

2005 Environmental Sustainability Index

Benchmarking National Environmental Stewardship

Appendix C Variable Profiles and Data

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Appendix C: Variable Profiles and Data

This section contains complete variable descriptions along with the original data used to produce the 2005 Environmental Sustainability Index. The variables are listed thematically according to the structure of the ESI shown in Table 10 (Table C.1 shows the variables in alphabetical order by variable code). Each page contains the following:

- The variable number.
- The variable code.
- The reference year (MRYA = Most Recent Year Available for the stated range).
- The variable description.
- The units in which the variable is measured.
- The primary data source*.
- The logic for including the variable in the ESI.
- The methodology used to produce the variable, including any additional processing of the data beyond that of the data providers.
- The observed mean and median values for all countries.
- The observed minimum (min) and maximum (max) values for all countries.
- The 2.5 and 97.5 percentile cut-off values. In calculating the ESI, we truncated extreme values that fell outside the ranges of these values.
- The table with the original and imputed data. Note that where data for a given variable were imputed, the estimated values are shown in brackets.

The Section on Data Quality and Coverage in Appendix A provides further information on our assessment of the quality of the ESI variables.

* A complete list of all data sources, including individual country information, follows the variable profiles.

Table C.1: Variables sorted alphabetically by variable code

Page	Variable Code	Variable Description	Indicator Description
281	ACEXC	Acidification exceedance from anthropogenic sulfur deposition	Reducing Ecosystem Stress
309	AGENDA21	Local Agenda 21 initiatives per million people	Environmental Governance
295	AGSUB	Agricultural subsidies	Natural Resource Management
267	ANTH10	Percentage of total land area (including inland waters) having very low anthropogenic impact	Land
268	ANTH40	Percentage of total land area (including inland waters) having very high anthropogenic impact	Land
287	BODWAT	Industrial organic water pollutant (BOD) emissions per available freshwater	Reducing Water Stress
279	CARSKM	Vehicles in use per populated land area	Reducing Air Pollution
310	CIVLIB	Civil and Political Liberties	Environmental Governance
330	CO2GDP	Carbon emissions per million US dollars GDP	Greenhouse Gas Emissions
331	CO2PC	Carbon emissions per capita	Greenhouse Gas Emissions
275	COALKM	Coal consumption per populated land area	Reducing Air Pollution
311	CSDMIS	Percentage of variables missing from the CGSDI "Rio to Joburg Dashboard"	Environmental Governance
323	DAI	Digital Access Index	Science and Technology
301	DISCAS	Average number of deaths per million inhabitants from floods, tropical cyclones, and droughts	Reducing Environment-Related Natural Disaster Vulnerability
302	DISEXP	Environmental Hazard Exposure Index	Reducing Environment-Related Natural Disaster Vulnerability
296	DISINT	Death rate from intestinal infectious diseases	Environmental Health
297	DISRES	Child death rate from respiratory diseases	Environmental Health
317	DJSGI	Dow Jones Sustainability Group Index (DJSGI)	Private Sector Responsiveness
262	ECORISK	Percentage of country's territory in threatened ecoregions	Biodiversity
318	ECOVAL	Average InnoVest EcoValue rating of firms headquartered in a country	Private Sector Responsiveness
284	EFPC	Ecological Footprint per capita	Reducing Waste & Consumption Pressures
327	EIONUM	Number of memberships in environmental intergovernmental organizations	Participation in International Collaborative Efforts
315	ENEFF	Energy efficiency	Eco-Efficiency
325	ENROL	Gross tertiary enrollment rate	Science and Technology
288	FERTHA	Fertilizer consumption per hectare of arable land	Reducing Water Stress
292	FORCERT	Percentage of total forest area that is certified for sustainable management	Natural Resource Management
280	FOREST	Annual average forest cover change rate from 1990 to 2000	Reducing Ecosystem Stress
328	FUNDING	Contribution to international and bilateral funding of environmental projects and development aid	Participation in International Collaborative Efforts
303	GASPR	Ratio of gasoline price to world average	Environmental Governance
305	GOVEFF	Government effectiveness	Environmental Governance
282	GR2050	Percentage change in projected population 2004-2050	Reducing Population Pressure
304	GRAFT	Corruption measure	Environmental Governance
274	GRDAVL	Internal groundwater availability per capita	Water Quantity
286	HAZWST	Generation of hazardous waste	Reducing Waste & Consumption Pressures
261	INDOOR	Indoor air pollution from solid fuel use	Air Quality
322	INNOV	Innovation Index	Science and Technology
294	IRRSAL	Salinized area due to irrigation as percentage of total arable land	Natural Resource Management
319	ISO14	Number of ISO 14001 certified companies per billion dollars GDP (PPP)	Private Sector Responsiveness
312	IUCN	IUCN member organizations per million population	Environmental Governance
313	KNWLDG	Knowledge creation in environmental science, technology, and policy	Environmental Governance
308	LAW	Rule of law	Environmental Governance
266	NBI	National Biodiversity Index	Biodiversity
258	NO2	Urban population weighted NO ₂ concentration	Air Quality

Page	Variable Code	Variable Description	Indicator Description
276	NOXKM	Anthropogenic NO _x emissions per populated land area	Reducing Air Pollution
291	OVRFSH	Productivity overfishing	Natural Resource Management
329	PARTICIP	Participation in international environmental agreements	Participation in International Collaborative Efforts
324	PECR	Female primary education completion rate	Science and Technology
289	PESTHA	Pesticide consumption per hectare of arable land	Reducing Water Stress
333	POLEXP	Import of polluting goods and raw materials as percentage of total imports of goods and services	Reducing Transboundary Environmental Pressures
314	POLITY	Democracy measure	Environmental Governance
306	PRAREA	Percentage of total land area under protected status	Environmental Governance
265	PRTAMPH	Threatened amphibian species as percentage of known amphibian species in each country	Biodiversity
263	PRTBRD	Threatened bird species as percentage of known breeding bird species in each country	Biodiversity
264	PRTMAM	Threatened mammal species as percentage of known mammal species in each country	Biodiversity
285	RECYCLE	Waste recycling rates	Reducing Waste & Consumption Pressures
316	RENPC	Hydropower and renewable energy production as a percentage of total energy consumption	Eco-Efficiency
321	RESCARE	Participation in the Responsible Care Program of the Chemical Manufacturer's Association	Private Sector Responsiveness
326	RESEARCH	Number of researchers per million inhabitants	Science and Technology
259	SO2	Urban population weighted SO ₂ concentration	Air Quality
332	SO2EXP	SO ₂ Exports	Reducing Transboundary Environmental Pressures
277	SO2KM	Anthropogenic SO ₂ emissions per populated land area	Reducing Air Pollution
283	TFR	Total Fertility Rate	Reducing Population Pressure
260	TSP	Urban population weighted TSP concentration	Air Quality
298	U5MORT	Children under five mortality rate per 1,000 live births	Environmental Health
299	UND_NO	Percentage of undernourished in total population	Basic Human Sustenance
278	VOCKM	Anthropogenic VOC emissions per populated land area	Reducing Air Pollution
273	WATAVL	Freshwater availability per capita	Water Quantity
290	WATSTR	Percentage of country under severe water stress	Reducing Water Stress
300	WATSUP	Percentage of population with access to improved drinking water source	Basic Human Sustenance
307	WEFGOV	World Economic Forum Survey on environmental governance	Environmental Governance
320	WEFPRI	World Economic Forum Survey on private sector environmental innovation	Private Sector Responsiveness
293	WEFSUB	World Economic Forum Survey on subsidies	Natural Resource Management
269	WQ_DO	Dissolved oxygen concentration	Water Quality
270	WQ_EC	Electrical conductivity	Water Quality
271	WQ_PH	Phosphorus concentration	Water Quality
272	WQ_SS	Suspended solids	Water Quality

Variable #:	1	Code:	NO2	Reference Year:	MRYA 1993-2004		
Description:	Urban population weighted NO2 concentration						
Units:	Micrograms per cubic meter						
Source*:	Organisation for Economic Co-operation and Development (OECD), United Nations Human Settlement Programme (UNHABITAT), World Health Organization, European Environment Agency, and World Resources Institute, plus country data.						
Logic:	Poor ambient air quality affects both human and ecosystem health. Humans exposed to high NO2 concentrations may suffer respiratory illness and lung damage. NO2 is also a precursor to the formation of ground-level ozone and acid rain. Through reactions of NO2 with other substances such as volatile organic compounds (VOC) in the atmosphere can cause reduced visibility.						
Methodology:	The data from all sources were normalized by city population (in thousands) in each country. The most recent data were used from the OECD, UNHABITAT, and WHO. The EEA data were drawn from the AirBase air quality monitoring database and station coverage was balanced with the need for recent data. If a country has observations from more than one data source, the most recent observation was chosen.						
Mean	39.22	Max	109.16	2.5 Percentile	0.02		
Median	36.56	Min	0	97.5 Percentile	76.73		
Albania	[14.74]	Ecuador	[47.74]	Lebanon	[25.81]	Saudi Arabia	[31.01]
Algeria	[43.7]	Egypt	[63.87]	Liberia	[28.53]	Senegal	[26.02]
Angola	[46.96]	El Salvador	70.50	Libya	[42.58]	Serbia and Mont.	[20.69]
Argentina	56.79	Estonia	22.67	Lithuania	22.00	Sierra Leone	[29.94]
Armenia	1.58	Ethiopia	[36.84]	Macedonia	[25.82]	Slovakia	37.44
Australia	16.47	Finland	24.00	Madagascar	[22.81]	Slovenia	32.47
Austria	33.02	France	51.00	Malawi	[27.33]	South Africa	44.03
Azerbaijan	[19.81]	Gabon	[42.43]	Malaysia	[39.53]	South Korea	53.41
Bangladesh	[28.67]	Gambia	[25.47]	Mali	[24.17]	Spain	67.30
Belarus	42.60	Georgia	[28.06]	Mauritania	[33.18]	Sri Lanka	[29.11]
Belgium	41.00	Germany	34.72	Mexico	56.02	Sudan	[42.26]
Benin	[26.56]	Ghana	[30.03]	Moldova	0.01	Sweden	18.20
Bhutan	[11.29]	Greece	58.80	Mongolia	[25.82]	Switzerland	38.57
Bolivia	[42.51]	Guatemala	69.33	Morocco	[47.11]	Syria	[43.74]
Bosnia and Herz.	27.00	Guinea	[33.97]	Mozambique	[23.59]	Taiwan	35.67
Botswana	[32.8]	Guinea-Bissau	[29.83]	Myanmar	[41.95]	Tajikistan	[26.5]
Brazil	51.37	Guyana	[39.8]	Namibia	[31.88]	Tanzania	[33.47]
Bulgaria	9.35	Haiti	[27.48]	Nepal	[23.78]	Thailand	23.00
Burkina Faso	[34.77]	Honduras	29.50	Netherlands	58.00	Togo	[35.89]
Burundi	[31.86]	Hungary	45.85	New Zealand	22.50	Trin. and Tob.	[39.96]
Cambodia	[28.3]	Iceland	29.00	Nicaragua	32.00	Tunisia	[38.08]
Cameroon	[45.41]	India	29.68	Niger	[38.12]	Turkey	9.45
Canada	34.73	Indonesia	[40.72]	Nigeria	[26.59]	Turkmenistan	[42.53]
Central Afr. Rep.	[29.73]	Iran	[53.81]	North Korea	[28.82]	Uganda	[28.66]
Chad	[36.45]	Iraq	[30.09]	Norway	38.00	Ukraine	0.04
Chile	81.00	Ireland	70.00	Oman	[44.32]	United Arab. Em.	0.00
China	71.72	Israel	35.55	P. N. Guinea	[31.46]	United Kingdom	54.87
Colombia	[52.21]	Italy	72.01	Pakistan	[45.02]	United States	60.57
Congo	[44.17]	Jamaica	[24.34]	Panama	42.00	Uruguay	[35.24]
Costa Rica	45.75	Japan	55.00	Paraguay	[46.18]	Uzbekistan	[35.88]
Côte d'Ivoire	[37.56]	Jordan	[47.4]	Peru	[56.29]	Venezuela	57.00
Croatia	[26.1]	Kazakhstan	[28.62]	Philippines	[36.02]	Viet Nam	[31.15]
Cuba	5.00	Kenya	[42.62]	Poland	28.72	Yemen	[41.32]
Czech Rep.	31.53	Kuwait	[19.92]	Portugal	49.69	Zambia	[26.35]
Dem. Rep. Congo	[42.11]	Kyrgyzstan	[24.72]	Romania	16.63	Zimbabwe	[38.55]
Denmark	47.00	Laos	[29.59]	Russia	109.16		
Dominican Rep.	[30.91]	Latvia	22.99	Rwanda	[17.68]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	2	Code:	SO2	Reference Year:	MRYA 1993-2004
Description:	Urban population weighted SO2 concentration				
Units:	Micrograms per cubic meter				
Source*:	Organisation for Economic Co-operation and Development (OECD), United Nations Human Settlement Programme (UNHABITAT), World Health Organization, European Environment Agency, and World Resources Institute, plus country data.				
Logic:	Poor ambient air quality affects both human and ecosystem health. Humans exposed to high SO2 concentrations, especially asthmatics, may suffer from respiratory tract problems and permanent damage to lung tissue as a result of long-term exposure. SO2 is an important precursor to the formation of acid rain and fog, which changes the composition of soils, causes acidification of water bodies, and negatively affects animal and plant growth. In many locations, SO2 particles in the atmosphere are the largest source of haze and impaired visibility.				
Methodology:	The data from all sources were normalized by city population (in thousands) in each country. The most recent data were used from the OECD, UNHABITAT, and WHO. The EEA data were drawn from the AirBase air quality monitoring database and station coverage was balanced with the need for recent data. If a country has observations from more than one data source, the most recent observation was chosen.				

	Mean		Max		2.5 Percentile		0.01
	Median		Min		97.5 Percentile		85.36
Albania	[2.28]	Ecuador	21.52	Lebanon	[1.65]	Saudi Arabia	[3.23]
Algeria	[11.5]	Egypt	69.00	Liberia	[3.45]	Senegal	[1.21]
Angola	[7.37]	El Salvador	[4.23]	Libya	[1.53]	Serbia and Mont.	[3.91]
Argentina	1.02	Estonia	2.00	Lithuania	6.00	Sierra Leone	[6.67]
Armenia	0.43	Ethiopia	[7.48]	Macedonia	24.23	Slovakia	13.40
Australia	13.17	Finland	3.00	Madagascar	[24.65]	Slovenia	8.71
Austria	8.31	France	8.00	Malawi	[3.78]	South Africa	22.37
Azerbaijan	[0.25]	Gabon	[5.79]	Malaysia	20.49	South Korea	23.84
Bangladesh	[6.08]	Gambia	[1.49]	Mali	[8.6]	Spain	7.82
Belarus	0.01	Georgia	[1.25]	Mauritania	[2.66]	Sri Lanka	[6.91]
Belgium	9.70	Germany	5.02	Mexico	46.60	Sudan	[5.91]
Benin	[26.62]	Ghana	[12.98]	Moldova	0.00	Sweden	3.00
Bhutan	[3.97]	Greece	13.16	Mongolia	[0.56]	Switzerland	6.25
Bolivia	[19.25]	Guatemala	[35.39]	Morocco	[12.64]	Syria	[4.84]
Bosnia and Herz.	18.00	Guinea	[9.29]	Mozambique	[2.9]	Taiwan	10.45
Botswana	[1.83]	Guinea-Bissau	[0.93]	Myanmar	[6.85]	Tajikistan	[0.23]
Brazil	75.78	Guyana	[3.81]	Namibia	[19.84]	Tanzania	[17.43]
Bulgaria	17.79	Haiti	[2.32]	Nepal	[9.37]	Thailand	11.00
Burkina Faso	[12]	Honduras	[18.56]	Netherlands	5.15	Togo	[2.47]
Burundi	[10.91]	Hungary	9.00	New Zealand	15.00	Trin. and Tob.	[0.76]
Cambodia	[5.5]	Iceland	2.00	Nicaragua	[2.77]	Tunisia	[3.91]
Cameroon	[9.38]	India	27.55	Niger	[3.22]	Turkey	64.47
Canada	9.32	Indonesia	[39.33]	Nigeria	[10.25]	Turkmenistan	[1.91]
Central Afr. Rep.	[5.6]	Iran	209.00	North Korea	[0.73]	Uganda	[22.49]
Chad	[5.65]	Iraq	[1.55]	Norway	4.00	Ukraine	0.06
Chile	29.00	Ireland	6.69	Oman	[2.02]	United Arab. Em.	0.01
China	97.07	Israel	16.82	P. N. Guinea	[8.63]	United Kingdom	4.64
Colombia	[59.13]	Italy	1.33	Pakistan	[6.37]	United States	15.43
Congo	[8.89]	Jamaica	[4.15]	Panama	[4.38]	Uruguay	[4.97]
Costa Rica	38.84	Japan	19.00	Paraguay	[1.65]	Uzbekistan	[1.57]
Côte d'Ivoire	[11.37]	Jordan	[2.88]	Peru	[76.82]	Venezuela	33.00
Croatia	31.00	Kazakhstan	0.04	Philippines	33.00	Viet Nam	[4.65]
Cuba	1.00	Kenya	[16.64]	Poland	20.56	Yemen	[8.85]
Czech Rep.	9.31	Kuwait	[0.31]	Portugal	6.77	Zambia	[19.52]
Dem. Rep. Congo	[1.05]	Kyrgyzstan	[0.32]	Romania	6.58	Zimbabwe	[5.35]
Denmark	4.00	Laos	[19.84]	Russia	3.00		
Dominican Rep.	[7.33]	Latvia	6.33	Rwanda	[9.33]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	3	Code:	TSP	Reference Year:	MRYA 1993-2002
Description:	Urban population weighted TSP concentration				
Units:	Micrograms TSP per cubic meter				
Source*:	Organisation for Economic Co-operation and Development (OECD), United Nations Human Settlement Programme (UNHABITAT), World Health Organization, European Environment Agency, and World Resources Institute, plus country data.				
Logic:	Poor ambient air quality affects both human and ecosystem health. Many studies have linked exposure to particulate matter (PM) to adverse health effects in humans such as increased asthma attacks, chronic bronchitis, decreased lung function, and premature death. PM can travel over long distances and is a significant contributor to reduced visibility. The deposition of PM can change the nutrient composition of soils and surface waters and affects the diversity of ecosystems.				
Methodology:	The data from all sources were normalized by city population (in thousands) in each country. The most recent data were used from the OECD, UNHABITAT, and WHO. The EEA data were drawn from the AirBase air quality monitoring database and station coverage was balanced with the need for recent data. If a country has observations from more than one data source, the most recent observation was chosen. All data refer to Total Suspended Particulates (TSP) except for the EEA and some individual country data points, which refer to PM10 (aerodynamic diameter less than 10 micrometers). The conversion factor applied to convert from PM10 to TSP is 1.1. TSP value for the USA represents a crude estimate based on information shown in first chart on website, http://www.epa.gov/air/airtrends/aqtrnd01/pmatter.html and its value is not population weighted due to lack of information on the population living near the monitoring sites.				

