Tables

Table 1. 25 Largest Countries: GHG Emissions, Economy, and Population

A. Emissions (6 gases)			B. Gross Domestic Product			C. Population		
Country	$MtCO_2$ Equiv.	% of World	Country	GDP-PPP$ (billions)	% of World	Country	Millions	% of World
United States	6,928	20.6	EU-25	10,402	22.2	China	1,280	20.7
China	4,938	14.7	United States	9,965	21.3	India	1,049	16.9
EU-25	4,725	14.0	China	5,607	12.0	EU-25	454	7.3
Russia	1,915	5.7	Japan	3,285	7.0	United States	293	4.7
India	1,884	5.6	India	2,698	5.8	Indonesia	212	3.4
Japan	1,317	3.9	Germany	2,157	4.6	Brazil	174	2.8
Germany	1,009	3.0	France	1,552	3.3	Pakistan	145	2.3
Brazil	851	2.5	United Kingdom	1,489	3.2	Russia	144	2.3
Canada	680	2.0	Italy	1,468	3.1	*Bangladesh*	136	2.2
United Kingdom	654	1.9	Brazil	1,305	2.8	*Nigeria*	133	2.1
Italy	531	1.6	Russia	1,151	2.5	Japan	127	2.1
South Korea	521	1.5	Canada	901	1.9	Mexico	101	1.6
France	513	1.5	Mexico	873	1.9	Germany	82	1.3
Mexico	512	1.5	Spain	850	1.8	*Vietnam*	80	1.3
Indonesia	503	1.5	South Korea	789	1.7	*Philippines*	80	1.3
Australia	491	1.5	Indonesia	648	1.4	Turkey	70	1.1
Ukraine	482	1.4	Australia	536	1.1	*Ethiopia*	67	1.1
Iran	480	1.4	*Netherlands*	451	1.0	*Egypt*	66	1.1
South Africa	417	1.2	South Africa	442	0.9	Iran	66	1.1
Spain	381	1.1	Turkey	428	0.9	*Thailand*	62	1.0
Poland	381	1.1	*Thailand*	415	0.9	France	59	1.0
Turkey	355	1.1	Iran	411	0.9	United Kingdom	59	1.0
Saudi Arabia	341	1.0	Poland	394	0.8	Italy	58	0.9
Argentina	289	0.9	Argentina	389	0.8	*Congo, DR*	52	0.8
Pakistan	285	0.8	*Taiwan*	386	0.8	Ukraine	49	0.8
Rest of World	**5,751**	**16.9**	**Rest of World**	**6,195**	**13.2**	**Rest of World**	**1,361**	**22.0**

Notes: $MtCO_2$ eq. is millions of tons of carbon dioxide equivalent. Emissions exclude those from international bunker fuels and land-use change and forestry. Countries not among the top 25 absolute emitters are shown in italics. GHG data is from 2000; other data is from 2002. GDP is measured in terms of purchasing power parity (constant 2000 international dollars).

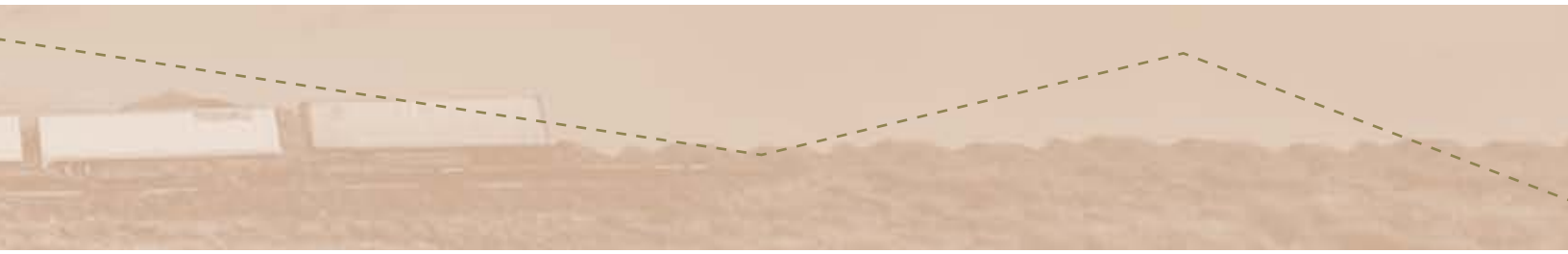

Table 2. Shares of National Emissions for Different Gas/Source Categories
Top 25 emitters, each category

