI per caput (formerly Gross National Product (GNP) per caput) is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. GNI, which is originally calculated in national currency, is usually converted to U.S. dollars at official exchange rates for comparisons across economies, although an alternative rate is used when the official exchange rate is judged to diverge by an exceptionally large margin from the rate actually applied in international transactions. To smooth fluctuations in prices and exchange rates, a special Atlas method of conversion is used by the World Bank. This applies a conversion factor that averages the exchange rate for a given year and the two preceding years, adjusted for differences in rates of inflation between the country, and through 2000, the G-5 countries (France, Germany, Japan, United Kingdom, and United States). From 2001, these countries include the Euro Zone, Japan, the United Kingdom, and the United States.

#### Gross Capital Formation

Gross capital formation (formerly gross domestic investment) consists of outlays on additions to the fixed assets of the economy plus net changes in the level of inventories. Fixed assets include land improvements (fences, ditches, drains, and so on); plant, machinery, and equipment purchases; and the construction of roads, railways, and the like, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Inventories are stocks of goods held by firms to meet temporary or unexpected fluctuations in production or sales, and "work in progress". According to the 1993 SNA, net acquisitions of valuables are also considered capital formation. Data are in current U. S. dollars.

#### Gross Domestic Product (GDP)

GDP at purchaser prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U. S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

## **External Assistance to Agriculture**

### External Assistance to Agriculture (EAA)

EAA refers to the concessional and non-concessional commitments made by bilateral and multilateral donors to developing countries and countries in transition for the development of agriculture in a broad sense which includes: land and water; research, training and extension; inputs; agricultural services; crop production; livestock; fisheries; forestry; agriculture (others, not elsewhere specified); environment protection; rural development/infrastructure; manufacturing of inputs; regional and river development; and agro-industries.

#### *Concessional and non-concessional*

If the commitment has a grant element not less than 25% it is considered as concessional otherwise it is considered as non-concessional.

#### *Multilateral*

Multilateral commitments are those made through an institution which:

- conducts all or part of its activities in favour of development;
- is an international agency, institution or organization whose members are Governments or a fund managed autonomously by such an agency; and
- pools funds so that they lose their identity and become an integral part of its financial assets.

#### *Bilateral*

Bilateral commitments are those where the donor effectively controls the disposal of the funds by specifying the recipient or other aspects of the disbursement (e.g. purpose, terms, total amount and re-use of any repayments).

#### *Total Assistance*

This represents total official commitments (bilateral and multilateral, concessional and non-concessional) to aid recipients (developing countries and countries in transition) at current prices.

### Government Expenditure

Government expenditure refers to all non-repayable payments, whether capital or current, required or not by government. Expenditures are shown by function or purpose at different levels of government administration - Central Government; State, Region or Province; and local governments. The data given in this document refer to the share of expenditure on agriculture, forestry, fishery and hunting (function) in the total government expenditure.

### Gross Fixed Investment

This refers to total annual average investment in fixed assets excluding working capital.

## **Population**

### Agricultural Population

This refers to all persons whose livelihood depends on agriculture. It comprises all persons actively assisting in the operation of family farms or businesses, whether as employers, own-account workers, salaried employees or unpaid workers and their non-working dependants.

### Economically Active Population (total labour force)

This refers to all employed and unemployed persons (including those seeking work for the first time). It covers employers; self-employed workers; salaried employees; wage earners; unpaid workers assisting in a family, farm or business operation; members of producers' cooperatives; and members of the armed forces.

### Economically Active Population in Agriculture (agricultural labour force)

The economically active population in agriculture is that part of the economically active population engaged in or seeking work in agriculture, hunting, fishing or forestry.

### Rural Population

This refers to the population residing in rural areas.. Usually the urban areas and hence the urban population are defined and the residual is taken as rural. In practice, the criteria adopted for distinguishing between urban and rural areas vary among countries. However, these criteria can be roughly divided into three major groups: classification of localities of a certain size as urban; classification of administrative centres of minor civil divisions as urban; and classification of centres of minor civil divisions on a chosen criterion which may include type of local government, number of inhabitants or proportion of population engaged in agriculture.