Mean	80.76	Max	320	2.5 Percentile	0.77		
Median	42.92	Min	0.15	97.5 Percentile	293.3		
Albania	167.42	Ecuador	125.73	Lebanon	[89.48]	Saudi Arabia	[72.39]
Algeria	[116.85]	Egypt	[74.18]	Liberia	[128.6]	Senegal	[167.6]
Angola	[163.85]	El Salvador	[163.77]	Libya	[89.65]	Serbia and Mont.	[113.2]
Argentina	50.01	Estonia	33.73	Lithuania	31.90	Sierra Leone	[136.8]
Armenia	1.02	Ethiopia	[195.14]	Macedonia	[86.25]	Slovakia	49.21
Australia	43.22	Finland	18.92	Madagascar	[215.7]	Slovenia	36.04
Austria	31.63	France	24.00	Malawi	[178.5]	South Africa	[111.9]
Azerbaijan	[105.36]	Gabon	[121.6]	Malaysia	91.58	South Korea	66.05
Bangladesh	[163.84]	Gambia	[141.41]	Mali	[150.0]	Spain	33.51
Belarus	18.40	Georgia	[142.06]	Mauritania	[106.0]	Sri Lanka	[170.4]
Belgium	42.62	Germany	31.95	Mexico	52.55	Sudan	[175.4]
Benin	[165.58]	Ghana	137.00	Moldova	1.08	Sweden	54.67
Bhutan	[150.32]	Greece	58.79	Mongolia	[51.27]	Switzerland	27.77
Bolivia	[60.57]	Guatemala	272.33	Morocco	[148.4]	Syria	[124.8]
Bosnia and Herz.	[97.42]	Guinea	[195.19]	Mozambique	[201.3]	Taiwan	104.21
Botswana	[62.75]	Guinea-Bissau	[119.23]	Myanmar	[161.2]	Tajikistan	[65.07]
Brazil	106.20	Guyana	[48.74]	Namibia	[91.99]	Tanzania	[183.9]
Bulgaria	61.30	Haiti	[215.39]	Nepal	[228.2]	Thailand	223.00
Burkina Faso	[159.62]	Honduras	320.00	Netherlands	38.65	Togo	[106.7]
Burundi	[160.83]	Hungary	40.70	New Zealand	25.00	Trin. and Tob.	[14.62]
Cambodia	[154.72]	Iceland	29.15	Nicaragua	[206.2]	Tunisia	[93.43]
Cameroon	[165.61]	India	277.45	Niger	[126.6]	Turkey	11.35
Canada	11.41	Indonesia	271.00	Nigeria	[207.9]	Turkmenistan	[92.6]
Central Afr. Rep.	[122.64]	Iran	248.00	North Korea	[120.9]	Uganda	[187.1]
Chad	[101.36]	Iraq	[184.35]	Norway	24.20	Ukraine	0.15
Chile	[100.87]	Ireland	24.75	Oman	[56.87]	United Arab. Em.	126.47
China	310.82	Israel	[67.44]	P. N. Guinea	[194.7]	United Kingdom	19.49
Colombia	120.00	Italy	104.50	Pakistan	[135.8]	United States	27.50
Congo	[77.72]	Jamaica	[104.98]	Panama	[109.9]	Uruguay	[76.34]
Costa Rica	226.30	Japan	40.00	Paraguay	[57.69]	Uzbekistan	[64.71]
Côte d'Ivoire	[160.66]	Jordan	[77.14]	Peru	[139.6]	Venezuela	53.00
Croatia	71.00	Kazakhstan	0.50	Philippines	200.00	Viet Nam	[182.8]
Cuba	[138.12]	Kenya	69.00	Poland	40.85	Yemen	[152.2]
Czech Rep.	42.39	Kuwait	[106.6]	Portugal	38.57	Zambia	[147.0]
Dem. Rep. Congo	[200.37]	Kyrgyzstan	[119.12]	Romania	82.00	Zimbabwe	[144.6]
Denmark	32.18	Laos	[183.44]	Russia	20.84		
Dominican Rep.	[133.32]	Latvia	63.80	Rwanda	[150.9]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 4 **Code:** INDOOR **Reference Year:** 2004

Description: Indoor air pollution from solid fuel use

Units: Percentage of households using solid fuels, adjusted for ventilation

Source*: World Health Organization.

Logic: The public health community has drawn attention to the deleterious effects of indoor air pollution, especially on women who cook inside using solid fuels. High exposure to the fumes from solid fuel combustion is dangerous to human health. Solid fuel use has further consequences for deforestation and soil depletion because of dung collection.

Methodology: Solid fuel use is defined as the household combustion of coal or biomass (such as dung, charcoal, wood, or crop residues). The approach taken in WHO guidelines is based on a binary classification scheme for exposure levels, separating the study population into those exposed to solid fuel use and those not exposed followed by the application of relative risks derived from a comprehensive review of the current epidemiological literature on solid fuel use. Central estimates were used. For China, original data was provided separately for children and adults and these values were averaged. A single value was provided and applied to both Ethiopia and Eritrea. Corrections are made for variation in prevailing ventilation practices.

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	45.17		100		0		
	40		0		100		
Albania	15.00	Ecuador	28.00	Lebanon	9.00	Saudi Arabia	0.00
Algeria	4.00	Egypt	8.00	Liberia	83.00	Senegal	79.00
Angola	100.00	El Salvador	65.00	Libya	3.00	Serbia and Mont.	14.00
Argentina	0.00	Estonia	8.00	Lithuania	8.00	Sierra Leone	92.00
Armenia	66.00	Ethiopia	97.00	Macedonia	12.00	Slovakia	5.00
Australia	0.00	Finland	0.00	Madagascar	99.00	Slovenia	0.00
Austria	0.00	France	0.00	Malawi	99.00	South Africa	28.00
Azerbaijan	37.00	Gabon	34.00	Malaysia	29.00	South Korea	0.00
Bangladesh	96.00	Gambia	98.00	Mali	100.00	Spain	0.00
Belarus	2.00	Georgia	71.00	Mauritania	69.00	Sri Lanka	89.00
Belgium	0.00	Germany	0.00	Mexico	22.00	Sudan	100.00
Benin	88.00	Ghana	95.00	Moldova	14.00	Sweden	0.00
Bhutan	[95.58]	Greece	0.00	Mongolia	67.00	Switzerland	0.00
Bolivia	61.00	Guatemala	73.00	Morocco	11.00	Syria	19.00
Bosnia and Herz.	15.00	Guinea	99.00	Mozambique	87.00	Taiwan	[4.18]
Botswana	65.00	Guinea-Bissau	95.00	Myanmar	100.00	Tajikistan	100.00
Brazil	27.00	Guyana	[41.56]	Namibia	83.00	Tanzania	96.00
Bulgaria	6.00	Haiti	82.00	Nepal	97.00	Thailand	72.00
Burkina Faso	97.00	Honduras	66.00	Netherlands	0.00	Togo	96.00
Burundi	100.00	Hungary	5.00	New Zealand	0.00	Trin. and Tob.	0.00
Cambodia	100.00	Iceland	[12.11]	Nicaragua	73.00	Tunisia	29.00
Cameroon	77.00	India	81.00	Niger	98.00	Turkey	11.00
Canada	0.00	Indonesia	63.00	Nigeria	67.00	Turkmenistan	50.00
Central Afr. Rep.	99.00	Iran	2.00	North Korea	68.00	Uganda	97.00
Chad	100.00	Iraq	2.00	Norway	0.00	Ukraine	11.00
Chile	15.00	Ireland	0.00	Oman	0.00	United Arab. Em.	0.00
China	30.00	Israel	0.00	P. N. Guinea	97.00	United Kingdom	0.00
Colombia	36.00	Italy	0.00	Pakistan	76.00	United States	0.00
Congo	100.00	Jamaica	47.00	Panama	37.00	Uruguay	0.00
Costa Rica	58.00	Japan	0.00	Paraguay	64.00	Uzbekistan	79.00
Côte d'Ivoire	93.00	Jordan	10.00	Peru	40.00	Venezuela	0.00
Croatia	3.00	Kazakhstan	51.00	Philippines	85.00	Viet Nam	98.00
Cuba	42.00	Kenya	85.00	Poland	7.00	Yemen	66.00
Czech Rep.	0.00	Kuwait	0.00	Portugal	0.00	Zambia	87.00
Dem. Rep. Congo	100.00	Kyrgyzstan	96.00	Romania	9.00	Zimbabwe	67.00
Denmark	0.00	Laos	95.00	Russia	1.00		
Dominican Rep.	48.00	Latvia	4.00	Rwanda	100.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 5 **Code:** ECORISK **Reference Year:** 2004

Description: Percentage of country's territory in threatened ecoregions

Units: Percentage of country's territory in threatened ecoregions

Source*: The Nature Conservancy and World Wildlife Fund.

Logic: Species extinction is just one aspect of the threats to biodiversity. Whole biomes (plant and animal assemblages) are also at significant risk of disappearing. Habitat conversion exceeds habitat protection by a ratio of 8:1 in temperate grasslands and Mediterranean biomes, and 10:1 in more than 140 ecoregions. These regions include some of the most biologically distinctive, species rich ecosystems on earth, as well as the last home of many threatened and endangered species.

Methodology: The authors identify the world's terrestrial biomes and ecoregions in which biodiversity and ecological function is at greatest risk because of extensive habitat conversion and limited habitat protection. Threatened ecoregions are ecoregions with high ratios of habitat conversion to habitat protection that are classified as vulnerable, endangered, or critical. This yields the land area of terrestrial ecosystems that is threatened, and the percent land area in each country that is in a threatened ecoregion. The original data distinguished between Gaza Strip and West Bank; between Montenegro and Serbia; between Jan Mayen and Svalbard. These have been combined by normalizing the percent area of ecoregions in crisis by their land area. Furthermore, the figures for France exclude the overseas territories of French Southern and Antarctic Lands. The figures for the United Kingdom exclude Guernsey, Jersey, and Isle of Man. The figures for the United States of America exclude Howland Island, Jarvis Island, Johnston Atoll, Midway Islands, and Wake Island.