	CO_2 from Fossil Fuels		CO_2 from Fossil Fuels, plus non-CO_2 GHGs		CO_2 from Fossil Fuels and Land-Use Change, plus non-CO_2 GHGs	
Country	**% of world**	**(Rank)**	**% of world**	**(Rank)**	**% of world**	**(Rank)**
United States	24.0	(1)	20.6	(1)	15.8	(1)
EU-25	15.9	(2)	14.0	(3)	11.4	(3)
China	14.4	(3)	14.7	(2)	11.9	(2)
Russia	6.4	(4)	5.7	(4)	4.8	(6)
Japan	5.0	(5)	3.9	(6)	3.2	(8)
India	4.4	(6)	5.6	(5)	4.5	(7)
Germany	3.6	(7)	3.0	(7)	2.5	(9)
United Kingdom	2.3	(8)	1.9	(10)	1.6	(12)
Canada	2.2	(9)	2.0	(9)	1.8	(11)
South Korea	1.9	(10)	1.6	(12)	1.3	(15)
Italy	1.9	(11)	1.6	(11)	1.3	(14)
Mexico	1.6	(12)	1.5	(14)	1.5	(13)
France	1.5	(13)	1.5	(13)	1.2	(17)
South Africa	1.5	(14)	1.2	(19)	1.0	(21)
Iran	1.4	(15)	1.4	(18)	1.2	(19)
Brazil	1.4	(16)	2.5	(8)	5.4	(5)
Australia	1.4	(17)	1.5	(16)	1.2	(18)
Ukraine	1.3	(18)	1.4	(17)	1.2	(20)
Spain	1.3	(19)	1.1	(20)	0.9	(26)
Poland	1.3	(20)	1.1	(21)	0.9	(24)
Indonesia	1.2	(21)	1.5	(15)	7.4	(4)
Saudi Arabia	1.2	(22)	1.0	(23)	0.8	(29)
Taiwan	0.9	(23)	0.7	(28)	0.6	(35)
Turkey	0.9	(24)	1.1	(22)	0.9	(25)
Thailand	0.7	(25)	0.8	(26)	0.8	(31)
Netherlands	0.7	(26)	0.6	(29)	0.5	(37)
Argentina	0.6	(27)	0.9	(24)	0.8	(28)
Venezuela	0.6	(28)	0.7	(27)	0.9	(23)
Malaysia	0.5	(34)	0.5	(33)	2.1	(10)
Pakistan	0.4	(35)	0.9	(25)	0.8	(30)
Myanmar	0.0	(94)	0.3	(48)	1.2	(16)
Developed	**59.0**		**51.9**		**41.4**	
Developing	**41.0**		**47.6**		**59.0**	

Note: Data is for 2000. CO_2 from fossil fuels includes CO_2 from the chemical process of cement manufacture. LUCF data not available for Ukraine and Taiwan. Countries not among the top 25 absolute emitters are shown in italics.