### Total Population

Generally refers to the present-in-area (de facto) population within the present national boundaries.

## **Land**

### Arable Land

Arable land refers to land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens and land temporarily fallow (less than five years). This category of land does not include abandoned land resulting from shifting cultivation. "Arable land" is not meant to indicate the amount of land that is potentially cultivable.

### Forest Cover Land

Land with tree crown cover (or equivalent stocking level) of more than 10% and area of more than 0.5 ha. The trees should be able to reach a minimum height of 5 m at maturity in situ. This may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground; or open forest formations with a continuous vegetation cover in which tree crown cover exceeds 10%. Young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10% or tree height of 5 m are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention or natural

causes but which are expected to revert to forest. These include: forest nurseries and seed orchards that constitute an integral part of the forest; forest roads, cleared tracts, firebreaks and other small open areas; forests in national parks, nature reserves and other protected areas such as those of specific scientific, historical, cultural or spiritual interest; windbreaks and shelterbelts of trees with an area of more than 0.5 ha and width of more than 20 m; plantations primarily used for forestry purposes, including rubberwood plantations and cork oak stands. Excludes: land predominantly used for agricultural practices

#### Land Area

Total country area, excluding area under inland water bodies. The definition of inland water bodies generally includes major rivers and lakes.

#### Land Availability

This refers to arable land plus land under permanent crops.

#### Land under Permanent Crops

Land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee and rubber. This category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land under trees grown for wood or timber.

#### Total Area

The total area of the country, including area under inland water bodies.

### **Agricultural Inputs**

#### Agricultural Tractors and Threshers/Harvesters

Agricultural tractors generally refer to wheel and crawler tractors (excluding garden tractors) used in agriculture. Harvester and threshers refer to self-propelled machines that reap and thresh in one operation.

#### Fertilizer Consumption

Fertilizer consumption refers to the total amount of fertilizers used. This is obtained by adding the volumes of nitrogenous, phosphate and potash fertilizers expressed in terms of plant nutrients (N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O). The time reference for fertilizer consumption is the crop year (July through June).

#### Fertilizer Production

Fertilizer production includes nitrogenous, phosphate and potash fertilizers. Production based on imported ammonia, phosphoric acid or rock phosphate is considered as national production, while that based on imported finished fertilizers (ammonium phosphate, potassium chloride, etc.) is excluded from national production to avoid double counting at the World level.

#### Pesticides

Pesticides refers to insecticides, fungicides, herbicides, disinfectants and any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals during the production, storage, transport, distribution,

and processing of food, agricultural commodities, or animal feeds of which may be administered to animals for the control of ectoparasites.

#### Pesticides Production

This refers to the total industrial production of each type of pesticide within the national boundaries of each country during the reference period .

#### Pesticides Trade

Refers to the value of all types of pesticides provided to (exports) or received (imported) from the rest of the world. Differences between figures given for total exports and total imports at the world level may be due to several factors, e.g. the time lag between the dispatch of goods from exporting country and their arrival in the importing country; the use of different classification of the same product by different countries; or the fact that some countries supply data on general trade while others give data on special trade.

### **Water Resources and Irrigation**

#### Freshwater Availability (internal renewable freshwater resources)

Refers to the average annual flow of rivers and groundwater generated from endogenous precipitation.

#### Irrigated Land

This refers to the areas equipped to provide water to crops. It includes areas equipped for full or partial control irrigation, spate irrigation areas, and equipped wetland or inland valley bottoms. It should be noted that definitions on irrigation vary between countries.