	Mean		Max		2.5 Percentile		0
	Median		Min		97.5 Percentile		100
Albania	100.00	Ecuador	36.10	Lebanon	100.00	Saudi Arabia	0.00
Algeria	5.78	Egypt	5.06	Liberia	100.00	Senegal	100.00
Angola	4.09	El Salvador	95.14	Libya	0.77	Serbia and Mont.	100.00
Argentina	39.07	Estonia	100.00	Lithuania	100.00	Sierra Leone	100.00
Armenia	100.00	Ethiopia	44.92	Macedonia	100.00	Slovakia	100.00
Australia	16.23	Finland	1.16	Madagascar	45.35	Slovenia	81.47
Austria	42.21	France	93.24	Malawi	10.56	South Africa	29.83
Azerbaijan	100.00	Gabon	0.00	Malaysia	83.27	South Korea	94.04
Bangladesh	100.00	Gambia	100.00	Mali	58.24	Spain	84.31
Belarus	100.00	Georgia	100.00	Mauritania	36.07	Sri Lanka	100.00
Belgium	100.00	Germany	99.02	Mexico	23.10	Sudan	52.42
Benin	100.00	Ghana	99.30	Moldova	100.00	Sweden	29.03
Bhutan	56.29	Greece	100.00	Mongolia	38.72	Switzerland	42.75
Bolivia	0.55	Guatemala	49.30	Morocco	59.80	Syria	27.59
Bosnia and Herz.	100.00	Guinea	100.00	Mozambique	0.04	Taiwan	0.00
Botswana	8.01	Guinea-Bissau	100.00	Myanmar	88.82	Tajikistan	48.93
Brazil	51.69	Guyana	0.00	Namibia	9.96	Tanzania	1.75
Bulgaria	100.00	Haiti	63.62	Nepal	75.66	Thailand	97.52
Burkina Faso	100.00	Honduras	87.27	Netherlands	100.00	Togo	100.00
Burundi	12.74	Hungary	100.00	New Zealand	67.34	Trin. and Tob.	4.97
Cambodia	82.76	Iceland	0.00	Nicaragua	70.28	Tunisia	41.05
Cameroon	7.75	India	93.70	Niger	46.90	Turkey	97.80
Canada	6.88	Indonesia	69.59	Nigeria	95.28	Turkmenistan	16.22
Central Afr. Rep.	2.14	Iran	7.60	North Korea	23.09	Uganda	50.31
Chad	45.66	Iraq	0.27	Norway	2.91	Ukraine	100.00
Chile	20.75	Ireland	0.00	Oman	0.00	United Arab. Em.	0.00
China	38.02	Israel	34.94	P. N. Guinea	37.76	United Kingdom	18.72
Colombia	30.19	Italy	72.65	Pakistan	74.91	United States	37.96
Congo	0.00	Jamaica	75.76	Panama	33.93	Uruguay	100.00
Costa Rica	47.71	Japan	49.70	Paraguay	55.81	Uzbekistan	17.73
Côte d'Ivoire	100.00	Jordan	10.76	Peru	2.95	Venezuela	5.38
Croatia	100.00	Kazakhstan	40.92	Philippines	92.51	Viet Nam	96.14
Cuba	86.10	Kenya	2.17	Poland	100.00	Yemen	0.87
Czech Rep.	100.00	Kuwait	0.00	Portugal	80.53	Zambia	0.00
Dem. Rep. Congo	0.19	Kyrgyzstan	55.57	Romania	100.00	Zimbabwe	15.86
Denmark	100.00	Laos	84.77	Russia	17.59		
Dominican Rep.	59.58	Latvia	100.00	Rwanda	53.51		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	6	Code:	PRTBRD	Reference Year:	MRYA 2002-2003		
Description:	Threatened bird species as percentage of known breeding bird species in each country						
Units:	Threatened bird species as percentage of known breeding bird species in each country						
Source*:	IUCN-The World Conservation Union Species Survival Commission.						
Logic:	The percent of breeding birds threatened gives an estimate of a country's success at preserving its biodiversity.						
Methodology:	The number of bird species threatened divided by known breeding bird species in the country, expressed as a percent. Threatened species include those that are listed as "Critically Endangered, Endangered, or Vulnerable," but excludes sub-species, introduced species, species whose status is insufficiently known (categorized by the World Conservation Union or IUCN as "data deficient"), those known to be extinct, and those for which status has not been assessed (categorized by IUCN as "not evaluated"). The number of species that are globally listed as Critically Endangered are known to occur in the country but do not imply that the species are threatened within the country itself.						
Mean	4.6	Max	42	2.5 Percentile	0.12		
Median	2.62	Min	0	97.5 Percentile	19.67		
Albania	1.30	Ecuador	4.47	Lebanon	4.55	Saudi Arabia	9.68
Algeria	3.13	Egypt	4.58	Liberia	2.96	Senegal	1.04
Angola	1.96	El Salvador	0.00	Libya	1.10	Serbia and Mont.	2.23
Argentina	4.35	Estonia	1.41	Lithuania	1.98	Sierra Leone	2.15
Armenia	1.65	Ethiopia	2.56	Macedonia	1.43	Slovakia	1.91
Australia	5.39	Finland	1.21	Madagascar	13.37	Slovenia	0.48
Austria	1.41	France	1.86	Malawi	2.11	South Africa	4.70
Azerbaijan	3.23	Gabon	1.07	Malaysia	7.28	South Korea	22.32
Bangladesh	7.80	Gambia	0.71	Mali	1.01	Spain	2.52
Belarus	1.36	Georgia	..	Mauritania	0.73	Sri Lanka	5.60
Belgium	1.11	Germany	2.09	Mexico	5.18	Sudan	0.88
Benin	0.65	Ghana	1.51	Moldova	2.82	Sweden	0.80
Bhutan	2.68	Greece	2.79	Mongolia	3.76	Switzerland	1.04
Bolivia	..	Guatemala	1.31	Morocco	4.29	Syria	3.92
Bosnia and Herz.	1.38	Guinea	2.44	Mozambique	3.21	Taiwan	4.20
Botswana	1.81	Guinea-Bissau	0.00	Myanmar	4.04	Tajikistan	..
Brazil	7.53	Guyana	0.29	Namibia	2.35	Tanzania	3.99
Bulgaria	4.17	Haiti	18.67	Nepal	4.09	Thailand	6.01
Burkina Faso	0.60	Honduras	1.18	Netherlands	2.09	Togo	0.00
Burundi	1.55	Hungary	3.90	New Zealand	42.00	Trin. and Tob.	0.38
Cambodia	6.19	Iceland	0.00	Nicaragua	1.04	Tunisia	2.89
Cameroon	2.17	India	7.78	Niger	1.00	Turkey	3.64
Canada	1.88	Indonesia	7.45	Nigeria	1.32	Turkmenistan	..
Central Afr. Rep.	0.56	Iran	4.02	North Korea	16.52	Uganda	1.57
Chad	1.35	Iraq	6.40	Norway	0.82	Ukraine	3.04
Chile	7.43	Ireland	0.70	Oman	9.35	United Arab. Em.	11.94
China	6.80	Israel	6.67	P. N. Guinea	4.90	United Kingdom	0.87
Colombia	4.59	Italy	2.14	Pakistan	4.53	United States	8.62
Congo	0.67	Jamaica	10.62	Panama	2.19	Uruguay	4.64
Costa Rica	2.17	Japan	14.00	Paraguay	4.68	Uzbekistan	..
Côte d'Ivoire	2.24	Jordan	5.67	Peru	4.93	Venezuela	1.79
Croatia	1.79	Kazakhstan	3.79	Philippines	34.18	Viet Nam	6.92
Cuba	13.14	Kenya	2.83	Poland	1.76	Yemen	8.39
Czech Rep.	1.01	Kuwait	35.00	Portugal	3.38	Zambia	1.82
Dem. Rep. Congo	3.01	Kyrgyzstan	..	Romania	3.24	Zimbabwe	1.88
Denmark	0.51	Laos	4.11	Russia	6.05		
Dominican Rep.	11.03	Latvia	1.38	Rwanda	1.75		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #:	7	Code:	PRTMAM	Reference Year:	MRYA 2002-2003		
Description:	Threatened mammal species as percentage of known mammal species in each country						
Units:	Threatened mammal species as percentage of known mammal species in each country						
Source*:	IUCN-The World Conservation Union Species Survival Commission.						
Logic:	The percent of mammals threatened gives an estimate of a country's success at preserving its biodiversity.						
Methodology:	The number of mammal species threatened was divided by known mammal species in the country, and expressed as a percent. Mammals threatened were normalized by mammals known in each country. Mammals species and number threatened includes all species of mammals that are recorded as threatened and that are known to occur in a given country. Threatened species include those that are listed as "Critically Endangered, Endangered, or Vulnerable," but excludes sub-species, introduced species, species whose status is insufficiently known (categorized by the World Conservation Union or IUCN as "data deficient"), those known to be extinct, and those for which status has not been assessed (categorized by IUCN as "not evaluated"). Number of mammal species refers to the total number of mammal species identified and documented in a particular country or region, but excludes data on cetaceans. Total numbers include both endemic and non-endemic species. The total number of known species may include introduced species. The exclusion of cetaceans may therefore lead to overestimation for coastal countries with threatened whale and porpoise populations. The number of species that are globally listed as Critically Endangered are known to occur in the country but do not imply that the species are threatened within the country itself.						
Mean	14.91	Max	133.33	2.5 Percentile	2.80		
Median	11.19	Min	1.00	97.5 Percentile	41.62		
Albania	4.41	Ecuador	11.26	Lebanon	10.53	Saudi Arabia	11.69
Algeria	14.13	Egypt	13.27	Liberia	8.29	Senegal	6.25
Angola	6.88	El Salvador	1.48	Libya	10.53	Serbia and Mont.	12.50
Argentina	10.00	Estonia	7.69	Lithuania	8.82	Sierra Leone	8.16
Armenia	13.10	Ethiopia	13.73	Macedonia	14.10	Slovakia	10.59
Australia	24.23	Finland	6.67	Madagascar	35.46	Slovenia	12.00
Austria	8.43	France	19.35	Malawi	4.10	South Africa	14.12
Azerbaijan	13.13	Gabon	7.37	Malaysia	16.67	South Korea	26.53
Bangladesh	20.18	Gambia	2.56	Mali	9.49	Spain	29.27
Belarus	9.46	Georgia	12.15	Mauritania	16.39	Sri Lanka	25.00
Belgium	18.97	Germany	14.47	Mexico	14.66	Sudan	8.24
Benin	4.79	Ghana	6.31	Moldova	8.82	Sweden	10.00
Bhutan	22.22	Greece	13.68	Mongolia	10.53	Switzerland	6.67
Bolivia	7.91	Guatemala	2.80	Morocco	15.24	Syria	6.35
Bosnia and Herz.	13.89	Guinea	6.32	Mozambique	8.38	Taiwan	17.14
Botswana	4.27	Guinea-Bissau	2.78	Myanmar	15.54	Tajikistan	10.71
Brazil	17.75	Guyana	6.74	Namibia	5.60	Tanzania	12.97
Bulgaria	17.28	Haiti	133.33	Nepal	16.02	Thailand	13.96
Burkina Faso	4.76	Honduras	5.78	Netherlands	18.18	Togo	4.59
Burundi	5.61	Hungary	10.84	New Zealand	80.00	Trin. and Tob.	1.00
Cambodia	19.51	Iceland	63.64	Nicaragua	3.00	Tunisia	14.10
Cameroon	9.29	India	27.22	Niger	8.40	Turkey	14.66
Canada	8.29	Indonesia	32.17	Nigeria	9.85	Turkmenistan	12.62
Central Afr. Rep.	6.70	Iran	15.71	North Korea	..	Uganda	5.92
Chad	11.19	Iraq	13.58	Norway	18.52	Ukraine	14.81
Chile	23.08	Ireland	24.00	Oman	19.64	United Arab. Em.	16.00
China	20.25	Israel	12.93	P. N. Guinea	26.13	United Kingdom	24.00
Colombia	10.86	Italy	15.56	Pakistan	11.26	United States	9.03
Congo	7.50	Jamaica	20.83	Panama	7.80	Uruguay	7.41
Costa Rica	6.83	Japan	19.68	Paraguay	3.28	Uzbekistan	9.28
Côte d'Ivoire	8.26	Jordan	12.68	Peru	10.00	Venezuela	6.97
Croatia	11.84	Kazakhstan	9.55	Philippines	31.65	Viet Nam	19.72
Cuba	35.48	Kenya	13.93	Poland	16.67	Yemen	9.09
Czech Rep.	9.88	Kuwait	4.76	Portugal	26.98	Zambia	4.72
Dem. Rep. Congo	8.89	Kyrgyzstan	8.43	Romania	20.24	Zimbabwe	4.07
Denmark	11.63	Laos	18.02	Russia	16.73		
Dominican Rep.	25.00	Latvia	6.02	Rwanda	5.30		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	8	Code:	PRTAMPH	Reference Year:	2004		
Description:	Threatened amphibian species as percentage of known amphibian species in each country						
Units:	Threatened amphibian species as percentage of known breeding amphibian species in each country						
Source*:	IUCN-The World Conservation Union Species Survival Commission, Conservation International-Center for Applied Biodiversity Science, and NatureServe.						
Logic:	The percent of amphibians threatened gives an estimate of a country's success at preserving its biodiversity.						
Methodology:	The number of amphibian species threatened divided by known amphibian species in the country, expressed as a percent. Threatened species include those that are listed as "Critically Endangered, Endangered, or Vulnerable," but excludes sub-species, introduced species, species whose status is insufficiently known (categorized by the World Conservation Union or IUCN as "data deficient"), those known to be extinct, and those for which status has not been assessed (categorized by IUCN as "not evaluated").						
Mean	13.08	Max	100	2.5 Percentile	0		
Median	4.22	Min	0	97.5 Percentile	74.4		
Albania	12.50	Ecuador	36.47	Lebanon	0.00	Saudi Arabia	0.00
Algeria	10.00	Egypt	0.00	Liberia	7.27	Senegal	0.00
Angola	0.00	El Salvador	25.81	Libya	0.00	Serbia and Mont.	4.17
Argentina	19.35	Estonia	0.00	Lithuania	0.00	Sierra Leone	3.64
Armenia	0.00	Ethiopia	14.29	Macedonia	0.00	Slovakia	0.00
Australia	21.86	Finland	0.00	Madagascar	24.77	Slovenia	10.00
Austria	0.00	France	8.33	Malawi	6.58	South Africa	18.42
Azerbaijan	0.00	Gabon	2.41	Malaysia	22.61	South Korea	6.67
Bangladesh	0.00	Gambia	0.00	Mali	0.00	Spain	11.43
Belarus	0.00	Georgia	8.33	Mauritania	0.00	Sri Lanka	46.81
Belgium	0.00	Germany	0.00	Mexico	54.42	Sudan	0.00
Benin	0.00	Ghana	14.08	Moldova	0.00	Sweden	0.00
Bhutan	14.29	Greece	20.00	Mongolia	0.00	Switzerland	4.76
Bolivia	10.45	Guatemala	54.81	Morocco	16.67	Syria	0.00
Bosnia and Herz.	5.56	Guinea	6.94	Mozambique	4.48	Taiwan	27.27
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	0.00	Tajikistan	0.00
Brazil	15.05	Guyana	5.22	Namibia	2.08	Tanzania	25.48
Bulgaria	0.00	Haiti	92.00	Nepal	6.52	Thailand	2.34
Burkina Faso	0.00	Honduras	45.69	Netherlands	0.00	Togo	14.29
Burundi	23.08	Hungary	0.00	New Zealand	100.00	Trin. and Tob.	27.27
Cambodia	6.98	Iceland	..	Nicaragua	14.71	Tunisia	0.00
Cameroon	26.46	India	28.21	Niger	0.00	Turkey	23.81
Canada	2.27	Indonesia	9.71	Nigeria	12.62	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	21.05	North Korea	7.69	Uganda	9.84
Chad	0.00	Iraq	16.67	Norway	0.00	Ukraine	0.00
Chile	37.74	Ireland	0.00	Oman	0.00	United Arab. Em.	0.00
China	27.30	Israel	0.00	P. N. Guinea	4.22	United Kingdom	0.00
Colombia	29.80	Italy	16.67	Pakistan	0.00	United States	19.39
Congo	0.00	Jamaica	80.95	Panama	27.51	Uruguay	9.30
Costa Rica	34.08	Japan	36.36	Paraguay	1.28	Uzbekistan	0.00
Côte d'Ivoire	16.28	Jordan	0.00	Peru	19.60	Venezuela	23.21
Croatia	10.00	Kazakhstan	9.09	Philippines	48.98	Viet Nam	11.11
Cuba	81.03	Kenya	5.26	Poland	0.00	Yemen	16.67
Czech Rep.	0.00	Kuwait	..	Portugal	0.00	Zambia	1.19
Dem. Rep. Congo	6.19	Kyrgyzstan	0.00	Romania	0.00	Zimbabwe	9.38
Denmark	0.00	Laos	6.15	Russia	0.00		
Dominican Rep.	86.11	Latvia	0.00	Rwanda	21.62		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #:	9	Code:	NBI	Reference Year:	2001		
Description:	National Biodiversity Index						
Units:	Score between 0 and 1 with large values corresponding to high levels of species abundance and small values reflecting low levels of species abundance						
Source*:	Convention on Biological Diversity.						
Logic:	Biodiversity cannot be measured solely in terms of threat. A country's extent of biodiversity is also important to assess. The NBI assesses a country's species richness by measuring species abundance.						
Methodology:	This index represents estimates of a country's richness and endemism in four terrestrial vertebrate classes and vascular plants; vertebrates and plants are ranked equally; index values range between 1 (maximum: Indonesia) and 0 (minimum: Greenland). The NBI includes some adjustment allowing for country size. Countries with land area less than 5,000 km ² are excluded. Overseas territories and dependencies are excluded.						
Mean	0.55	Max	1	2.5 Percentile		0.28	
Median	0.55	Min	0.11	97.5 Percentile		0.87	
Albania	0.53	Ecuador	0.87	Lebanon	0.57	Saudi Arabia	0.28
Algeria	0.31	Egypt	0.33	Liberia	0.56	Senegal	0.51
Angola	0.64	El Salvador	0.62	Libya	0.24	Serbia and Mont.	..
Argentina	0.62	Estonia	0.44	Lithuania	0.42	Sierra Leone	0.65
Armenia	0.56	Ethiopia	0.59	Macedonia	0.55	Slovakia	0.59
Australia	0.85	Finland	0.29	Madagascar	0.81	Slovenia	0.56
Austria	0.47	France	0.42	Malawi	0.63	South Africa	0.71
Azerbaijan	0.53	Gabon	0.64	Malaysia	0.81	South Korea	0.42
Bangladesh	0.54	Gambia	0.60	Mali	0.38	Spain	0.49
Belarus	0.37	Georgia	0.55	Mauritania	0.34	Sri Lanka	0.66
Belgium	0.45	Germany	0.37	Mexico	0.93	Sudan	0.54
Benin	0.62	Ghana	0.65	Moldova	0.45	Sweden	0.30
Bhutan	0.61	Greece	0.55	Mongolia	0.36	Switzerland	0.50
Bolivia	0.72	Guatemala	0.74	Morocco	0.46	Syria	0.47
Bosnia and Herz.	0.53	Guinea	0.60	Mozambique	0.52	Taiwan	..
Botswana	0.46	Guinea-Bissau	0.59	Myanmar	0.63	Tajikistan	0.46
Brazil	0.88	Guyana	0.69	Namibia	0.55	Tanzania	0.67
Bulgaria	0.49	Haiti	0.68	Nepal	0.64	Thailand	0.67
Burkina Faso	0.53	Honduras	0.65	Netherlands	0.41	Togo	0.69
Burundi	0.68	Hungary	0.44	New Zealand	0.52	Trin. and Tob.	0.69
Cambodia	0.57	Iceland	0.11	Nicaragua	0.64	Tunisia	0.41
Cameroon	0.69	India	0.73	Niger	0.41	Turkey	0.57
Canada	0.30	Indonesia	1.00	Nigeria	0.55	Turkmenistan	0.45
Central Afr. Rep.	0.51	Iran	0.47	North Korea	0.37	Uganda	0.66
Chad	0.36	Iraq	0.43	Norway	0.30	Ukraine	0.42
Chile	0.57	Ireland	0.28	Oman	0.36	United Arab. Em.	0.39
China	0.84	Israel	0.60	P. N. Guinea	0.78	United Kingdom	0.32
Colombia	0.94	Italy	0.51	Pakistan	0.50	United States	0.68
Congo	0.65	Jamaica	0.67	Panama	0.79	Uruguay	0.49
Costa Rica	0.82	Japan	0.64	Paraguay	0.61	Uzbekistan	0.44
Côte d'Ivoire	0.63	Jordan	0.47	Peru	0.84	Venezuela	0.85
Croatia	0.54	Kazakhstan	0.44	Philippines	0.79	Viet Nam	0.68
Cuba	0.70	Kenya	0.64	Poland	0.37	Yemen	0.39
Czech Rep.	0.50	Kuwait	0.22	Portugal	0.51	Zambia	0.54
Dem. Rep. Congo	0.65	Kyrgyzstan	0.41	Romania	0.42	Zimbabwe	0.59
Denmark	0.40	Laos	0.62	Russia	0.45		
Dominican Rep.	0.66	Latvia	0.42	Rwanda	0.73		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	10	Code:	ANTH10	Reference Year:	2004
Description:	Percentage of total land area (including inland waters) having very low anthropogenic impact				
Units:	Percentage of a country's land and inland waters having very low anthropogenic impact ("wildness" score of 9 or below on the Human Impact Index 58-point scale)				
Source*:	Center for International Earth Science Information Network (CIESIN), Columbia University.				
Logic:	Agricultural activities and the built environment have high impacts on the natural environment. The conversion of natural vegetation for human activity has important ecological implications. The percentage of a country's land area that has low anthropogenic impact is a measure of the degree to which wild lands, which are important for biodiversity conservation, still exist in that country.				
Methodology:	The HII measures anthropogenic impact of land and inland waters based on human land uses, human access from roads, railways or major rivers, electrical infrastructure, and population density. A scoring system is applied to each of 9 gridded data sets according to the degree of "wildness" of the grid tile. The 9 individual scores are then aggregated and normalized using the total area of the country. Areas that receive less than or equal to 9 points (out of a total of 58 points) on the scoring metric are included. The underlying data sets are: World Roads (US Dept. of Defense National Imaging and Mapping Agency, NIMA, VMAP0), World Railroads (NIMA, VMAP0), Navigable Rivers (NIMA, VMAP0-hydropoly data set), Coastlines (NIMA, coastline data), GPW3 Population Density Data (CIESIN Gridded Population of the World v3 Population Density Grid adjusted to match UN figures), GRUMP v1 Urban Extent Data (CIESIN Gridded Rural Urban Mapping Project, Urban extent data), DMSP Nighttime Stable Lights (US Dept. of Defense, Defense Meteorological Satellite Program), and Cropland Data (SAGE Navin Ramankutty, Center for Sustainability and Global Environment). The data are not directly comparable to the ANTH10 data shown in the 2002 ESI report due to improvements and changes in the underlying data sources.				
Mean	20.56	Max	100	2.5 Percentile	0
Median	3.51	Min	0	97.5 Percentile	92.18