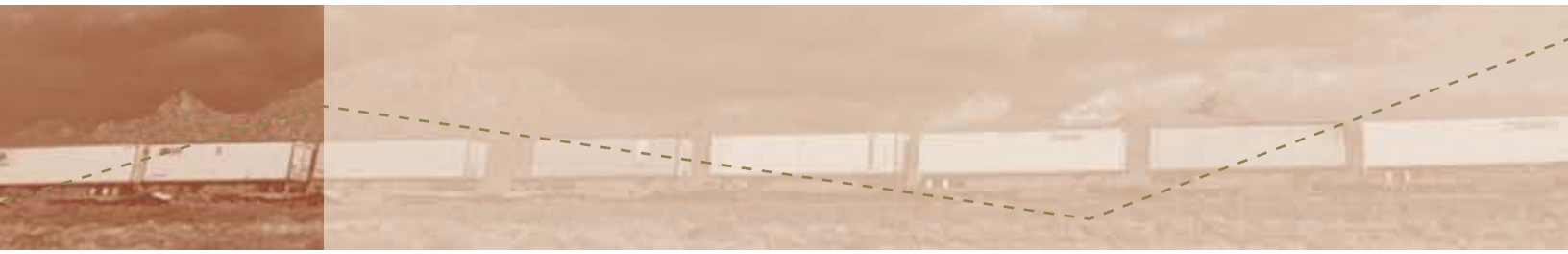

Table 3. Intensity Indicators and Trends, 2002

	Carbon Intensity		Energy Intensity		Fuel Mix	
Country	Tons of CO_2 / $mil. GDP-PPP	% change, 1990–2002	Tons of Oil Eq. / $mil. GDP-PPP	% change, 1990–2002	Tons of CO_2 / Ton of Oil Eq.	% change 1990–2002
Ukraine	1,368	-14	569	-1	2.40	-13
Russia	1,332	-15	537	-13	2.48	-3
Saudi Arabia	1,181	45	481	47	2.45	-1
Iran	899	17	326	19	2.76	-1
South Africa	823	-2	257	-2	3.21	-1
Poland	757	-43	226	-39	3.34	-7
China	675	-51	219	-54	3.08	7
South Korea	633	-2	258	10	2.45	-10
Australia	630	-16	210	-15	2.99	-1
United States	579	-17	230	-16	2.52	-1
Canada	575	-14	278	-15	2.07	0
Indonesia	513	22	241	1	2.13	20
Turkey	489	-2	176	0	2.78	-2
Mexico	453	-9	180	-10	2.52	1
India	410	-9	200	-21	2.05	16
Germany	400	-29	161	-20	2.49	-10
Pakistan	382	4	234	-2	1.63	6
Spain	381	5	155	6	2.46	-1
EU-25	374	-23	163	-13	2.30	-11
Japan	369	-6	157	0	2.35	-6
United Kingdom	363	-29	152	-19	2.39	-12
Argentina	319	-18	145	-8	2.20	-11
Italy	306	-10	118	-5	2.60	-5
Brazil	263	17	146	6	1.80	10
France	244	-19	171	-6	1.43	-14
Developed	**511**	**-23**	**212**	**3**	**2.41**	**-4**
Developing	**549**	**-12**	**224**	**-10**	**2.47**	**5**
World	**529**	**-15**	**218**	**-13**	**2.43**	**-2**

Notes: For Russia and Ukraine, figures cover the 1992–2002 period, due to lack of energy data in 1990. CO_2 excludes land use change and forestry and international bunker fuels. "GDP-PPP" is gross domestic product measured in terms of purchasing power parity (constant 2000 international dollars).

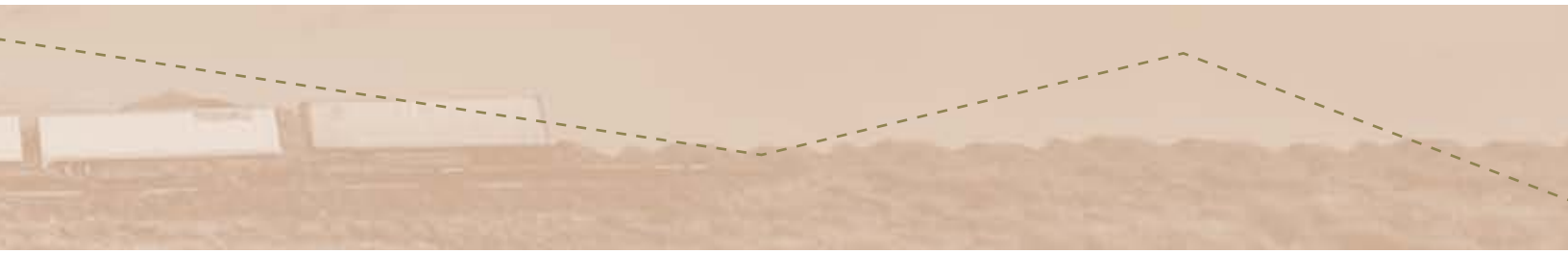

Table 4. Indicators of Historical Contributions to Climate Change, 1850–2002
CO_2 from fossil fuels & cement manufacture

	% of World (Rank)						
Country	**Cumulative**		**Concentration Increase**		**Temperature Increase**		**% change, cum. v. temp**
United States	29.3	(1)	27.8	(1)	29.0	(1)	-1
EU-25	26.5	(2)	23.8	(2)	26.0	(2)	-2
Russian Federation	8.1	(3)	8.3	(4)	8.5	(3)	5
China	7.6	(4)	9.0	(3)	7.5	(4)	0
Germany	7.3	(5)	6.4	(5)	7.1	(5)	-2
United Kingdom	6.3	(6)	5.0	(6)	5.9	(6)	-6
Japan	4.1	(7)	4.4	(7)	4.2	(7)	2
France	2.9	(8)	2.6	(8)	2.8	(8)	-2
India	2.2	(9)	2.5	(9)	2.1	(11)	-3
Ukraine	2.2	(10)	2.2	(10)	2.3	(9)	6
Canada	2.1	(11)	2.2	(11)	2.2	(10)	0
Poland	2.1	(12)	1.9	(12)	2.1	(12)	1
Italy	1.6	(13)	1.7	(13)	1.7	(13)	2
South Africa	1.2	(14)	1.2	(14)	1.2	(14)	1
Australia	1.1	(15)	1.1	(16)	1.1	(15)	0
Mexico	1.0	(16)	1.1	(15)	1.0	(16)	1
Spain	0.9	(20)	1.0	(17)	0.9	(20)	1
Brazil	0.8	(22)	0.9	(19)	0.8	(22)	0
South Korea	0.8	(23)	1.0	(18)	0.7	(23)	-4
Iran	0.6	(24)	0.8	(24)	0.6	(25)	-2
Indonesia	0.5	(27)	0.6	(25)	0.5	(28)	-6
Saudi Arabia	0.5	(28)	0.6	(26)	0.5	(29)	-2
Argentina	0.5	(29)	0.5	(30)	0.5	(27)	2
Turkey	0.4	(31)	0.5	(29)	0.4	(31)	-2
Pakistan	0.2	(48)	0.2	(45)	0.2	(50)	0
Developed	**75.6**		**72.0**		**75.6**		**0**
Developing	**24.4**		**28.0**		**24.4**		**0**

Notes: For information on methodologies, see WRI, 2005b.