### **Agricultural Production and Trade**

#### Agricultural Production

This refers to the aggregate volume of agricultural production in the narrow sense, i.e. excluding fishery and forestry products. In order to obtain these figures the aggregate production quantities of each agricultural commodity are weighted by 1999-2001 average international commodity prices and then summed for each year. When calculating the aggregates, all intermediate primary inputs of agricultural origin are deducted. In other words, amounts of seed and feed are subtracted from the production data in order to avoid double counting. Processed and semi-processed commodities such as bran, oilcakes, meals and molasses have been completely excluded from the calculations at all stages. The "international prices", expressed in so-called "international dollars", are derived using the Geary-Khamis formula for the agricultural sector. This method assigns a single producer price to each commodity. For example, one metric ton of wheat has the same price regardless of the country in which it was produced. The currency unit in which the prices are expressed has no influence on the indices.

#### Crop Production

Crop production refers to the actual harvested production from the field or orchard and gardens, excluding harvesting losses and that part of crop not harvested for any reason. Crop production therefore includes the quantities of the commodity sold in the market and the quantities consumed or used by the producers. The time reference for statistics on production of crops is based on the calendar year. That is to say, the data for any particular crop are reported under the calendar year in which the entire harvest or bulk of it took place.

### Food Production

The food production aggregate includes the commodities that are considered edible and that contain nutrients. Accordingly, coffee and tea are excluded along with inedible commodities, as, although edible, they have practically no nutritive value.

### Meat Production

The meat production aggregate is computed based on data for production from indigenous animals, which takes account of the meat equivalent of exported live animals but excludes the meat equivalent of imported live animals. Annual changes in livestock and poultry numbers or in their average live weights are not taken into account.

### Agricultural Trade

This refers to imports and exports pertaining to agriculture in the narrow sense, excluding fishery and forestry products. Differences between figures given for total cereal exports and total cereal imports at the world level may be due to several factors, e.g. the time lag between the dispatch of goods from one exporting country and their arrival in the importing country; the use of different classifications of the same product by different countries; or the fact that some countries supply data on general trade while others give data on special trade.

### Total Merchandise Trade

This refers to total imports and total exports of merchandise. In general, export values are f.o.b. (free on board) and import values are c.i.f. (cost, insurance and freight).

## **Forestry Production and Trade**

### Roundwood

Roundwood (wood in the rough) is wood in its natural state as felled, or otherwise harvested, with or without bark, round, split, roughly squared or other forms (e.g. roots, stumps, burls, etc.). It may also be impregnated (e.g. telegraph poles) or roughly shaped or pointed. It comprises all wood obtained from removals, i.e. the quantities removed from forests and from trees outside the forest, including wood recovered from natural, felling and logging losses during the calendar year or forest year period. Commodities included are sawlogs and veneer logs, pulpwood, other industrial roundwood (including pitprops) and fuelwood. The statistics include recorded volumes, as well as estimated unrecorded volumes. Statistics for trade include, as well as roundwood from removals, the estimated roundwood equivalent of chips and particles, wood residues and charcoal.

## **Fishery Production and Trade**

### Aquaculture

The term aquaculture designates the culturing or farming (including harvesting) of aquatic organisms with some sort of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated. For statistical purposes, aquatic organisms harvested by an individual or corporate body which has owned them throughout their rearing period, contribute to aquaculture. Data refer to the output from aquaculture activities designated for final harvest for consumption or other purposes. Data cover fish, molluscs, crustaceans and aquatic organisms, farmed in fresh, brackish and marine waters. Statistics are reported on live weight equivalent and exclude aquatic plants.

### Capture Fisheries (nominal catches concept)

Capture fisheries refer to hunting, collecting and gathering activities directed at removing or collecting live wild aquatic organisms. Data shown refer to nominal catches of fish, crustaceans, molluscs and other aquatic organisms taken for all purposes (commercial, industrial, recreational and subsistence purposes) by all types and classes of fishing units (fishermen, vessels, gear, etc.) operating both in inland, fresh and brackish water areas, and in inshore, offshore and high seas fishing areas. Data exclude aquatic mammals, crocodiles, corals, sponges, shells, pearls and aquatic plants.