Albania	0.44	Ecuador	32.87	Lebanon	0.00	Saudi Arabia	49.29
Algeria	84.25	Egypt	86.37	Liberia	8.13	Senegal	7.47
Angola	49.04	El Salvador	0.02	Libya	92.46	Serbia and Mont.	0.08
Argentina	46.51	Estonia	4.18	Lithuania	0.00	Sierra Leone	0.02
Armenia	2.65	Ethiopia	18.49	Macedonia	3.44	Slovakia	0.33
Australia	86.84	Finland	40.46	Madagascar	20.45	Slovenia	2.41
Austria	0.02	France	4.37	Malawi	24.28	South Africa	55.56
Azerbaijan	46.68	Gabon	80.78	Malaysia	29.48	South Korea	0.04
Bangladesh	0.21	Gambia	0.00	Mali	64.55	Spain	2.78
Belarus	0.01	Georgia	0.46	Mauritania	93.84	Sri Lanka	0.22
Belgium	0.00	Germany	0.07	Mexico	24.17	Sudan	44.24
Benin	1.54	Ghana	0.98	Moldova	0.00	Sweden	43.62
Bhutan	2.49	Greece	0.71	Mongolia	91.93	Switzerland	3.41
Bolivia	66.63	Guatemala	7.98	Morocco	17.90	Syria	0.21
Bosnia and Herz.	0.00	Guinea	0.11	Mozambique	31.55	Taiwan	0.10
Botswana	77.19	Guinea-Bissau	4.59	Myanmar	16.80	Tajikistan	32.83
Brazil	51.70	Guyana	85.12	Namibia	91.10	Tanzania	14.35
Bulgaria	0.01	Haiti	0.20	Nepal	7.16	Thailand	0.87
Burkina Faso	3.33	Honduras	15.00	Netherlands	0.00	Togo	0.00
Burundi	3.63	Hungary	0.12	New Zealand	48.04	Trin. and Tob.	0.56
Cambodia	14.08	Iceland	86.88	Nicaragua	18.62	Tunisia	33.98
Cameroon	16.49	India	3.82	Niger	77.06	Turkey	0.72
Canada	88.23	Indonesia	39.95	Nigeria	0.81	Turkmenistan	43.69
Central Afr. Rep.	62.35	Iran	18.40	North Korea	0.09	Uganda	17.56
Chad	65.66	Iraq	9.51	Norway	41.00	Ukraine	0.36
Chile	53.64	Ireland	0.10	Oman	76.24	United Arab. Em.	0.46
China	35.55	Israel	0.67	P. N. Guinea	46.17	United Kingdom	0.13
Colombia	51.68	Italy	0.53	Pakistan	12.26	United States	45.32
Congo	76.27	Jamaica	0.13	Panama	16.91	Uruguay	2.03
Costa Rica	0.11	Japan	1.00	Paraguay	56.45	Uzbekistan	48.06
Côte d'Ivoire	4.00	Jordan	46.61	Peru	56.76	Venezuela	52.01
Croatia	1.65	Kazakhstan	55.55	Philippines	0.85	Viet Nam	0.12
Cuba	1.36	Kenya	45.95	Poland	0.03	Yemen	49.09
Czech Rep.	0.00	Kuwait	0.05	Portugal	0.63	Zambia	22.87
Dem. Rep. Congo	25.84	Kyrgyzstan	18.23	Romania	0.12	Zimbabwe	2.51
Denmark	0.55	Laos	6.92	Russia	72.38		
Dominican Rep.	0.12	Latvia	0.55	Rwanda	1.85		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 11 **Code:** ANTH40 **Reference Year:** 2004

Description: Percentage of total land area (including inland waters) having very high anthropogenic impact

Units: Percentage of a country's land and inland waters having very high anthropogenic impact ("wildness" score of 36 or higher on the Human Impact Index 58-point scale)

Source*: Center for International Earth Science Information Network (CIESIN), Columbia University.

Logic: Agricultural activities and the built environment have high impacts on the natural environment. The conversion of natural vegetation for human activity has important ecological implications. The percentage of a country's land area that has high anthropogenic impact is a measure of the degree to which a country's land area is dominated by high intensity land-uses.

Methodology: The HII measures anthropogenic impact of land and inland waters based on human land uses, human access from roads, railways or major rivers, electrical infrastructure, and population density. A scoring system is applied to each of 9 gridded data sets according to the degree of "wildness" of the grid tile. The 9 individual scores are then aggregated and normalized using the total area of the country. Areas that receive greater or equal to 36 points (out of a total of 58) on the scoring metric are included. The underlying data sets are: World Roads (US Dept. of Defense National Imaging and Mapping Agency, NIMA, VMAP0), World Railroads (NIMA, VMAP0), Navigable Rivers (NIMA, VMAP0-hydrology data set), Coastlines (NIMA, coastline data), GPW3 Population Density Data (CIESIN Gridded Population of the World v3 Population Density Grid adjusted to match UN figures), GRUMP v1 Urban Extent Data (CIESIN Gridded Rural Urban Mapping Project, Urban extent data), DMSP Nighttime Stable Lights (US Dept. of Defense, Defense Meteorological Satellite Program), and Cropland Data (SAGE Navin Ramankutty, Center for Sustainability and Global Environment). The data are not directly comparable to the ANTH40 data shown in the 2002 ESI report due to improvements and changes in the underlying data sources.

Mean	8.38	Max	100	2.5 Percentile	0
Median	1.53	Min	0	97.5 Percentile	66.3

Albania	3.25	Ecuador	2.19	Lebanon	18.08	Saudi Arabia	0.58
Algeria	0.58	Egypt	1.85	Liberia	0.06	Senegal	0.58
Angola	0.04	El Salvador	11.19	Libya	0.27	Serbia and Mont.	7.44
Argentina	1.00	Estonia	3.97	Lithuania	5.79	Sierra Leone	0.19
Armenia	2.47	Ethiopia	0.07	Macedonia	6.63	Slovakia	9.44
Australia	0.24	Finland	2.56	Madagascar	0.04	Slovenia	7.35
Austria	7.75	France	10.99	Malawi	0.33	South Africa	1.85
Azerbaijan	3.03	Gabon	0.07	Malaysia	2.94	South Korea	14.60
Bangladesh	4.67	Gambia	4.15	Mali	0.04	Spain	11.27
Belarus	4.43	Georgia	2.21	Mauritania	0.02	Sri Lanka	4.25
Belgium	28.57	Germany	12.29	Mexico	2.50	Sudan	0.11
Benin	0.31	Ghana	0.93	Moldova	6.03	Sweden	3.77
Bhutan	0.00	Greece	11.21	Mongolia	0.01	Switzerland	11.47
Bolivia	0.12	Guatemala	2.41	Morocco	2.04	Syria	3.10
Bosnia and Herz.	1.74	Guinea	0.11	Mozambique	0.12	Taiwan	29.18
Botswana	0.08	Guinea-Bissau	0.22	Myanmar	0.62	Tajikistan	2.08
Brazil	0.81	Guyana	0.12	Namibia	0.04	Tanzania	0.14
Bulgaria	6.66	Haiti	1.39	Nepal	1.08	Thailand	4.06
Burkina Faso	0.12	Honduras	1.44	Netherlands	28.30	Togo	0.59
Burundi	0.51	Hungary	11.13	New Zealand	1.93	Trin. and Tob.	32.06
Cambodia	0.24	Iceland	0.41	Nicaragua	1.19	Tunisia	3.57
Cameroon	0.10	India	4.63	Niger	0.02	Turkey	3.94
Canada	0.82	Indonesia	1.33	Nigeria	0.57	Turkmenistan	0.63
Central Afr. Rep.	0.01	Iran	1.80	North Korea	0.80	Uganda	0.40
Chad	0.01	Iraq	2.08	Norway	3.02	Ukraine	6.64
Chile	1.09	Ireland	8.23	Oman	0.73	United Arab. Em.	5.02
China	1.09	Israel	21.65	P. N. Guinea	0.08	United Kingdom	21.71
Colombia	1.48	Italy	17.76	Pakistan	2.88	United States	6.24
Congo	0.11	Jamaica	17.20	Panama	3.64	Uruguay	1.68
Costa Rica	5.92	Japan	21.96	Paraguay	0.47	Uzbekistan	2.70
Côte d'Ivoire	0.31	Jordan	1.65	Peru	0.45	Venezuela	1.37
Croatia	6.91	Kazakhstan	0.39	Philippines	2.73	Viet Nam	1.74
Cuba	6.34	Kenya	0.31	Poland	9.22	Yemen	0.17
Czech Rep.	11.52	Kuwait	10.47	Portugal	10.12	Zambia	0.21
Dem. Rep. Congo	0.06	Kyrgyzstan	1.08	Romania	4.72	Zimbabwe	0.68
Denmark	21.19	Laos	0.25	Russia	0.91		
Dominican Rep.	5.39	Latvia	3.61	Rwanda	0.43		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #:	12	Code:	WQ_DO	Reference Year:	MRYA 1993-2002
Description:	Dissolved oxygen concentration				
Units:	Milligrams dissolved oxygen per liter water				
Source*:	United Nations Environment Programme (UNEP), Organisation for Economic Co-operation and Development (OECD), European Environment Agency (EEA), plus country data.				
Logic:	A measure of eutrophication, which has an important impact on the health of aquatic resources and ecosystems. High levels correspond to low eutrophication.				
Methodology:	For GEMS water data: for Dissolved Oxygen (DO), three codes are chosen: 08101, 08102 and 08107. Among them, 08101 was used in the ESI 2002 report and 08107 was used only by New Zealand. The value for each country was the mean of all the stations. For those countries that had both 08101 and 08102 values, the mean of both values was calculated as the value for the country. The data range from 1994 to 2002. OECD data range from 1997 to 1999. EEA data cover the period between 2000 and 2002. For some countries, the original data contained a detection flag if the data fell below the detection limit, or the smallest concentration of a substance that can still be detected with at least 95% probability. The limit of determination was the smallest concentration of a substance that can still be determined as being different from 0 with at least 95% probability. If the limit of detection flag was set, it can be assumed with probability >=95% that the substance was not in the water. In order to do the calculations, those observations were set to 0. GEMS water data was the main data source and OECD data and EEA data were used to fill in the blanks. If a country had both OECD and EEA values, OECD data were used. For water quality of lakes, Oxygen Concentration as equivalent to DO was used. For Romania no OECD data were available and the EEA value of zero was used instead.				

Mean	8.67	Max	13.76	2.5 Percentile	3.46		
Median	9.17	Min	0	97.5 Percentile	11.31		
Albania	[7.94]	Ecuador	[8.02]	Lebanon	[7.97]	Saudi Arabia	[8.21]
Algeria	[7.14]	Egypt	[8.13]	Liberia	[6.15]	Senegal	[8.82]
Angola	[5.82]	El Salvador	[6.39]	Libya	[7.04]	Serbia and Mont.	[6.95]
Argentina	8.53	Estonia	10.08	Lithuania	3.86	Sierra Leone	[5.1]
Armenia	[6.6]	Ethiopia	[5.09]	Macedonia	8.83	Slovakia	9.99
Australia	[9.38]	Finland	10.97	Madagascar	[4.7]	Slovenia	10.57
Austria	10.45	France	10.18	Malawi	[7.22]	South Africa	[8.6]
Azerbaijan	[6.85]	Gabon	[8.31]	Malaysia	[7.51]	South Korea	11.01
Bangladesh	6.70	Gambia	[7.24]	Mali	8.47	Spain	8.34
Belarus	[6.81]	Georgia	[6.88]	Mauritania	[8.32]	Sri Lanka	[8.13]
Belgium	8.55	Germany	10.07	Mexico	6.10	Sudan	[7.61]
Benin	[5.54]	Ghana	6.80	Moldova	[4.7]	Sweden	9.73
Bhutan	[6.63]	Greece	11.30	Mongolia	[7.4]	Switzerland	10.99
Bolivia	[8.67]	Guatemala	[7.93]	Morocco	6.34	Syria	[7.13]
Bosnia and Herz.	9.51	Guinea	[6.8]	Mozambique	[5.22]	Taiwan	6.10
Botswana	[8.21]	Guinea-Bissau	[6.75]	Myanmar	[6.03]	Tajikistan	[4.67]
Brazil	[8.14]	Guyana	[8.47]	Namibia	[8.44]	Tanzania	[6.28]
Bulgaria	8.28	Haiti	[4.61]	Nepal	[6.68]	Thailand	[6.29]
Burkina Faso	[6.55]	Honduras	[6.76]	Netherlands	9.78	Togo	[7.07]
Burundi	[4.68]	Hungary	5.50	New Zealand	10.72	Trin. and Tob.	[8.22]
Cambodia	[5.82]	Iceland	[11.51]	Nicaragua	[9.13]	Tunisia	[6.78]
Cameroon	[7.54]	India	6.43	Niger	[6.4]	Turkey	7.43
Canada	8.13	Indonesia	3.31	Nigeria	[4.53]	Turkmenistan	[7.34]
Central Afr. Rep.	[7.03]	Iran	[6.68]	North Korea	[7.43]	Uganda	[8]
Chad	[6.08]	Iraq	[5.35]	Norway	[11.83]	Ukraine	[6.78]
Chile	[7.69]	Ireland	10.90	Oman	[10.35]	United Arab. Em.	[8.78]
China	8.62	Israel	[9.56]	P. N. Guinea	[5.89]	United Kingdom	10.38
Colombia	[7.78]	Italy	9.77	Pakistan	6.77	United States	11.32
Congo	[7.9]	Jamaica	[7.26]	Panama	[8.53]	Uruguay	[8.3]
Costa Rica	[8.79]	Japan	9.80	Paraguay	[7.79]	Uzbekistan	[6.75]
Côte d'Ivoire	[7.16]	Jordan	10.50	Peru	[6.86]	Venezuela	[6.91]
Croatia	[8.28]	Kazakhstan	[7.17]	Philippines	7.42	Viet Nam	5.30
Cuba	8.10	Kenya	[6.09]	Poland	10.12	Yemen	[7.29]
Czech Rep.	10.40	Kuwait	[9.2]	Portugal	13.76	Zambia	[6.02]
Dem. Rep. Congo	[6.08]	Kyrgyzstan	[8.03]	Romania	0.00	Zimbabwe	[7.38]
Denmark	10.42	Laos	6.96	Russia	9.50		
Dominican Rep.	[7.65]	Latvia	8.58	Rwanda	[5.95]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 13 **Code:** WQ_EC **Reference Year:** MRYA 1994-2002

Description: Electrical conductivity

Units: Micro-Siemens per centimeter

Source*: United Nations Environment Programme (UNEP) and European Environment Agency (EEA), plus country data.