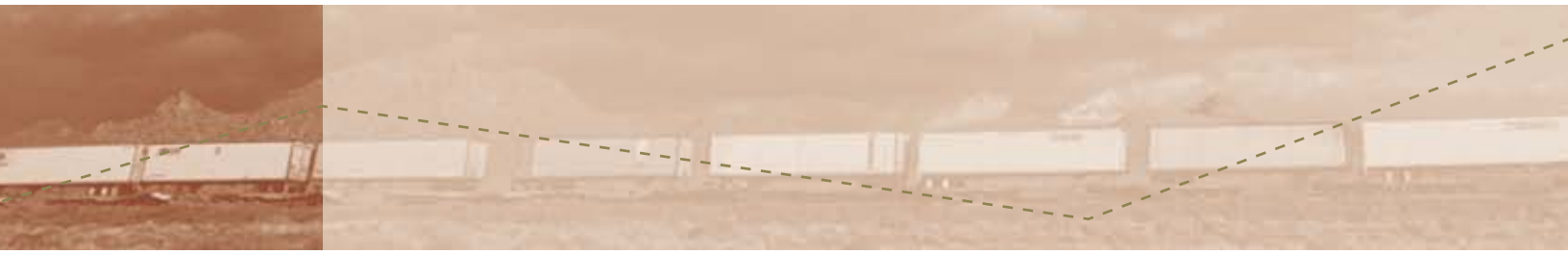

Table 5. Cumulative Emissions and LUCF, 1950–2000
Effect of including land use change & forestry emissions

	% of World (Rank)				
Country	**CO_2 from Fossil Fuels**		**CO_2 from Fossil Fuels & Land Use Change**		**% Change**
United States	26.6	(1)	16.7	(1)	-37
EU-25	22.0	(2)	15.8	(2)	-28
Russia	9.6	(3)	8.1	(4)	-15
China	9.0	(4)	9.9	(3)	11
Germany	5.9	(5)	4.3	(7)	-28
Japan	4.7	(6)	3.8	(8)	-19
United Kingdom	3.7	(7)	2.7	(9)	-28
Ukraine	2.6	(8)	1.9	(12)	-28
India	2.3	(9)	1.6	(14)	-33
France	2.3	(10)	1.7	(13)	-28
Canada	2.2	(11)	2.0	(10)	-7
Poland	2.0	(12)	1.4	(15)	-28
Italy	1.8	(13)	1.3	(16)	-28
South Africa	1.3	(14)	0.9	(21)	-28
Mexico	1.2	(15)	1.2	(17)	5
Australia	1.2	(16)	0.9	(20)	-18
Spain	1.0	(18)	0.7	(26)	-29
Brazil	0.9	(19)	6.1	(6)	560
South Korea	0.9	(20)	0.7	(25)	-20
Iran	0.8	(23)	0.6	(32)	-21
Saudi Arabia	0.6	(27)	0.4	(38)	-28
Indonesia	0.6	(28)	7.2	(5)	1,165
Argentina	0.6	(29)	0.6	(28)	11
Turkey	0.5	(31)	0.5	(36)	-4
Pakistan	0.2	(46)	0.3	(48)	22
Developed	**71.4**		**51.4**		**-28**
Developing	**28.6**		**48.6**		**70**

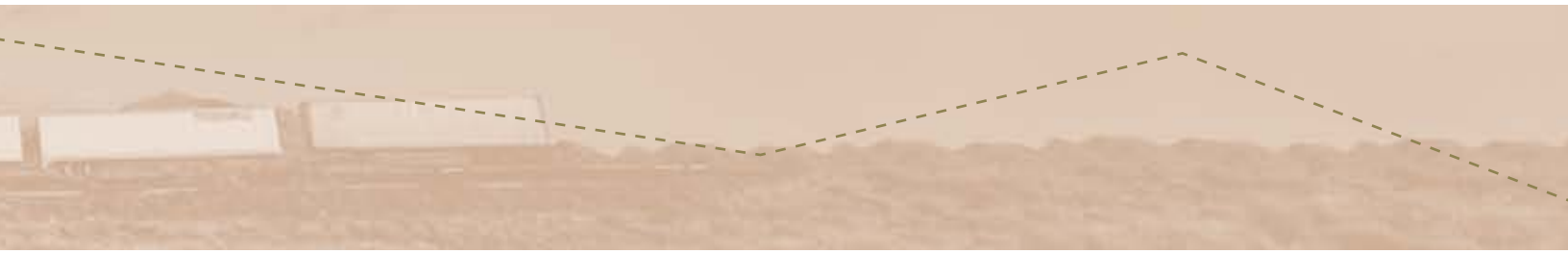

Table 6. Cumulative Emissions and Time Periods
Effect of altering the time period of analysis