The nominal catches concept refers to the landings converted on a live weight basis. Landings refer to the quantities on a landed weight basis. In many fisheries the landed quantities (landings) are identical to the quantities caught (nominal catches). In many other instances the catches on board of fishing vessels or factory ships are gutted, eviscerated, filleted, salted, dried, etc., or reduced to meals and oil. These data require conversion by accurate conversion factors to establish the live weight equivalents (nominal catches) at the time of their capture.

The flag of the vessel performing the essential part of the operation of catching the fish should be considered as the paramount indication of the nationality to be assigned to the catch data. National data cover all quantities caught by fishing crafts flying the flag of the reporting country and landed not only in the domestic harbours of the reporting country but also in foreign harbours. National catch excludes quantities caught by foreign fishing craft and landed in domestic ports.

### Exports and Imports of Fish and Fishery Products

Statistics refer to the values of fisheries commodities imported or exported (including re-exports when applicable). The commodity categories cover products derived from fish production (capture and aquaculture) of fish, crustaceans, molluscs and other aquatic animals, excluding products obtained from aquatic mammals, crocodiles, corals, sponges, shells, pearls and aquatic plants. In general, export values are f.o.b. (free on board) and import values are c.i.f. (cost, insurance and freight). In accordance with the internationally recommended practice, import statistics include fish caught by foreign fishing craft, whether or not processed on board, be landed in domestic ports; export statistics include fish caught by domestic fishing craft, whether or not processed on board or landed in foreign ports.

The totals for the world, developed and developing countries, continents, and regions, are obtained by adding up the imports or exports of each country included in the various groups irrespective of origin or destination of the commodity. Consequently, these totals are by no means to be taken as net trade of the groups to which they refer. Furthermore, differences between figures given for total exports and total imports at the world level may be due to several factors, e.g. the time lapse between the dispatch of goods from the exporting country and their arrival in the importing country; the use of a different classification of the same product by different countries; or the fact that some countries supply trade data on general trade, while others give data on special trade. Two systems of recording trade are in common use (general trade and special trade), differing mainly in the treatment of recording the movement of goods through customs-bounded storage areas (warehouses, free areas, etc.).

### Fish Production

Refers to the aggregate production (capture and aquaculture combined) of freshwater, brackishwater and marine species of fish, crustaceans, molluscs and other aquatic

organisms taken for all commercial, industrial, recreational and subsistence purposes. Data exclude aquatic mammals, crocodiles, corals, sponges, shells, pearls and aquatic plants. Data are expressed in live weight equivalent: that is the weight of fish and shellfish at the time of their capture or harvest.

### Fish Utilization

#### *Human consumption*

Refers to total fish available for human consumption derived through the food balance sheet, for fish by the following equation:

Production, less reduction to meal and other non-food uses, plus imports, less exports, plus or less variation in stocks.

The calculations are made in terms of live weight equivalent.

#### *Other purposes*

Includes utilization of aquatic products for reduction to meal and oil, for feed and bait, ornamental purposes, withdrawals from markets and any one other non-food use of fish production (e.g. fertilizers, medical uses).

### **Food and Nutrition**

#### Food Aid Received

This refers to food aid shipments which represent a transfer of food commodities from donor to recipient countries on a total-grant basis or on highly concessional terms. A food aid shipment record contains information on the year of shipment, donor, recipient, commodity and quantity in terms of thousand metric tons.

Cereal food aid shipments are reported on a global trade year basis (July/June). The series starts from 1970/71. Processed and blended cereals are converted into their grain equivalent by applying the conversion factors included in the Rule of Procedures under the 1999 Food Aid Convention to facilitate comparisons between deliveries of different commodities.

#### Food Availability

This refers to the amount of food available for human consumption as estimated by the FAO Food Balance Sheets (FBS). The FBS are compiled every year by FAO with country-level data on the production and trade of food commodities. Using these data and the available information on seed rates, waste coefficients, stock changes and types of utilization (feed, food, other uses), a supply/utilization account is prepared for each commodity in weight terms.