Logic: A widely used bulk measure of metals concentration and salinity. High levels of conductivity correspond to high concentrations of metals.

Methodology: For GEMS water data: for Electrical Conductivity (EC), three codes were chosen: 02040, 02041 and 02049. Among them, 02041 was used in the ESI 2002 report and 02049 was used only by New Zealand. The value for each country was the average across all stations. For countries that have both 02040 and 02041 values, the average of both values was calculated. OECD data do not include data for the European Community and the EEA data only cover lakes for the European Community.

	Mean		Max		2.5 Percentile		22.7
	Median		Min		97.5 Percentile		2243.67
Albania	[716.23]	Ecuador	[338.08]	Lebanon	[1084.23]	Saudi Arabia	[1305.8]
Algeria	[854.22]	Egypt	[1092.39]	Liberia	[565.87]	Senegal	729.63
Angola	[362.45]	El Salvador	[310.47]	Libya	[696.53]	Serbia and Mont.	[1099.14]
Argentina	118.62	Estonia	[598.03]	Lithuania	607.00	Sierra Leone	[280.49]
Armenia	[662.96]	Ethiopia	[571.52]	Macedonia	[579.19]	Slovakia	[497.32]
Australia	[267.23]	Finland	53.14	Madagascar	[-18.36]	Slovenia	[369.59]
Austria	317.03	France	321.57	Malawi	[302]	South Africa	[863.71]
Azerbaijan	[934.89]	Gabon	[149.19]	Malaysia	[504.48]	South Korea	145.29
Bangladesh	231.60	Gambia	[478.01]	Mali	120.77	Spain	1086.9
Belarus	[547.75]	Georgia	[560.12]	Mauritania	[500.81]	Sri Lanka	[722.22]
Belgium	573.62	Germany	863.30	Mexico	1239.63]	Sudan	[346.54]
Benin	[621.56]	Ghana	[722.62]	Moldova	[883.1]	Sweden	152.97
Bhutan	[616.32]	Greece	385.96	Mongolia	[525.36]	Switzerland	285.95
Bolivia	[235.33]	Guatemala	[648.12]	Morocco	1620.5	Syria	[683.3]
Bosnia and Herz.	[836.08]	Guinea	[314.35]	Mozambique	[-7.88]	Taiwan	2244.0
Botswana	[341.58]	Guinea-Bissau	[347.2]	Myanmar	[233.22]	Tajikistan	[553.91]
Brazil	[296.74]	Guyana	[46.38]	Namibia	[319.41]	Tanzania	[922.37]
Bulgaria	[543.5]	Haiti	[363.24]	Nepal	[637.2]	Thailand	[490.41]
Burkina Faso	[842.34]	Honduras	[770.5]	Netherlands	623.12	Togo	[714.14]
Burundi	[683.86]	Hungary	711.71	New Zealand	111.54	Trin. and Tob.	[880.37]
Cambodia	13.62	Iceland	[85.58]	Nicaragua	[-30.81]	Tunisia	[850.13]
Cameroon	[306.19]	India	2240.70	Niger	[588.14]	Turkey	2247.4
Canada	153.29	Indonesia	167.13	Nigeria	[232.63]	Turkmenistan	[897.86]
Central Afr. Rep.	[182.76]	Iran	[627.04]	North Korea	[1168.8]	Uganda	[35.71]
Chad	[279.66]	Iraq	[1057.17]	Norway	[-173.27]	Ukraine	[1190.95]
Chile	[417.36]	Ireland	457.10	Oman	[613.53]	United Arab. Em.	[849.43]
China	522.78	Israel	[730.53]	P. N. Guinea	[-51.86]	United Kingdom	368.07
Colombia	[565.76]	Italy	505.52	Pakistan	492.46	United States	663.27
Congo	[-23.12]	Jamaica	[309.51]	Panama	[367.93]	Uruguay	[380.05]
Costa Rica	[146.88]	Japan	163.43	Paraguay	[59.16]	Uzbekistan	[1158.18]
Côte d'Ivoire	[620.07]	Jordan	1245.83	Peru	[809.21]	Venezuela	[737.26]
Croatia	[387]	Kazakhstan	[1038.84]	Philippines	136.70	Viet Nam	559.87
Cuba	515.00	Kenya	[325.88]	Poland	969.12	Yemen	[327.79]
Czech Rep.	[1150.5]	Kuwait	[405.71]	Portugal	52.10	Zambia	[-13.87]
Dem. Rep. Congo	[155.57]	Kyrgyzstan	[745.88]	Romania	[657.24]	Zimbabwe	[914.33]
Denmark	382.92	Laos	20.88	Russia	39.14		
Dominican Rep.	[960.72]	Latvia	685.59	Rwanda	[218.1]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 14 **Code:** WQ_PH **Reference Year:** MRYA 1994-2003

Description: Phosphorus concentration

Units: Milligrams phosphorus per liter water

Source*: United Nations Environment Programme (UNEP), Organisation for Economic Co-operation and Development (OECD), European Environment Agency (EEA), plus country data.

Logic: A measure of eutrophication, which affects aquatic resources health. High levels correspond to high levels of eutrophication.

Methodology: For GEMS water data: for Phosphorus Concentration (PH), three codes were chosen: 15403, 15405 and 15406. Among them 15405 was used in the ESI 2002 report and 15406 was used only by New Zealand. The value for each country represents the average across all stations. 15403 values were used to fill in the blanks. For Japan, phosphorus concentration values for the 1997-1999 time period were available for both codes, but deviated substantially. Therefore, only data for code 15405 were used; the same as in the ESI 2002. The OECD data cover 1997 to 1999. The EEA data cover 2000-2002. For some countries, the original data contained a detection flag if the data fell below the detection limit, or the smallest concentration of a substance that can still be detected with at least 95% probability. The limit of determination was defined as the smallest concentration of a substance that can still be determined as being different from 0 with at least 95% probability. If the limit of detection flag was set, it can be assumed with a probability >=95% that the substance was not in the water. In order to do the calculations, those observations were set to 0. Two stations in Germany, stations NW08 and NW041, had abnormally large values for PH in 2002 indicating an error. These values were not included. GEMS data took precedence over OECD and EEA data.

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	0.16		0.67		0.01		
	0.12		0		0.55		
Albania	[0.14]	Ecuador	[0.12]	Lebanon	[0.25]	Saudi Arabia	[0.15]
Algeria	[0.31]	Egypt	[0.19]	Liberia	[0.18]	Senegal	[0.22]
Angola	[0.15]	El Salvador	[0.15]	Libya	[0.18]	Serbia and Mont.	[0.2]
Argentina	0.09	Estonia	0.00	Lithuania	0.08	Sierra Leone	[0.17]
Armenia	[0.06]	Ethiopia	[0.22]	Macedonia	0.02	Slovakia	0.19
Australia	[0.08]	Finland	0.01	Madagascar	[0.17]	Slovenia	0.09
Austria	0.08	France	0.17	Malawi	[0.19]	South Africa	[0.21]
Azerbaijan	[0.19]	Gabon	[0.07]	Malaysia	[0.09]	South Korea	0.13
Bangladesh	[0.29]	Gambia	[0.23]	Mali	0.15	Spain	0.23
Belarus	[0.12]	Georgia	[0.13]	Mauritania	[0.17]	Sri Lanka	[0.2]
Belgium	0.32	Germany	0.16	Mexico	0.10	Sudan	[0.18]
Benin	[0.17]	Ghana	[0.24]	Moldova	[0.14]	Sweden	0.11
Bhutan	[0.03]	Greece	0.39	Mongolia	[0.04]	Switzerland	0.07
Bolivia	[0.09]	Guatemala	[0.2]	Morocco	0.46	Syria	[0.28]
Bosnia and Herz.	0.10	Guinea	[0.22]	Mozambique	[0.14]	Taiwan	0.18
Botswana	[0.13]	Guinea-Bissau	[0.15]	Myanmar	[0.11]	Tajikistan	[0.11]
Brazil	[0.17]	Guyana	[0.02]	Namibia	[0.17]	Tanzania	[0.22]
Bulgaria	[0.28]	Haiti	[0.28]	Nepal	[0.19]	Thailand	[0.22]
Burkina Faso	[0.15]	Honduras	[0.21]	Netherlands	0.27	Togo	[0.26]
Burundi	[0.22]	Hungary	0.12	New Zealand	0.05	Trin. and Tob.	[0.17]
Cambodia	0.04	Iceland	[0.02]	Nicaragua	[0.06]	Tunisia	[0.16]
Cameroon	[0.05]	India	0.20	Niger	[0.12]	Turkey	0.29
Canada	0.01	Indonesia	0.57	Nigeria	[0.29]	Turkmenistan	[0.11]
Central Afr. Rep.	[0.11]	Iran	[0.28]	North Korea	[0.14]	Uganda	[0.22]
Chad	[0.14]	Iraq	[0.22]	Norway	0.01	Ukraine	[0.12]
Chile	[0.19]	Ireland	0.08	Oman	[0.08]	United Arab. Em.	[0.12]
China	0.28	Israel	[0.17]	P. N. Guinea	[0.16]	United Kingdom	0.09
Colombia	[0.1]	Italy	0.14	Pakistan	0.67	United States	0.13
Congo	[0.1]	Jamaica	[0.11]	Panama	[0.07]	Uruguay	[0.09]
Costa Rica	[0.13]	Japan	0.06	Paraguay	[0.21]	Uzbekistan	[0.2]
Côte d'Ivoire	[0.19]	Jordan	[0.19]	Peru	[0.14]	Venezuela	[0.21]
Croatia	[0.12]	Kazakhstan	[0.11]	Philippines	[0.26]	Viet Nam	0.12
Cuba	0.02	Kenya	[0.21]	Poland	0.24	Yemen	[0.19]
Czech Rep.	0.32	Kuwait	[0.23]	Portugal	[0.28]	Zambia	[0.17]
Dem. Rep. Congo	[0.17]	Kyrgyzstan	[0.13]	Romania	[0.16]	Zimbabwe	0.01
Denmark	0.14	Laos	0.12	Russia	0.01		
Dominican Rep.	[0.16]	Latvia	0.04	Rwanda	[0.16]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	15	Code:	WQ_SS	Reference Year:	MRYA 1994-2003
Description:	Suspended solids				
Units:	Milligrams suspended solids per liter water				
Source*:	United Nations Environment Programme (UNEP) plus country data.				
Logic:	A measure of water quality and turbidity.				
Methodology:	For GEMS water data: for Suspended Solids (SS), two codes are chosen: 10401 and 10408. A comparison of the values for the two codes yielded substantial differences. Therefore only code 10401, the same as in the ESI 2002 report, was used. To obtain data several methods were used: 10401:SUSPENDED SOLIDS, 105 DEG. Gravimetric method. If oil and grease are present, the sample is blended. If large particles, either floating or submerged, are present, they are excluded from the sample. The sample aliquot is passed through a pre-ignited and pre-weighed Whatman GF/C filter. The filter containing the residue is placed in a porcelain dish, oven-dried at 105 o C for 2.5 hours, cooled 15 minutes in a desiccator, and weighed to a constant weight. The method detection limit is 10 mg/L. 10408:SUSPENDED SOLIDS, 180 DEG. Gravimetric method. If oil and grease are present, the sample is blended. If large particles, either floating or submerged, are present, they are excluded from the sample. A sample aliquot is passed through a pre-ignited Whatman GF/C filter. The filter containing the residue is placed in a porcelain dish, oven-dried at 180 o C for 2.5 hours, cooled 15 minutes in a desiccator and weighed to a constant weight. The method detection limit is 10 mg/L.				
Mean	3.74	Max	7.97	2.5 Percentile	0.98
Median	3.92	Min	0.64	97.5 Percentile	6.33
Albania	..	Ecuador	..	Lebanon	..
Algeria	..	Egypt	..	Liberia	..
Angola	..	El Salvador	..	Libya	..
Argentina	4.35	Estonia	..	Lithuania	..
Armenia	..	Ethiopia	..	Macedonia	..
Australia	..	Finland	1.14	Madagascar	..
Austria	..	France	3.24	Malawi	..
Azerbaijan	..	Gabon	..	Malaysia	..
Bangladesh	4.08	Gambia	..	Mali	..
Belarus	..	Georgia	..	Mauritania	..
Belgium	3.42	Germany	..	Mexico	5.17
Benin	..	Ghana	4.55	Moldova	..
Bhutan	..	Greece	..	Mongolia	..
Bolivia	..	Guatemala	..	Morocco	5.31
Bosnia and Herz.	..	Guinea	..	Mozambique	..
Botswana	..	Guinea-Bissau	..	Myanmar	..
Brazil	..	Guyana	..	Namibia	..
Bulgaria	..	Haiti	..	Nepal	..
Burkina Faso	..	Honduras	..	Netherlands	3.26
Burundi	..	Hungary	..	New Zealand	..
Cambodia	4.03	Iceland	..	Nicaragua	..
Cameroon	..	India	1.83	Niger	..
Canada	0.64	Indonesia	5.37	Nigeria	..
Central Afr. Rep.	..	Iran	..	North Korea	..
Chad	..	Iraq	..	Norway	..
Chile	..	Ireland	..	Oman	..
China	7.97	Israel	..	P. N. Guinea	..
Colombia	..	Italy	..	Pakistan	5.54
Congo	..	Jamaica	..	Panama	..
Costa Rica	..	Japan	2.30	Paraguay	..
Côte d'Ivoire	..	Jordan	4.50	Peru	..
Croatia	..	Kazakhstan	..	Philippines	3.81
Cuba	..	Kenya	..	Poland	3.33
Czech Rep.	..	Kuwait	..	Portugal	..
Dem. Rep. Congo	..	Kyrgyzstan	..	Romania	..
Denmark	..	Laos	4.40	Russia	2.86
Dominican Rep.	..	Latvia	..	Rwanda	..
				Saudi Arabia	..
				Senegal	..
				Serbia and Mont.	..
				Sierra Leone	..
				Slovakia	3.18
				Slovenia	..
				South Africa	..
				South Korea	2.21
				Spain	..
				Sri Lanka	..
				Sudan	..
				Sweden	..
				Switzerland	4.06
				Syria	..
				Taiwan	5.25
				Tajikistan	..
				Tanzania	..
				Thailand	..
				Togo	..
				Trin. and Tob.	..
				Tunisia	..
				Turkey	2.10
				Turkmenistan	..
				Uganda	..
				Ukraine	..
				United Arab. Em.	..
				United Kingdom	2.26
				United States	..
				Uruguay	..
				Uzbekistan	..
				Venezuela	..
				Viet Nam	4.63
				Yemen	..
				Zambia	..
				Zimbabwe	..