	Cumulative CO_2 Emissions from Fossil Fuels				
	% of World (Rank)				
Country	**1850–2002**		**1990–2002**		**% change**
United States	29.3	(1)	23.5	(1)	-20
EU-25	26.5	(2)	17.0	(2)	-36
Russia	8.1	(3)	7.5	(4)	-8
China	7.6	(4)	13.9	(3)	83
Germany	7.3	(5)	4.0	(6)	-46
United Kingdom	6.3	(6)	2.5	(8)	-61
Japan	4.1	(7)	5.2	(5)	26
France	2.9	(8)	1.6	(13)	-44
India	2.2	(9)	3.9	(7)	79
Ukraine	2.2	(10)	1.9	(10)	-12
Canada	2.1	(11)	2.1	(9)	-3
Poland	2.1	(12)	1.5	(15)	-28
Italy	1.6	(13)	1.9	(11)	17
South Africa	1.2	(14)	1.5	(16)	26
Australia	1.1	(15)	1.3	(17)	24
Mexico	1.0	(16)	1.6	(14)	56
Spain	0.9	(20)	1.2	(20)	31
Brazil	0.8	(22)	1.3	(18)	58
South Korea	0.8	(23)	1.7	(12)	127
Iran	0.6	(24)	1.2	(19)	92
Indonesia	0.5	(27)	1.1	(21)	110
Saudi Arabia	0.5	(28)	1.1	(22)	116
Argentina	0.5	(29)	0.6	(30)	16
Turkey	0.4	(31)	0.8	(24)	82
Pakistan	0.2	(48)	0.4	(36)	105
Industrialized	**75.6**		**60.8**		**-20**
Developing	**24.4**		**39.2**		**61**

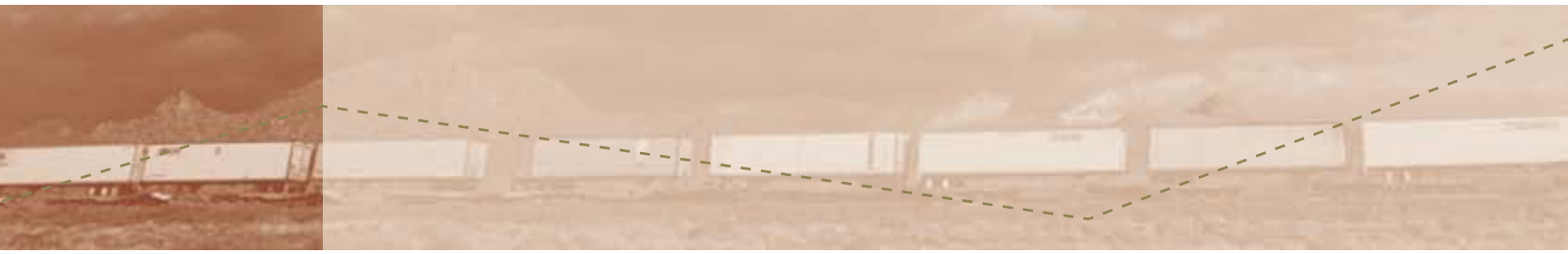

Table 7. Health, Education, and Governance Indicators, 2002
Top 25 GHG emitting countries

Country	Life Expectancy Years	(Rank)	Adult Literacy % of Pop.	(Rank)	Governance Index 0-100 Index	(Rank)
Canada	79	(4)	99	(1)	92	(11)
Australia	79	(6)	99	(1)	92	(10)
Japan	82	(1)	99	(1)	79	(26)
France	79	(9)	99	(1)	83	(20)
Germany	78	(18)	99	(1)	90	(14)
United Kingdom	78	(21)	99	(1)	92	(12)
EU-25	78	(21)	99	(1)	84	(18)
United States	77	(28)	99	(1)	85	(17)
Spain	79	(5)	98	(50)	82	(23)
Italy	79	(11)	99	(45)	73	(30)
Poland	74	(49)	99	(1)	67	(40)
South Korea	75	(38)	98	(47)	66	(43)
Russia	67	(117)	99	(1)	48	(76)
Mexico	73	(56)	91	(91)	52	(72)
Argentina	74	(43)	97	(55)	33	(128)
Ukraine	70	(98)	99	(1)	33	(129)
China	71	(79)	91	(89)	40	(109)
Saudi Arabia	72	(68)	78	(124)	47	(90)
Brazil	68	(113)	86	(101)	49	(74)
Turkey	70	(87)	87	(99)	41	(106)
South Africa	49	(155)	86	(102)	59	(56)
Iran	70	(89)	77	(126)	29	(140)
Indonesia	67	(119)	88	(96)	26	(151)
India	64	(123)	61	(150)	44	(99)
Pakistan	61	(132)	42	(168)	26	(150)
World	**67**		**80**		**51**	

Sources & Notes: Life expectancy and literacy are from UNDP (2004) and governance is a composite index, based on Kaufmann et al. (2002), that captures six interrelated aspects of governance (e.g., political stability, regulatory quality, etc.). Countries are ordered according to their collective ratings of all three indicators (with the highest scoring at the top). The highest possible score here for literacy is 99 percent.