The food component of a commodity account, which is usually derived as a balancing item, refers to the total amount of the commodity available for human consumption during the year. Besides commodity-by-commodity information, the FAO FBS also provide total food availability estimates by aggregating the food component of all commodities including fishery products after conversion into nutritive values. From these values and the available population estimates, the per caput dietary energy and protein and fat supplies are derived and expressed on a daily basis.

The data shown for food availability refer to the dietary energy supply (DES) per caput/day, during the reference period, in kilocalories. However, the amount of food actually consumed



may be lower than the quantity shown as food availability depending on the degree of losses of edible food and nutrients in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, or thrown away.

### Undernourishment

Undernourishment refers to the condition of people whose dietary energy intake is below that needed for maintaining a healthy and active life. The undernourished refers to those in this condition.

The prevalence of undernourishment refers to the proportion of the population undernourished. The number of persons undernourished is obtained by multiplying estimates of the proportion of undernourished for each country by estimates of the total population

## Annex V: Technical Notes

### Calculation of average annual growth rates

*Tables 1.2 and 5.1- 5.2*

The growth rate in these tables is calculated by fitting a linear trend line, of the form

$$\ln X_t = a + bt$$

to the annual values of the variable X in the aggregate time series. The parameter  $b$  is estimated by the least-squares method and the percentage growth rate,  $r$ , is then derived as follows:

$$r = [\exp(b) - 1] \times 100$$

*Tables 2.1, 2.2, 11.2 – 11.5, 11.7*

In these tables the percentage growth rate,  $r$ , is calculated between two time points using the following formula:

$$r = \left[ \ln \left( \frac{p_n}{p_1} \right) / n \right] * 100$$

where  $p_n$  and  $p_1$  are the last and first observations in the period respectively,  $n$  is the number of years in the period, and  $\ln$  is the natural logarithm operator.

*Tables 5.4, 5.7 - 5.9, 5.10, 5.13, 5.16, 5.19, 5.22, 5.25, 5.28, 6.1, 6.2, 7.1 – 7.3, 7.8*

In these tables the percentage growth rate,  $r$ , is also calculated between two time points but using the following formula:

$$r = \left[ \left( \frac{p_n}{p_1} \right)^{\frac{1}{n}} - 1 \right] \times 100$$

where  $p_n$  and  $p_1$  are the last and first observations in the period respectively and  $n$  is the number of years in the period.

### Population and labour force estimates and projections

*Tables 2.1 – 2.3 and 9.1 – 9.5*

The population and labour force estimates and projections presented in these tables are based on the products of a coordinated inter-agency work programme involving the UN Population Division, the International Labour Organization (ILO) Bureau of Statistics and the FAO Statistics Division.

The basic framework for the set of demographic estimates and projections are the estimates and projections of the total population by sex and age, which are prepared by the UN

Population Division. The estimates and projections of urban/rural population, economically active population (labour force) and the agricultural population are obtained by systematically applying estimates and projections of the relevant population ratios (i.e. the proportion of urban/ rural population, the activity rates by sex and age and the proportion of agricultural population) to the total population. The economically active population in agriculture (agricultural labour force) is obtained by applying the estimates and projections of the proportion of economically active population in agriculture to the total economically active population

The estimates and projections of the total population are biennially revised by the UN Population Division and the figures in the present document are based on the 2002 revision (“World Population Prospects: The 2002 Revision”, United Nations, New York, 2003). The estimates and projections of the proportion of urban/rural population, which are also prepared by the UN Population Division, refer to the assessment made in 2003 (“World Population Prospects: The 2003 Revision”, United Nations, New York, 2004). The estimates and projections of the activity rates by sex and age, which are produced by the ILO Bureau of Statistics, are based on the assessment made in 1996 (“Economically Active Population, 1950 – 2010”, Fourth Edition, ILO, Geneva, 1996). The estimates of the proportion of the economically active population in agriculture also emanate from the latter assessment while the projections were prepared by the FAO Statistics Division (“World-wide Estimates and Projections of Agricultural Population and Labour Force”, FAO, Rome, 2000).