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	16	Code:	WATAVL	Reference Year:	1961-1995 (long-term average)		
Description:	Freshwater availability per capita						
Units:	Thousand cubic meters per person						
Source*:	Center for Environmental System Research, Kassel University.						
Logic:	The per capita volume of available water resources for a country is an important indicator of environmental services and the ability to support the needs of the population.						
Methodology:	The total per capita water availability was measured as the sum of internal renewable water per capita (average annual surface runoff and groundwater recharge generated from endogenous precipitation, taking into account evaporation from lakes and wetlands) and per capita water inflow from other countries. These data were derived from the WaterGap 2.1 gridded hydrological model developed by the Center for Environmental Systems Research, Kassel University, Germany. A special run of the model was performed in order to derive country-level estimates of water availability in a country. It should be noted that the size of the grid cells (0.5 x 0.5 degree) does not accurately capture small countries. However, the fact that the model itself is based on over 30 years of global hydrological data means that the data are more comparable than similar country water resources estimates published elsewhere.						
Mean	26.99	Max	543.29	2.5 Percentile	0.56		
Median	7.51	Min	-0.01	97.5 Percentile	212.63		
Albania	7.13	Ecuador	29.52	Lebanon	0.88	Saudi Arabia	0.35
Algeria	0.76	Egypt	2.18	Liberia	75.03	Senegal	3.34
Angola	140.46	El Salvador	3.40	Libya	1.43	Serbia and Mont.	17.93
Argentina	27.27	Estonia	12.88	Lithuania	8.24	Sierra Leone	27.94
Armenia	1.45	Ethiopia	2.51	Macedonia	2.87	Slovakia	14.41
Australia	33.20	Finland	18.01	Madagascar	20.17	Slovenia	14.98
Austria	10.84	France	4.11	Malawi	6.57	South Africa	1.48
Azerbaijan	3.11	Gabon	192.75	Malaysia	20.24	South Korea	1.25
Bangladesh	9.65	Gambia	7.98	Mali	7.02	Spain	2.27
Belarus	4.81	Georgia	8.10	Mauritania	8.25	Sri Lanka	1.86
Belgium	1.87	Germany	2.53	Mexico	4.62	Sudan	6.44
Benin	7.71	Ghana	3.03	Moldova	5.77	Sweden	15.77
Bhutan	22.12	Greece	4.47	Mongolia	28.26	Switzerland	5.55
Bolivia	80.90	Guatemala	15.00	Morocco	0.68	Syria	2.50
Bosnia and Herz.	16.03	Guinea	19.29	Mozambique	18.20	Taiwan	1.74
Botswana	19.70	Guinea-Bissau	21.84	Myanmar	22.21	Tajikistan	11.03
Brazil	53.07	Guyana	299.98	Namibia	54.75	Tanzania	6.71
Bulgaria	23.09	Haiti	1.55	Nepal	6.63	Thailand	8.59
Burkina Faso	0.96	Honduras	18.71	Netherlands	5.98	Togo	3.80
Burundi	2.38	Hungary	11.61	New Zealand	79.88	Trin. and Tob.	1.91
Cambodia	45.74	Iceland	301.37	Nicaragua	32.07	Tunisia	0.66
Cameroon	19.80	India	1.94	Niger	8.15	Turkey	2.85
Canada	86.59	Indonesia	11.50	Nigeria	2.95	Turkmenistan	10.04
Central Afr. Rep.	57.73	Iran	1.49	North Korea	2.78	Uganda	3.88
Chad	8.07	Iraq	3.34	Norway	60.77	Ukraine	1.93
Chile	20.28	Ireland	13.72	Oman	1.35	United Arab. Em.	0.38
China	1.88	Israel	0.62	P. N. Guinea	151.70	United Kingdom	3.21
Colombia	90.58	Italy	2.14	Pakistan	1.01	United States	8.43
Congo	543.29	Jamaica	3.49	Panama	28.89	Uruguay	265.04
Costa Rica	23.17	Japan	2.62	Paraguay	110.27	Uzbekistan	2.60
Côte d'Ivoire	8.40	Jordan	0.37	Peru	65.42	Venezuela	60.50
Croatia	33.59	Kazakhstan	9.54	Philippines	3.94	Viet Nam	8.70
Cuba	2.28	Kenya	2.65	Poland	1.75	Yemen	30.36
Czech Rep.	2.00	Kuwait	-0.01	Portugal	5.05	Zambia	17.15
Dem. Rep. Congo	30.36	Kyrgyzstan	6.14	Romania	9.20	Zimbabwe	7.31
Denmark	2.78	Laos	74.99	Russia	24.65		
Dominican Rep.	2.23	Latvia	13.11	Rwanda	1.88		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 17 **Code:** GRDAVL **Reference Year:** 2003

Description: Internal groundwater availability per capita

Units: Thousand cubic meters per capita

Source*: United Nations Food and Agricultural Organization (FAO).

Logic: Groundwater is an important part of the picture of a country's water resources. The more groundwater is available per capita, the higher the probability that a country can sustainably manage its groundwater resources, e.g. for agricultural production.

Methodology: The groundwater data are divided by population data and expressed in thousand cubic meters per capita.

	Mean		4.24	Max	110.27	2.5 Percentile	0.04
	Median		0.82	Min	0.00	97.5 Percentile	19.52
Albania	1.92	Ecuador	10.00	Lebanon	0.71	Saudi Arabia	0.09
Algeria	0.05	Egypt	0.02	Liberia	17.21	Senegal	0.70
Angola	5.42	El Salvador	0.92	Libya	0.09	Serbia and Mont.	..
Argentina	3.38	Estonia	2.97	Lithuania	0.35	Sierra Leone	9.67
Armenia	1.31	Ethiopia	0.55	Macedonia	..	Slovakia	0.32
Australia	3.58	Finland	0.42	Madagascar	3.14	Slovenia	6.76
Austria	0.74	France	1.67	Malawi	0.12	South Africa	0.10
Azerbaijan	0.78	Gabon	45.89	Malaysia	2.50	South Korea	..
Bangladesh	0.15	Gambia	0.32	Mali	1.49	Spain	0.70
Belarus	1.84	Georgia	0.01	Mauritania	0.10	Sri Lanka	0.40
Belgium	0.09	Germany	0.21	Mexico	1.31	Sudan	0.18
Benin	0.25	Ghana	2.14	Moldova	0.10	Sweden	2.22
Bhutan	..	Greece	0.94	Mongolia	2.42	Switzerland	0.34
Bolivia	14.83	Guatemala	2.66	Morocco	0.33	Syria	0.23
Bosnia and Herz.	..	Guinea	4.11	Mozambique	0.89	Taiwan	..
Botswana	1.01	Guinea-Bissau	9.10	Myanmar	3.11	Tajikistan	0.91
Brazil	10.46	Guyana	..	Namibia	1.10	Tanzania	0.83
Bulgaria	0.82	Haiti	0.27	Nepal	0.81	Thailand	0.66
Burkina Faso	..	Honduras	5.55	Netherlands	0.28	Togo	1.03
Burundi	0.34	Hungary	0.60	New Zealand	..	Trin. and Tob.	..
Cambodia	1.34	Iceland	82.19	Nicaragua	10.49	Tunisia	0.14
Cameroon	6.23	India	0.39	Niger	0.20	Turkey	0.97
Canada	11.60	Indonesia	2.08	Nigeria	0.63	Turkmenistan	0.06
Central Afr. Rep.	14.97	Iran	0.73	North Korea	0.57	Uganda	1.11
Chad	1.21	Iraq	0.05	Norway	20.92	Ukraine	0.42
Chile	8.76	Ireland	2.66	Oman	0.36	United Arab. Em.	0.03
China	0.64	Israel	0.07	P. N. Guinea	..	United Kingdom	0.16
Colombia	11.25	Italy	0.74	Pakistan	0.35	United States	4.43
Congo	110.27	Jamaica	1.47	Panama	6.62	Uruguay	6.77
Costa Rica	8.84	Japan	0.21	Paraguay	6.81	Uzbekistan	0.33
Côte d'Ivoire	2.23	Jordan	0.09	Peru	11.00	Venezuela	8.67
Croatia	2.48	Kazakhstan	0.41	Philippines	2.15	Viet Nam	0.59
Cuba	0.58	Kenya	0.09	Poland	0.33	Yemen	0.07
Czech Rep.	0.14	Kuwait	0.00	Portugal	0.38	Zambia	4.30
Dem. Rep. Congo	0.23	Kyrgyzstan	2.69	Romania	0.38	Zimbabwe	0.39
Denmark	0.80	Laos	6.55	Russia	5.47		
Dominican Rep.	1.33	Latvia	0.95	Rwanda	0.43		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 18 **Code:** COALKM **Reference Year:** 2001

Description: Coal consumption per populated land area

Units: Terajoules coal consumed per populated land area (at 5 or more persons per square km)

Source*: United States Energy Information Agency, plus country data.

Logic: Coal fired power plants emit higher SO2 levels and other air pollutants than natural gas or oil fired plants, and the energy produced is more carbon-intensive.

Methodology: The original data are in billion British Thermal Units (BTUs), which were converted to terajoules. The factor applied to convert 10⁹ BTUs to terajoules is 0.9478 (Source: Energy Information Administration). The Gridded Population of the World dataset (CIESIN) was used to calculate the total land area in each country inhabited with a population density of greater than 5 persons per km². The data set was then used as the denominator for the coal consumption data.

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	2.43		189.00		0.00		
	0.00		0.00		16.56		
Albania	0.01	Ecuador	0.00	Lebanon	0.51	Saudi Arabia	0.00
Algeria	0.05	Egypt	0.27	Liberia	0.00	Senegal	0.00
Angola	0.00	El Salvador	0.00	Libya	0.00	Serbia and Mont.	2.99
Argentina	0.02	Estonia	0.33	Lithuania	0.05	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	2.89	Slovakia	3.30
Australia	10.29	Finland	1.07	Madagascar	0.00	Slovenia	2.69
Austria	1.63	France	0.99	Malawi	0.01	South Africa	9.87
Azerbaijan	0.00	Gabon	0.00	Malaysia	0.32	South Korea	16.23
Bangladesh	0.07	Gambia	0.00	Mali	0.00	Spain	1.54
Belarus	0.00	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.00
Belgium	11.12	Germany	8.38	Mexico	0.20	Sudan	0.00
Benin	0.00	Ghana	0.00	Moldova	0.10	Sweden	0.40
Bhutan	0.04	Greece	3.06	Mongolia	4.67	Switzerland	0.16
Bolivia	1.68	Guatemala	0.05	Morocco	0.28	Syria	0.00
Bosnia and Herz.	0.32	Guinea	0.00	Mozambique	0.00	Taiwan	26.95
Botswana	0.29	Guinea-Bissau	0.00	Myanmar	0.02	Tajikistan	0.02
Brazil	0.00	Guyana	0.00	Namibia	0.00	Tanzania	0.00
Bulgaria	3.01	Haiti	0.00	Nepal	0.08	Thailand	0.68
Burkina Faso	0.00	Honduras	0.03	Netherlands	11.72	Togo	0.00
Burundi	0.00	Hungary	1.52	New Zealand	0.52	Trin. and Tob.	0.00
Cambodia	0.00	Iceland	1.32	Nicaragua	0.00	Tunisia	0.03
Cameroon	0.00	India	2.00	Niger	0.01	Turkey	0.94
Canada	4.47	Indonesia	0.75	Nigeria	0.00	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	0.04	North Korea	18.94	Uganda	0.00
Chad	0.00	Iraq	0.00	Norway	0.54	Ukraine	2.97
Chile	0.29	Ireland	1.14	Oman	0.00	United Arab. Em.	0.00
China	3.90	Israel	11.20	P. N. Guinea	0.00	United Kingdom	6.24
Colombia	0.20	Italy	1.71	Pakistan	0.12	United States	5.91
Congo	0.00	Jamaica	0.12	Panama	0.03	Uruguay	0.00
Costa Rica	0.00	Japan	9.62	Paraguay	0.00	Uzbekistan	0.17
Côte d'Ivoire	0.00	Jordan	0.00	Peru	0.05	Venezuela	0.00
Croatia	[0.18]	Kazakhstan	1.19	Philippines	0.66	Viet Nam	0.44
Cuba	0.01	Kenya	0.01	Poland	6.89	Yemen	0.00
Czech Rep.	8.71	Kuwait	0.00	Portugal	1.29	Zambia	0.01
Dem. Rep. Congo	0.00	Kyrgyzstan	0.13	Romania	1.21	Zimbabwe	0.32
Denmark	3.83	Laos	0.00	Russia	1.56		
Dominican Rep.	0.10	Latvia	[0.53]	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 19 **Code:** NOXKM **Reference Year:** MRYA 1990-2003

Description: Anthropogenic NOx emissions per populated land area

Units: Metric tons NOx emissions per populated land area (at 5 or more persons per square km)

Source*: United Nations Framework Convention on Climate Change (UNFCCC), Organization for Economic Cooperation and Development (OECD), and Intergovernmental Panel on Climate Change (IPCC), plus country data.

Logic: NOx emissions contribute to changes in ambient air quality and consequently impact human and ecosystem

Methodology: The data were merged as follows: UNFCCC data were available in Gigagrams for 1990, 1994, and 2000. The most recent year available was used for each country. The OECD data were available in thousand tonnes for 1980, 1985-2000 and the most recent year 1998-2000 was extracted. The OECD data were then used to fill gaps in the UNFCCC data. The resulting data set was transformed to metric tons per populated land area (km2).

Mean	3.32	Max	97.38	2.5 Percentile	0.02		
Median	0.56	Min	0.00	97.5 Percentile	17.46		
Albania	0.07	Ecuador	0.65	Lebanon	5.25	Saudi Arabia	0.20
Algeria	0.86	Egypt	2.18	Liberia	0.27	Senegal	0.05
Angola	0.33	El Salvador	1.67	Libya	6.34	Serbia and Mont.	[1.01]
Argentina	0.83	Estonia	1.01	Lithuania	0.18	Sierra Leone	0.48
Armenia	2.55	Ethiopia	0.17	Macedonia	0.15	Slovakia	2.08
Australia	14.28	Finland	1.56	Madagascar	0.11	Slovenia	3.23
Austria	2.46	France	3.26	Malawi	0.16	South Africa	0.64
Azerbaijan	1.32	Gabon	0.11	Malaysia	0.21	South Korea	8.60
Bangladesh	0.67	Gambia	[0.79]	Mali	[0.32]	Spain	3.36
Belarus	0.20	Georgia	0.31	Mauritania	0.20	Sri Lanka	0.91
Belgium	9.88	Germany	4.49	Mexico	0.78	Sudan	0.18
Benin	0.14	Ghana	0.29	Moldova	1.70	Sweden	1.16
Bhutan	0.02	Greece	2.52	Mongolia	0.31	Switzerland	2.56
Bolivia	0.37	Guatemala	0.44	Morocco	0.41	Syria	0.21
Bosnia and Herz.	0.16	Guinea	0.08	Mozambique	0.13	Taiwan	14.77
Botswana	2.65	Guinea-Bissau	0.13	Myanmar	0.19	Tajikistan	0.16
Brazil	0.34	Guyana	0.78	Namibia	1.84	Tanzania	0.19
Bulgaria	0.19	Haiti	0.30	Nepal	0.93	Thailand	0.56
Burkina Faso	0.03	Honduras	0.14	Netherlands	10.15	Togo	0.30
Burundi	0.23	Hungary	2.19	New Zealand	3.30	Trin. and Tob.	7.33
Cambodia	1.31	Iceland	8.76	Nicaragua	0.37	Tunisia	0.67
Cameroon	0.17	India	0.52	Niger	0.16	Turkey	0.33
Canada	0.08	Indonesia	0.81	Nigeria	0.24	Turkmenistan	0.26
Central Afr. Rep.	0.61	Iran	0.12	North Korea	1.18	Uganda	0.26
Chad	0.17	Iraq	0.31	Norway	1.94	Ukraine	0.36
Chile	0.67	Ireland	1.90	Oman	0.09	United Arab. Em.	4.99
China	0.75	Israel	0.76	P. N. Guinea	0.01	United Kingdom	6.39
Colombia	0.52	Italy	4.63	Pakistan	0.25	United States	7.13
Congo	0.22	Jamaica	2.80	Panama	0.28	Uruguay	0.22
Costa Rica	0.65	Japan	5.59	Paraguay	50.70	Uzbekistan	1.12
Côte d'Ivoire	0.52	Jordan	3.49	Peru	0.38	Venezuela	0.41
Croatia	0.18	Kazakhstan	0.29	Philippines	1.17	Viet Nam	0.56
Cuba	0.62	Kenya	0.22	Poland	2.69	Yemen	[0.76]
Czech Rep.	5.00	Kuwait	1.05	Portugal	4.47	Zambia	0.41
Dem. Rep. Congo	0.16	Kyrgyzstan	0.08	Romania	2.06	Zimbabwe	0.21
Denmark	4.71	Laos	0.07	Russia	0.67		
Dominican Rep.	0.06	Latvia	0.61	Rwanda	0.32		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 20 **Code:** SO2KM **Reference Year:** MRYA 1990-2003

Description: Anthropogenic SO2 emissions per populated land area

Units: Metric tons SO2 per populated land area (at 5 or more persons per square km)

Source*: United Nations Framework Convention on Climate Change (UNFCCC), Organization for Economic Cooperation and Development (OECD), and Intergovernmental Panel on Climate Change (IPCC), plus country data.

Logic: SO2 emissions contribute to changes in ambient air quality and consequently impact human and ecosystem

Methodology: The data were merged as follows: UNFCCC data were available in Gigagrams for 1990, 1994, and 2000. The most recent year available was used for each country. The OECD data were available in thousand tonnes for 1980, 1985-2000 and the most recent available year 1997-2000 was extracted. The OECD data were then used to fill gaps in the UNFCCC data. The resulting data set was transformed to metric tons per populated land area (km2).