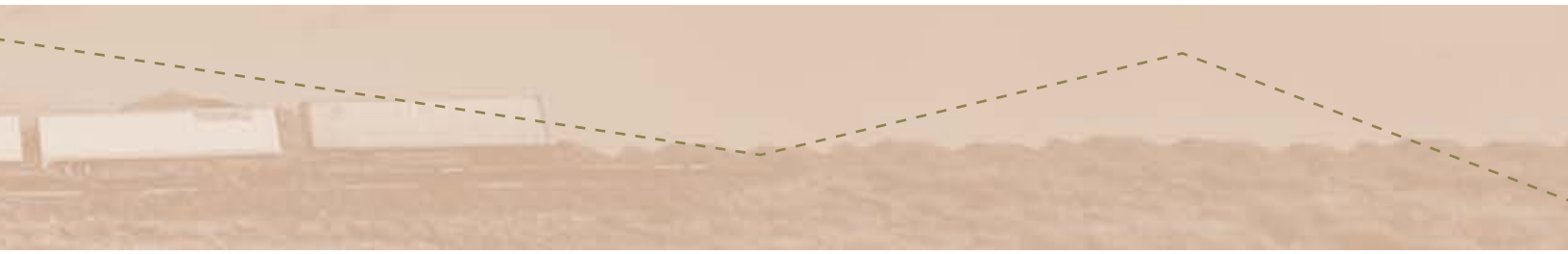

Table 8. Coal Consumption, Production, and Reserves, 2004

	Consumption			Production			Reserves
Country	**Mtoe**	**(Rank)**	**% World**	**Mtoe**	**(Rank)**	**% World**	**% World**
China	957	(1)	34.4	990	(1)	36.2	12.6
United States	564	(2)	20.3	567	(2)	20.8	27.1
EU-25	307	(3)	11.0	191	(4)	7.0	5.0
India	205	(4)	7.4	189	(5)	6.9	10.2
Japan	121	(5)	4.3	1	(32)	—	—
Russia	106	(6)	3.8	128	(7)	4.7	17.3
South Africa	95	(7)	5.0	137	(6)	5.0	5.4
Germany	86	(8)	3.1	55	(10)	2.0	0.7
Poland	58	(9)	2.1	70	(9)	2.6	1.5
Australia	54	(10)	2.0	199	(3)	7.3	8.6
South Korea	53	(11)	1.9	1	(30)	0.1	—
Ukraine	39	(12)	1.4	42	(12)	1.5	3.8
United Kingdom	38	(13)	1.4	15	(16)	0.6	—
Canada	31	(15)	1.1	35	(14)	1.3	0.7
Turkey	23	(17)	0.8	10	(18)	0.4	0.5
Indonesia	22	(18)	0.8	81	(8)	3.0	0.5
Spain	21	(19)	0.8	7	(21)	0.2	0.1
Italy	17	(21)	0.6	—	—	—	—
France	13	(22)	0.4	1	(33)	—	—
Brazil	11	(23)	0.4	2	(29)	0.1	1.1
Mexico	9	(27)	0.3	4	(25)	0.2	0.1
Pakistan	3	(39)	0.1	1	(31)	—	0.3
Iran	1	(47)	—	—	—	—	—
Argentina	1	(49)	—	—	—	—	—
Saudi Arabia	—	—	—	—	—	—	—
Rest of World	**176**		**6.3**	**154**		**5.6**	**6.8**
World	**2,778**			**2,732**			

Sources & Notes: BP, 2005. Mtoe = millions of tons of oil equivalent. "—" signifies no data, small, or zero values. EU-25 production and reserves figures are estimates, based on BP (2005).