The estimates and projections of the proportion of the population dependent on agriculture (agricultural population) are also prepared by FAO. However, as information on agricultural population derived from population censuses or surveys is scarce, FAO has largely relied on the close relationship existing between the ratio of economically active population in agriculture (EAPA) to the total economically active population (EAP) and the ratio of agricultural population (AP) to total population (TP). For most countries the two ratios are assumed to be equal. Thus applying the EAPA/EAP ratio to the total population derives the agricultural population.

#### Estimation of the proportion of the population undernourished

*Table 8.3*

The estimation of the proportion of the population undernourished requires the specification of the distribution of food intake (expressed in terms of dietary energy) within the population and a cut-off point reflecting the minimum dietary energy requirement of the average individual. The part of the distribution below the cut-off point represents the proportion of the population undernourished.

The distribution of food intake in the population is assumed to be lognormal. This means that its parameters can be derived on the basis of the mean and the coefficient of variation of the household per caput food intake. Thus for the purpose of deriving the distribution for all countries at common time periods, the per caput dietary energy supply estimated through the food balance sheets is taken as a proxy for the mean. The coefficient of variation, which reflects the inequality in the distribution, is however estimated on the basis of household income/expenditure survey data. For countries where the appropriate household survey data are not available the coefficient of variation is estimated by certain indirect procedures. Given the mean and the coefficient of variation, the parameters of the lognormal distribution of food intake are estimated as follows:

$$\mu = \log_e \bar{x} - [\log_e \{CV^2(x) + 1\}] / 2$$

$$\sigma = [\log_e \{CV^2(x) + 1\}]^{0.5}$$

where  $\bar{x}$  and  $CV(x)$  are the mean and coefficient of variation respectively of the distribution of food intake.

Regarding the minimum dietary energy requirement used as the cut-off point, the procedure is to first specify the sex-age specific minimum requirements. These are then averaged, using the proportion of the population in the different sex-age groups as weight, to reflect the minimum energy requirement of the average individual in the population.

Thus if the cut-off point is denoted by  $r_L$  the proportion of the population undernourished is derived as follows:

$$P(u) = \Phi \{ (\log_e r_L - \mu) / \sigma \}$$

where the expression on the right hand side refers to the proportion below  $\log_e r_L$  in the normal distribution with mean  $\mu$  and standard deviation  $\sigma$ .

#### Selected Cereals Market Indicators (Global Food Security Indicators)

##### Table 8.6

FAO uses six indicators to monitor changes in Global Food Security. "Ratio of Five Major Grain Exporters' Supplies to Requirements" is used to monitor and assess the potential for the five major wheat and coarse grain exporters to meet the global import demand for those grains. The indicator is derived as the ratio of the sum of the five major exporter's production, imports and opening stocks to their total domestic utilization plus exports.

"Closing Stocks as a percentage of Total Disappearance of Major Cereal Exporters" is another measure of the exporters' potential to meet world import demand. In order to capture the supply and demand dynamics of the world trade, this indicator also includes rice along with coarse grains and wheat. It is derived as the ratio of the projected ending stocks in the major exporting countries to total disappearance (i.e. domestic consumption plus exports),

"Changes World in Cereal Production" measures changes in cereal production against the trend and the preceding year's value.

"Changes in Cereal Production in Low-income Food Deficit Countries (LIFDCs)" and "Changes in Cereal Production in LIFDCs less China and India", is on changes in aggregate cereal production of LIFDCs, which includes the countries most vulnerable to fluctuations in food supplies and international prices.

"Selected Cereal Price Indices" provides a comparison of export prices for the major cereals.