Mean	56.18	Max	8281.06	2.5 Percentile	0.02		
Median	0.64	Min	0.00	97.5 Percentile	12.71		
Albania	0.60	Ecuador	0.35	Lebanon	8.07	Saudi Arabia	0.56
Algeria	0.12	Egypt	4.09	Liberia	0.11	Senegal	0.15
Angola	0.20	El Salvador	0.70	Libya	3.22	Serbia and Mont.	[2.72]
Argentina	0.02	Estonia	3.35	Lithuania	1.69	Sierra Leone	[0.21]
Armenia	2.29	Ethiopia	0.01	Macedonia	0.90	Slovakia	2.08
Australia	11.86	Finland	0.50	Madagascar	0.04	Slovenia	3.59
Austria	0.43	France	1.54	Malawi	0.05	South Africa	2.35
Azerbaijan	0.56	Gabon	0.11	Malaysia	1.60	South Korea	11.58
Bangladesh	0.69	Gambia	0.11	Mali	[0.05]	Spain	3.57
Belarus	0.95	Georgia	3.62	Mauritania	0.18	Sri Lanka	0.68
Belgium	5.14	Germany	2.23	Mexico	0.90	Sudan	0.11
Benin	21.39	Ghana	0.17	Moldova	3.11	Sweden	0.27
Bhutan	0.00	Greece	3.79	Mongolia	0.43	Switzerland	0.48
Bolivia	0.02	Guatemala	0.75	Morocco	0.80	Syria	0.71
Bosnia and Herz.	1.78	Guinea	0.07	Mozambique	0.13	Taiwan	6.29
Botswana	1.32	Guinea-Bissau	0.19	Myanmar	0.09	Tajikistan	2.61
Brazil	0.36	Guyana	[0.6]	Namibia	0.87	Tanzania	0.10
Bulgaria	4.61	Haiti	0.34	Nepal	0.05	Thailand	1.07
Burkina Faso	0.08	Honduras	0.15	Netherlands	2.19	Togo	0.07
Burundi	0.13	Hungary	5.31	New Zealand	0.97	Trin. and Tob.	20.99
Cambodia	0.18	Iceland	3.85	Nicaragua	0.05	Tunisia	0.71
Cameroon	0.08	India	1.15	Niger	0.09	Turkey	2.99
Canada	7.52	Indonesia	0.36	Nigeria	0.19	Turkmenistan	0.07
Central Afr. Rep.	0.29	Iran	0.49	North Korea	7.64	Uganda	0.16
Chad	0.10	Iraq	0.58	Norway	0.23	Ukraine	2.06
Chile	6.70	Ireland	1.99	Oman	0.11	United Arab. Em.	1.52
China	2.68	Israel	3.31	P. N. Guinea	0.04	United Kingdom	4.04
Colombia	0.32	Italy	2.56	Pakistan	0.30	United States	4.68
Congo	0.14	Jamaica	8.95	Panama	0.03	Uruguay	0.19
Costa Rica	0.38	Japan	2.26	Paraguay	0.00	Uzbekistan	1.27
Côte d'Ivoire	0.20	Jordan	2.71	Peru	0.25	Venezuela	0.59
Croatia	1.87	Kazakhstan	0.58	Philippines	1.56	Viet Nam	0.26
Cuba	3.74	Kenya	0.16	Poland	4.85	Yemen	[0.22]
Czech Rep.	3.33	Kuwait	7.12	Portugal	3.84	Zambia	2.10
Dem. Rep. Congo	0.00	Kyrgyzstan	0.27	Romania	5.14	Zimbabwe	0.33
Denmark	0.64	Laos	0.11	Russia	2.08		
Dominican Rep.	0.64	Latvia	0.30	Rwanda	0.49		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	21	Code:	VOCKM	Reference Year:	MRYA 1990-2003		
Description:	Anthropogenic VOC emissions per populated land area						
Units:	Metric tons per populated land area (at 5 or more persons per square km)						
Source*:	United Nations Framework Convention on Climate Change (UNFCCC), Organization for Economic Cooperation and Development (OECD), and Intergovernmental Panel on Climate Change (IPCC), plus country data.						
Logic:	VOC emissions contribute to changes in ambient air quality and consequently impact human and ecosystem						
Methodology:	The data were merged as follows: UNFCCC data were available for NMVOC (non-methane volatile organic compounds) emissions in Gigagrams for 1990, 1994, and 2000. The most recent year available was used for each country. The OECD data were available for VOC emissions in thousand tonnes for 1980, 1985-2000 and the most recent available year 1998-2000 was extracted. The OECD data were then used to fill gaps in the UNFCCC data. The resulting data set was transformed to metric tons per populated land area (km2).						
Mean	5.00	Max	131.09	2.5 Percentile	0.08		
Median	1.65	Min	0.01	97.5 Percentile	26.15		
Albania	0.57	Ecuador	0.84	Lebanon	35.09	Saudi Arabia	4.10
Algeria	0.86	Egypt	7.94	Liberia	1.65	Senegal	1.20
Angola	1.94	El Salvador	0.60	Libya	18.90	Serbia and Mont.	[1.36]
Argentina	0.51	Estonia	0.60	Lithuania	1.42	Sierra Leone	1.39
Armenia	1.64	Ethiopia	0.40	Macedonia	1.30	Slovakia	1.80
Australia	12.79	Finland	1.07	Madagascar	0.71	Slovenia	1.87
Austria	2.31	France	4.64	Malawi	1.46	South Africa	1.62
Azerbaijan	3.28	Gabon	0.96	Malaysia	1.87	South Korea	1.54
Bangladesh	5.22	Gambia	[1.07]	Mali	[0.8]	Spain	5.93
Belarus	1.24	Georgia	0.67	Mauritania	1.02	Sri Lanka	2.10
Belgium	6.30	Germany	4.50	Mexico	0.61	Sudan	1.70
Benin	1.08	Ghana	2.21	Moldova	1.88	Sweden	1.96
Bhutan	0.05	Greece	2.40	Mongolia	0.58	Switzerland	4.01
Bolivia	0.20	Guatemala	1.07	Morocco	0.52	Syria	1.97
Bosnia and Herz.	1.52	Guinea	0.71	Mozambique	0.93	Taiwan	25.68
Botswana	13.59	Guinea-Bissau	0.83	Myanmar	1.07	Tajikistan	0.79
Brazil	2.02	Guyana	1.06	Namibia	9.40	Tanzania	1.57
Bulgaria	1.16	Haiti	1.79	Nepal	2.07	Thailand	4.93
Burkina Faso	0.02	Honduras	1.31	Netherlands	6.77	Togo	0.56
Burundi	2.29	Hungary	1.87	New Zealand	3.30	Trin. and Tob.	17.43
Cambodia	2.73	Iceland	2.80	Nicaragua	0.41	Tunisia	1.01
Cameroon	1.26	India	3.19	Niger	1.01	Turkey	1.26
Canada	7.46	Indonesia	1.65	Nigeria	3.80	Turkmenistan	0.15
Central Afr. Rep.	3.29	Iran	0.98	North Korea	1.91	Uganda	2.46
Chad	0.96	Iraq	2.88	Norway	3.16	Ukraine	2.04
Chile	1.04	Ireland	1.48	Oman	1.45	United Arab. Em.	10.55
China	2.08	Israel	2.34	P. N. Guinea	0.08	United Kingdom	4.81
Colombia	0.76	Italy	5.10	Pakistan	1.53	United States	5.19
Congo	0.24	Jamaica	2.98	Panama	0.10	Uruguay	0.26
Costa Rica	0.65	Japan	5.10	Paraguay	0.01	Uzbekistan	0.28
Côte d'Ivoire	0.05	Jordan	1.42	Peru	0.54	Venezuela	3.88
Croatia	1.50	Kazakhstan	0.46	Philippines	1.05	Viet Nam	2.21
Cuba	0.33	Kenya	2.32	Poland	1.92	Yemen	[1.76]
Czech Rep.	3.08	Kuwait	7.08	Portugal	5.62	Zambia	2.55
Dem. Rep. Congo	0.09	Kyrgyzstan	0.77	Romania	1.76	Zimbabwe	1.19
Denmark	3.06	Laos	1.03	Russia	1.23		
Dominican Rep.	0.45	Latvia	1.79	Rwanda	5.13		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 22 **Code:** CARSKM **Reference Year:** MRYA 1995-2004

Description: Vehicles in use per populated land area

Units: Number of vehicles per populated land area (at 5 or more persons per square km)

Source*: United Nations Statistics Division (UNSD) plus country data.

Logic: This is a proxy measure of air pollution from the transportation sector, which is a large sector in terms of energy use and experiences the highest growth rates.

Methodology: The Gridded Population of the World dataset (CIESIN) was used to calculate the total land area in each country inhabited with a population density of greater than 5 persons per square km. This data set was then used as the denominator for the vehicles data, which includes registered cars, trucks and buses but not motorcycles.

	Mean	86.22	Max	3838.0	2.5 Percentile	0.06	
	Median	8.49	Min	0.01	97.5 Percentile	453.95	
Albania	7.22	Ecuador	3.74	Lebanon	139.11	Saudi Arabia	4.61
Algeria	8.50	Egypt	22.07	Liberia	0.37	Senegal	0.86
Angola	0.41	El Salvador	19.65	Libya	11.74	Serbia and Mont.	[8.35]
Argentina	7.15	Estonia	13.20	Lithuania	21.37	Sierra Leone	0.47
Armenia	[2.75]	Ethiopia	0.11	Macedonia	13.89	Slovakia	29.36
Australia	59.91	Finland	16.23	Madagascar	0.15	Slovenia	47.65
Austria	65.12	France	73.41	Malawi	0.43	South Africa	18.65
Azerbaijan	5.49	Gabon	0.70	Malaysia	1.83	South Korea	112.42
Bangladesh	1.55	Gambia	0.88	Mali	0.11	Spain	53.31
Belarus	7.08	Georgia	4.53	Mauritania	0.74	Sri Lanka	8.69
Belgium	172.76	Germany	132.41	Mexico	12.18	Sudan	0.07
Benin	0.12	Ghana	0.91	Moldova	7.70	Sweden	20.81
Bhutan	[0.22]	Greece	35.64	Mongolia	[1.55]	Switzerland	104.08
Bolivia	1.61	Guatemala	6.75	Morocco	4.41	Syria	2.85
Bosnia and Herz.	[5.09]	Guinea	0.15	Mozambique	0.23	Taiwan	161.78
Botswana	1.35	Guinea-Bissau	[0.38]	Myanmar	0.46	Tajikistan	1.46
Brazil	4.32	Guyana	0.59	Namibia	[2.74]	Tanzania	0.16
Bulgaria	21.60	Haiti	5.76	Nepal	1.81	Thailand	13.50
Burkina Faso	0.17	Honduras	0.81	Netherlands	166.94	Togo	0.94
Burundi	0.64	Hungary	31.10	New Zealand	40.56	Trin. and Tob.	56.11
Cambodia	0.09	Iceland	63.08	Nicaragua	1.92	Tunisia	7.62
Cameroon	0.41	India	4.08	Niger	0.23	Turkey	8.02
Canada	48.97	Indonesia	5.01	Nigeria	0.07	Turkmenistan	[5.11]
Central Afr. Rep.	0.05	Iran	0.94	North Korea	[3.93]	Uganda	0.72
Chad	0.05	Iraq	2.36	Norway	20.33	Ukraine	9.03
Chile	6.89	Ireland	25.48	Oman	8.47	United Arab. Em.	8.64
China	2.08	Israel	83.32	P. N. Guinea	0.38	United Kingdom	112.89
Colombia	2.46	Italy	144.98	Pakistan	2.31	United States	65.42
Congo	0.61	Jamaica	17.81	Panama	5.17	Uruguay	4.07
Costa Rica	10.18	Japan	197.11	Paraguay	[5.74]	Uzbekistan	[4.41]
Côte d'Ivoire	0.53	Jordan	16.23	Peru	2.47	Venezuela	5.75
Croatia	25.62	Kazakhstan	2.20	Philippines	14.61	Viet Nam	0.21
Cuba	0.09	Kenya	1.81	Poland	40.35	Yemen	3.22
Czech Rep.	49.18	Kuwait	43.08	Portugal	79.22	Zambia	0.01
Dem. Rep. Congo	0.11	Kyrgyzstan	1.23	Romania	15.91	Zimbabwe	3.15
Denmark	52.46	Laos	[0.25]	Russia	7.84		
Dominican Rep.	17.58	Latvia	11.53	Rwanda	1.11		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 23 **Code:** FOREST **Reference Year:** 1990 to 2000

Description: Annual average forest cover change rate from 1990 to 2000

Units: Average annual change rate in forest cover from 1990 to 2000

Source*: United Nations Food and Agriculture Organization (FAO).

Logic: When forests are lost or severely degraded, their capacity to function as regulators for the environment is also lost, increasing flood and erosion hazards, reducing soil fertility, and contributing to the loss of plant and animal life. As a result, the sustainable provision of goods and services from forests is jeopardized.

Methodology: For area statistics, FRA 2000 generated information at three scales - country (based on surveys of national inventory and mapping reports), region (FRA 2000 remote sensing survey) and world (FRA 2000 global mapping). For the estimates of area and area change, only country- and regional-level information was used, as the global forest map did not provide sufficient precision.

	Mean		Max		2.5 Percentile		
	-0.11	Median	0	Min	-9	97.5 Percentile	4.91
Albania	-0.80	Ecuador	-1.20	Lebanon	-0.40	Saudi Arabia	0.00
Algeria	1.30	Egypt	3.30	Liberia	-2.00	Senegal	-0.70
Angola	-0.20	El Salvador	-4.60	Libya	1.40	Serbia and Mont.	-0.10
Argentina	-0.80	Estonia	0.60	Lithuania	0.20	Sierra Leone	-2.90
Armenia	1.30	Ethiopia	-0.80	Macedonia	0.00	Slovakia	0.90
Australia	-0.18	Finland	[1.27]	Madagascar	-0.90	Slovenia	0.20
Austria	0.20	France	0.40	Malawi	-2.40	South Africa	-0.10
Azerbaijan	1.30	Gabon	[0.6]	Malaysia	-1.20	South Korea	-0.10
Bangladesh	1.30	Gambia	1.00	Mali	-0.70	Spain	0.60
Belarus	3.20	Georgia	0.00	Mauritania	-2.70	Sri Lanka	-1.60
Belgium	-0.20	Germany	0.00	Mexico	-1.10	Sudan	-1.40
Benin	-2.30	Ghana	-1.70	Moldova	0.20	Sweden	[0.6]
Bhutan	0.00	Greece	0.90	Mongolia	-0.50	Switzerland	0.40
Bolivia	-0.30	Guatemala	-1.70	Morocco	[0.04]	Syria	0.00
Bosnia and Herz.	0.00	Guinea	-0.50	Mozambique	-0.20	Taiwan	[0.53]
Botswana	-0.90	Guinea-Bissau	-0.90	Myanmar	-1.40	Tajikistan	0.50
Brazil	-0.40	Guyana	-0.30	Namibia	-0.90	Tanzania	-0.20
Bulgaria	0.60	Haiti	-5.70	Nepal	-1.80	Thailand	-0.70
Burkina Faso	-0.20	Honduras	-1.00	Netherlands	0.30	Togo	-3.40
Burundi	-9.00	Hungary	0.40	New Zealand	0.50	Trin. and Tob.	-0.80
Cambodia	-0.60	Iceland	2.20	Nicaragua	-3.00	Tunisia	0.20
Cameroon	-0.90	India	0.10	Niger	-3.70	Turkey	0.20
Canada	0.00	Indonesia	-1.20	Nigeria	-2.60	Turkmenistan	0.00
Central Afr. Rep.	-0.10	Iran	0.00	North Korea	0.00	Uganda	-2.00
Chad	-0.60	Iraq	0.00	Norway	0.40	Ukraine	0.30
Chile	-0.10	Ireland	3.00	Oman	5.30	United Arab. Em.	2.80
China	1.20	Israel	4.90	P. N. Guinea	-0.40	United Kingdom	0.60
Colombia	-0.40	Italy	0.30	Pakistan	-1.50	United States	0.20
Congo	-0.10	Jamaica	-1.50	Panama	-1.60	Uruguay	5.00
Costa Rica	-0.80	Japan	[0.72]	Paraguay	-0.50	Uzbekistan	0.20
Côte d'Ivoire	-3.10	Jordan	0.00	Peru	-0.40	Venezuela	-0.40
Croatia	0.10	Kazakhstan	2.20	Philippines	-1.40	Viet Nam	0.50
Cuba	1.30	Kenya	-0.50	Poland	0.20	Yemen	-1.90
Czech Rep.	[-0.13]	Kuwait	3.50	Portugal	1.70	Zambia	-2.40
Dem. Rep. Congo	-0.40	Kyrgyzstan	2.60	Romania	0.20	Zimbabwe	-1.50
Denmark	0.20	Laos	-0.40	Russia	[1.28]		
Dominican Rep.	0.00	Latvia	0.40	Rwanda	-3.90		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 24 **Code:** ACEXC **Reference Year:** 1990

Description: Acidification exceedance from anthropogenic sulfur deposition

Units: Percentage of total land area at risk of acidification exceedance

Source*: Stockholm Environment Institute at York.