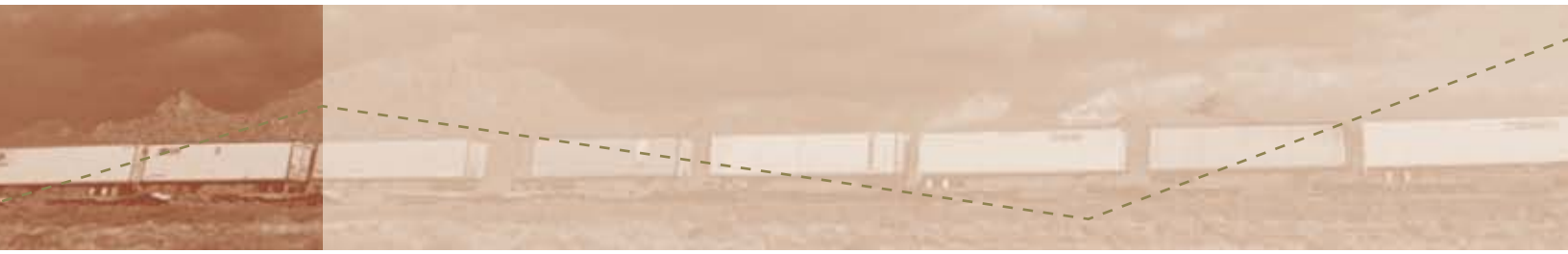

Table 9. Oil Consumption, Production, and Reserves, 2004

	Consumption			Production			Reserves
Country	**Mt**	**(Rank)**	**% World**	**Mt**	**(Rank)**	**% World**	**% World**
United States	938	(1)	24.9	330	(3)	8.5	2.5
EU-25	695	(2)	18.4	—	—	—	—
China	309	(3)	8.2	175	(6)	4.5	1.4
Japan	242	(4)	6.4	—	—	—	—
Russia	129	(5)	3.4	459	(2)	11.9	6.1
Germany	124	(6)	3.3	—	—	—	—
India	119	(7)	3.2	38	(24)	1.0	0.5
South Korea	105	(8)	2.8	—	—	—	—
Canada	100	(9)	2.6	148	(9)	3.8	1.4
France	94	(10)	2.5	—	—	—	—
Italy	90	(11)	2.4	5	(46)	0.1	0.1
Mexico	85	(12)	2.3	191	(5)	4.9	1.2
Brazil	84	(13)	2.2	76	(16)	2.0	0.9
United Kingdom	81	(14)	2.1	95	(14)	2.5	0.4
Saudi Arabia	80	(15)	2.1	506	(1)	13.1	22.1
Spain	78	(16)	2.1	—	—	—	—
Iran	73	(17)	1.9	203	(4)	5.2	11.1
Indonesia	55	(18)	1.5	55	(19)	1.4	0.4
Australia	39	(22)	1.0	23	(30)	0.6	—
Turkey	32	(25)	0.8	—	—	—	—
Venezuela	26	(27)	0.7	153	(7)	4.0	6.5
South Africa	25	(28)	0.7	—	—	—	—
Poland	21	(30)	0.6	—	—	—	—
Argentina	19	(32)	0.5	38	(25)	1.0	0.2
Ukraine	17	(33)	0.5	—	—	—	—
UAE	16	(36)	0.4	126	(10)	3.3	8.2
Pakistan	14	(40)	0.4	—	—	—	—
Kuwait	14	(39)	0.4	120	(12)	3.1	8.3
Algeria	11	(43)	0.3	83	(15)	2.1	1.0
Norway	10	(49)	0.3	150	(8)	3.9	0.8
Nigeria	—	—	—	122	(11)	3.2	3.0
Iraq	—	—	—	100	(13)	2.6	9.7
Libya	—	—	—	76	(17)	2.0	3.3
Rest of World	**534**		**14.2**	**698**		**18.1**	**88.7**
World	**3,767**			**3,868**			

Source & Sources: BP, 2005. Mt = millions of tons. "—" signifies no data, small, or zero values. Countries not among the top 25 absolute emitters are shown in italics, and are included here because their oil production accounts for at least 2% of the world total.

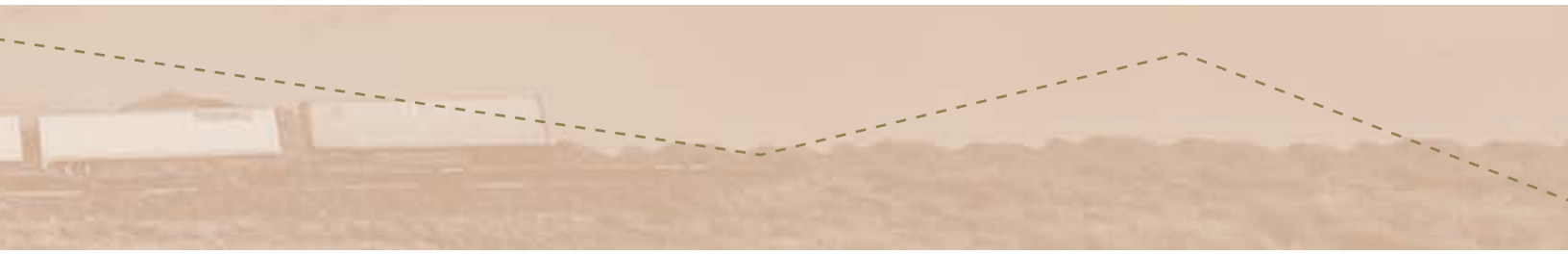

Table 10. Natural Gas Consumption, Production, and Reserves, 2004

	Consumption			Production			Reserves
Country	**Mtoe**	**(Rank)**	**% World**	**Mtoe**	**(Rank)**	**% World**	**% World**
United States	582	(1)	24.0	489	(2)	20.2	2.9
EU-25	420	(2)	17.4	194	(3)	8.0	1.5
Russia	362	(3)	15.0	530	(1)	21.9	26.7
United Kingdom	88	(4)	3.6	86	(5)	3.6	0.3
Canada	81	(5)	3.3	165	(4)	6.8	0.9
Iran	78	(6)	3.2	77	(6)	3.2	15.3
Germany	77	(7)	3.2	15	(31)	0.6	0.1
Italy	66	(8)	2.7	12	(34)	0.5	0.1
Japan	65	(9)	2.7	—	—	—	—
Ukraine	64	(10)	2.6	17	(29)	0.7	0.6
Saudi Arabia	58	(11)	2.4	58	(11)	2.4	3.8
Uzbekistan	44	(12)	1.8	50	(12)	2.1	1.0
Mexico	43	(13)	1.8	33	(19)	1.4	0.2
France	40	(14)	1.7	—	—	—	—
Netherlands	39	(15)	1.6	62	(10)	2.6	0.8
UAE	36	(16)	1.5	41	(15)	1.7	3.4
China	35	(17)	1.5	37	(17)	1.5	1.2
Argentina	34	(18)	1.4	40	(16)	1.7	0.3
Indonesia	30	(19)	1.3	66	(9)	2.7	1.4
Malaysia	30	(20)	1.2	49	(14)	2.0	1.4
India	29	(21)	1.2	27	(21)	1.1	0.5
South Korea	28	(22)	1.2	—	—	—	—
Venezuela	25	(24)	1.0	25	(22)	1.0	2.4
Spain	25	(25)	1.0	—	—	—	—
Pakistan	23	(27)	1.0	21	(25)	0.9	0.4
Australia	22	(28)	0.9	32	(20)	1.3	1.4
Turkey	20	(29)	0.8	—	—	—	—
Algeria	19	(30)	0.8	74	(7)	3.0	2.5
Brazil	17	(31)	0.7	10	(36)	0.4	0.2
Turkmenistan	14	(35)	0.6	49	(13)	2.0	1.6
Qatar	14	(37)	0.6	35	(18)	1.5	14.4
Poland	12	(39)	0.5	4	(46)	0.2	0.1
Norway	4	(51)	0.2	71	(8)	2.9	1.3
Nigeria	—	—	—	19	(26)	0.8	2.8
South Africa	—	—	—	—	—	—	—
Rest of World	**204**		**8.4**	**154**		**6.4**	**10.9**
World	**2,420**			**2,422**			

Sources & Notes: BP, 2005. Mtoe = millions of tons of oil equivalent. "—" signifies no data, small, or zero values. Countries not among the top 25 absolute emitters are shown in italics, and are included here because their gas production and/or reserves account for at least 2% of the world total.

Table 11. GHG Emissions From Agriculture, 2000

	Total Agriculture Emissions		$MtCO_2$ Equivalent		
Country	**$MtCO_2$ eq.**	**% World**	**CO_2**	**CH_4**	**N_2O**
China	1,097	18	88	437	572
India	640	11	0	275	365
EU-25	548	9	71	225	252
United States	517	9	47	162	308
Brazil	461	8	16	250	196
Pakistan	149	2	1	67	82
Indonesia	129	2	6	90	33
Argentina	124	2	7	56	60
Russia	118	2	20	52	45
France	108	2	8	44	56
Australia	107	2	4	76	27
Germany	96	2	6	53	36
Turkey	77	1	8	31	38
Iran	71	1	10	19	42
Canada	70	1	9	23	38
Mexico	56	1	6	46	4
Japan	54	1	20	14	20
United Kingdom	52	1	2	21	29
Spain	50	1	6	23	21
Italy	49	1	8	17	23
South Africa	44	1	4	16	23
Ukraine	43	1	8	20	16
Poland	41	1	14	10	16
South Korea	24	0	10	12	2
Saudi Arabia	10	0	0	2	8
Rest of World	**1,668**	**28**	**41**	**906**	**721**
World	**6,008**		**377**	**2,778**	**2,853**

Notes: Emissions here pertain to IPCC Source Category 4 (CH_4 and N_2O), but also include CO_2 emissions from fossil fuel combustion (category 1A4).