Logic: Exceedance of critical SO₂ loading represents an indicator for ecosystems under stress due to acidification from anthropogenic sulfur deposition. Since it takes into account both the deposition and the ability of the ecosystem to respond to stress, it is a good indicator of the ecosystems' sustainability.

Methodology: From a map of acidification exceedance, the area of terrestrial ecosystems at risk were summed within each country and then the percentage of a country at risk of exceedance was calculated.

Mean	4.6	Max	97.48	2.5 Percentile	0		
Median	0	Min	0	97.5 Percentile	53.52		
Albania	2.54	Ecuador	0.00	Lebanon	0.00	Saudi Arabia	0.00
Algeria	0.00	Egypt	0.00	Liberia	0.00	Senegal	0.00
Angola	1.83	El Salvador	0.00	Libya	0.00	Serbia and Mont.	0.00
Argentina	0.00	Estonia	0.00	Lithuania	0.00	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	97.48	Slovakia	27.23
Australia	0.00	Finland	1.19	Madagascar	0.00	Slovenia	40.11
Austria	50.81	France	18.84	Malawi	0.00	South Africa	0.00
Azerbaijan	0.00	Gabon	0.00	Malaysia	0.00	South Korea	58.90
Bangladesh	0.00	Gambia	0.00	Mali	0.00	Spain	3.65
Belarus	4.91	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.00
Belgium	70.83	Germany	51.88	Mexico	0.68	Sudan	0.00
Benin	0.00	Ghana	0.00	Moldova	0.00	Sweden	34.37
Bhutan	0.00	Greece	2.77	Mongolia	0.00	Switzerland	36.90
Bolivia	0.00	Guatemala	0.00	Morocco	0.00	Syria	0.00
Bosnia and Herz.	34.07	Guinea	0.00	Mozambique	0.00	Taiwan	0.00
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	0.77	Tajikistan	0.00
Brazil	0.00	Guyana	0.00	Namibia	0.00	Tanzania	0.00
Bulgaria	14.10	Haiti	0.00	Nepal	0.00	Thailand	0.27
Burkina Faso	0.00	Honduras	0.00	Netherlands	43.81	Togo	0.00
Burundi	0.00	Hungary	4.93	New Zealand	0.00	Trin. and Tob.	0.00
Cambodia	0.00	Iceland	0.00	Nicaragua	0.00	Tunisia	0.00
Cameroon	0.00	India	0.00	Niger	0.00	Turkey	0.02
Canada	5.39	Indonesia	8.15	Nigeria	0.00	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	0.00	North Korea	2.43	Uganda	4.27
Chad	0.00	Iraq	0.00	Norway	15.96	Ukraine	0.00
Chile	0.00	Ireland	54.16	Oman	0.00	United Arab. Em.	0.00
China	15.66	Israel	0.00	P. N. Guinea	0.00	United Kingdom	45.75
Colombia	0.00	Italy	17.94	Pakistan	0.00	United States	13.74
Congo	0.43	Jamaica	0.00	Panama	0.00	Uruguay	0.00
Costa Rica	0.00	Japan	10.99	Paraguay	0.00	Uzbekistan	0.00
Côte d'Ivoire	0.00	Jordan	0.00	Peru	0.00	Venezuela	0.00
Croatia	4.69	Kazakhstan	0.00	Philippines	0.00	Viet Nam	32.17
Cuba	0.00	Kenya	0.00	Poland	53.45	Yemen	0.00
Czech Rep.	89.22	Kuwait	0.00	Portugal	3.24	Zambia	5.13
Dem. Rep. Congo	0.00	Kyrgyzstan	0.00	Romania	19.27	Zimbabwe	0.00
Denmark	54.88	Laos	29.22	Russia	0.33		
Dominican Rep.	0.00	Latvia	1.95	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 25 **Code:** GR2050 **Reference Year:** 2004

Description: Percentage change in projected population 2004-2050

Units: Percentage change in projected population 2004-2050

Source*: Population Reference Bureau (PRB).

Logic: The projected change in population between 2004 and 2050 provides an indication of the trajectory of population change, which has an impact on a country's per capita natural resource availability and environmental conditions. Projections can be made with a fair degree of accuracy because of the influence of a country's current age structure and fertility on likely future growth.

Methodology: The projected population in 2050 was divided by the population in 2004 to calculate a percentage change in the population between the two dates.

Mean	58.58	Max	327	2.5 Percentile	-27.53		
Median	42	Min	-43	97.5 Percentile	225.3		
Albania	15.00	Ecuador	54.00	Lebanon	53.00	Saudi Arabia	120.00
Algeria	37.00	Egypt	74.00	Liberia	182.00	Senegal	126.00
Angola	206.00	El Salvador	48.00	Libya	92.00	Serbia and Mont.	-4.00
Argentina	40.00	Estonia	-23.00	Lithuania	-9.00	Sierra Leone	100.00
Armenia	-24.00	Ethiopia	139.00	Macedonia	3.00	Slovakia	-13.00
Australia	31.00	Finland	-8.00	Madagascar	274.00	Slovenia	-15.00
Austria	1.00	France	7.00	Malawi	296.00	South Africa	-11.00
Azerbaijan	40.00	Gabon	84.00	Malaysia	83.00	South Korea	-8.00
Bangladesh	98.00	Gambia	169.00	Mali	243.00	Spain	-3.00
Belarus	-13.00	Georgia	-32.00	Mauritania	152.00	Sri Lanka	10.00
Belgium	5.00	Germany	-9.00	Mexico	41.00	Sudan	115.00
Benin	148.00	Ghana	85.00	Moldova	-28.00	Sweden	18.00
Bhutan	113.00	Greece	-12.00	Mongolia	72.00	Switzerland	-3.00
Bolivia	75.00	Guatemala	115.00	Morocco	47.00	Syria	95.00
Bosnia and Herz.	-15.00	Guinea	231.00	Mozambique	63.00	Taiwan	-3.00
Botswana	-43.00	Guinea-Bissau	207.00	Myanmar	29.00	Tajikistan	52.00
Brazil	24.00	Guyana	-34.00	Namibia	35.00	Tanzania	105.00
Bulgaria	-38.00	Haiti	97.00	Nepal	105.00	Thailand	15.00
Burkina Faso	191.00	Honduras	109.00	Netherlands	8.00	Togo	74.00
Burundi	147.00	Hungary	-25.00	New Zealand	26.00	Trin. and Tob.	-7.00
Cambodia	104.00	Iceland	22.00	Nicaragua	93.00	Tunisia	22.00
Cameroon	92.00	India	50.00	Niger	327.00	Turkey	37.00
Canada	16.00	Indonesia	41.00	Nigeria	124.00	Turkmenistan	53.00
Central Afr. Rep.	65.00	Iran	43.00	North Korea	10.00	Uganda	217.00
Chad	206.00	Iraq	124.00	Norway	22.00	Ukraine	-19.00
Chile	39.00	Ireland	16.00	Oman	93.00	United Arab. Em.	35.00
China	11.00	Israel	56.00	P. N. Guinea	90.00	United Kingdom	10.00
Colombia	48.00	Italy	-10.00	Pakistan	85.00	United States	43.00
Congo	179.00	Jamaica	39.00	Panama	58.00	Uruguay	24.00
Costa Rica	49.00	Japan	-21.00	Paraguay	101.00	Uzbekistan	84.00
Côte d'Ivoire	63.00	Jordan	80.00	Peru	55.00	Venezuela	59.00
Croatia	-14.00	Kazakhstan	-1.00	Philippines	76.00	Viet Nam	41.00
Cuba	-2.00	Kenya	54.00	Poland	-15.00	Yemen	255.00
Czech Rep.	-10.00	Kuwait	182.00	Portugal	-11.00	Zambia	70.00
Dem. Rep. Congo	211.00	Kyrgyzstan	62.00	Romania	-27.00	Zimbabwe	15.00
Denmark	-3.00	Laos	98.00	Russia	-17.00		
Dominican Rep.	52.00	Latvia	-24.00	Rwanda	104.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	26	Code:	TFR	Reference Year:	2004		
Description:	Total Fertility Rate						
Units:	Average number of births per woman based on current age-specific fertility rates						
Source*:	Population Reference Bureau (PRB).						
Logic:	Fertility contributes significantly to population growth, and thus to pressures on natural resources.						
Methodology:	The average number of children a woman will have, assuming that current age-specific birth rates remain constant throughout her childbearing years (usually considered to be ages 15 to 49).						
Mean	3.19	Max	8	2.5 Percentile			1.18
Median	2.65	Min	0	97.5 Percentile			6.88
Albania	2.10	Ecuador	3.00	Lebanon	3.20	Saudi Arabia	4.81
Algeria	2.50	Egypt	3.19	Liberia	6.80	Senegal	5.12
Angola	6.80	El Salvador	2.97	Libya	3.57	Serbia and Mont.	1.71
Argentina	2.44	Estonia	1.41	Lithuania	1.27	Sierra Leone	6.50
Armenia	1.21	Ethiopia	5.90	Macedonia	1.73	Slovakia	1.21
Australia	1.73	Finland	1.75	Madagascar	5.77	Slovenia	1.20
Austria	1.36	France	1.89	Malawi	6.60	South Africa	2.76
Azerbaijan	1.84	Gabon	4.30	Malaysia	3.29	South Korea	1.17
Bangladesh	3.31	Gambia	5.61	Mali	7.00	Spain	1.26
Belarus	1.23	Georgia	1.42	Mauritania	5.90	Sri Lanka	1.97
Belgium	1.62	Germany	1.30	Mexico	2.80	Sudan	5.35
Benin	5.60	Ghana	4.45	Moldova	1.21	Sweden	1.73
Bhutan	4.70	Greece	1.34	Mongolia	2.66	Switzerland	1.37
Bolivia	3.85	Guatemala	4.38	Morocco	2.47	Syria	3.80
Bosnia and Herz.	1.23	Guinea	6.01	Mozambique	5.50	Taiwan	1.22
Botswana	3.46	Guinea-Bissau	7.10	Myanmar	3.08	Tajikistan	3.06
Brazil	2.18	Guyana	2.38	Namibia	4.20	Tanzania	5.30
Bulgaria	1.23	Haiti	4.70	Nepal	4.10	Thailand	1.70
Burkina Faso	6.24	Honduras	4.10	Netherlands	1.78	Togo	5.50
Burundi	6.16	Hungary	1.27	New Zealand	1.96	Trin. and Tob.	1.63
Cambodia	4.50	Iceland	1.99	Nicaragua	3.75	Tunisia	2.00
Cameroon	4.88	India	3.06	Niger	8.00	Turkey	2.46
Canada	1.50	Indonesia	2.57	Nigeria	5.70	Turkmenistan	2.89
Central Afr. Rep.	4.86	Iran	2.50	North Korea	2.04	Uganda	6.90
Chad	6.60	Iraq	5.01	Norway	1.80	Ukraine	1.17
Chile	2.35	Ireland	1.98	Oman	4.10	United Arab. Em.	2.54
China	1.70	Israel	2.93	P. N. Guinea	4.14	United Kingdom	1.71
Colombia	2.58	Italy	1.29	Pakistan	4.77	United States	2.02
Congo	6.29	Jamaica	2.42	Panama	2.70	Uruguay	2.21
Costa Rica	2.10	Japan	1.28	Paraguay	3.84	Uzbekistan	2.92
Côte d'Ivoire	5.20	Jordan	3.67	Peru	2.80	Venezuela	2.83
Croatia	1.30	Kazakhstan	2.03	Philippines	3.54	Viet Nam	2.10
Cuba	1.63	Kenya	5.00	Poland	1.25	Yemen	7.00
Czech Rep.	1.18	Kuwait	4.04	Portugal	1.44	Zambia	5.64
Dem. Rep. Congo	6.84	Kyrgyzstan	2.59	Romania	1.23	Zimbabwe	3.96
Denmark	1.76	Laos	4.88	Russia	1.39		
Dominican Rep.	3.00	Latvia	1.30	Rwanda	5.80		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 27 **Code:** EFPC **Reference Year:** MRYA 1999-2000

Description: Ecological Footprint per capita

Units: Hectares of biologically productive land required per capita

Source*: Redefining Progress, plus country data.

Logic: The ecological footprint is a measure of the biologically productive land that is required to sustain a country's population at current consumption levels. Countries whose footprints exceed their own arable land area are consuming at levels that are unsustainable in the long term.

Methodology: The data reflect information from the Ecological Footprint of Nations 2004. The reference year is 2000. For Niger, Somalia, Togo, Afghanistan, Uzbekistan, and Yemen, the 1999 data from the Living Planet Report 2002 were

	Mean	2.5 Percentile	Max	9.57	2.5 Percentile	0.62	
	Median	97.5 Percentile	Min	0.5	97.5 Percentile	8.15	
Albania	1.25	Ecuador	1.77	Lebanon	2.37	Saudi Arabia	4.05
Algeria	1.67	Egypt	1.16	Liberia	0.85	Senegal	1.23
Angola	0.76	El Salvador	1.72	Libya	3.21	Serbia and Mont.	[2]
Argentina	3.18	Estonia	5.37	Lithuania	3.87	Sierra Leone	0.88
Armenia	0.75	Ethiopia	0.67	Macedonia	2.69	Slovakia	3.27
Australia	7.09	Finland	7.00	Madagascar	0.97	Slovenia	3.52
Austria	4.87	France	5.74	Malawi	0.64	South Africa	3.52
Azerbaijan	1.91	Gabon	1.87	Malaysia	2.99	South Korea	2.43
Bangladesh	0.50	Gambia	1.01	Mali	1.16	Spain	4.90
Belarus	3.17	Georgia	0.85	Mauritania	2.36	Sri Lanka	0.88
Belgium	5.11	Germany	4.26	Mexico	2.59	Sudan	1.20
Benin	0.92	Ghana	1.23	Moldova	1.13	Sweden	7.95
Bhutan	[1.85]	Greece	4.78	Mongolia	5.68	Switzerland	5.26
Bolivia	1.67	Guatemala	1.30	Morocco	0.92	Syria	1.74
Bosnia and Herz.	1.49	Guinea	1.22	Mozambique	0.56	Taiwan	4.67
Botswana	2.70	Guinea-Bissau	1.05	Myanmar	0.76	Tajikistan	0.65
Brazil	2.39	Guyana	[2.52]	Namibia	2.52	Tanzania	0.89
Bulgaria	2.65	Haiti	0.62	Nepal	0.57	Thailand	1.41
Burkina Faso	1.19	Honduras	1.54	Netherlands	3.81	Togo	0.86
Burundi	0.63	Hungary	3.26	New Zealand	8.13	Trin. and Tob.	1.73
Cambodia	1.03	Iceland	[6.65]	Nicaragua	1.57	Tunisia	1.51
Cameroon	1.24	India	0.76	Niger	1.15	Turkey	2.20
Canada	8.56	Indonesia	0.98	Nigeria	1.10	Turkmenistan	2.60
Central Afr. Rep.	1.48	Iran	1.85	North Korea	4.07	Uganda	1.29
Chad	1.31	Iraq	[2.19]	Norway	8.17	Ukraine	3.53
Chile	3.04	Ireland	4.97	Oman	[4.27]	United Arab. Em.	8.97
China	1.36	Israel	3.97	P. N. Guinea	1.25	United Kingdom	4.72
Colombia	1.51	Italy	3.26	Pakistan	0.67	United States	9.57
Congo	0.80	Jamaica	2.15	Panama	1.89	Uruguay	3.32
Costa Rica	1.91	Japan	3.91	Paraguay	2.29	Uzbekistan	1.91
Côte d'Ivoire	1.60	Jordan	1.39	Peru	1.26	Venezuela	2.42
Croatia	2.76	Kazakhstan	3.75	Philippines	1.11	Viet Nam	0.76
Cuba	1.53	Kenya	1.08	Poland	3.40	Yemen	0.71
Czech Rep.	4.24	Kuwait	8.01	Portugal	5.34	Zambia	1.02
Dem. Rep. Congo	0.62	Kyrgyzstan	1.10	Romania	2.46	Zimbabwe	1.05
Denmark	5.32	Laos	1.09	Russia	4.28		
Dominican Rep.	1.69	Latvia	4.40	Rwanda	0.78		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 28 **Code:** RECYCLE **Reference Year:** MRYA 1996-2003

Description: Waste recycling rates

Units: Percentage of solid waste recycled for 1998 for selected cities in each country for non-OECD countries and the percentage of glass, paper and cardboard recycled for OECD countries

Source*: Organisation for Economic Co-operation and Development (OECD) and United Nations Human Settlement Programme (UNHABITAT), plus country data.

Logic: Waste recycling reduces the impact on the environment by using resources more efficiently and by reducing the stream of waste for landfills and incineration.

Methodology: If both recycling rates were available for an OECD country, the maximum of the recycling rates for glass and "paper and cardboard" was used. If neither value was available, it was classified as missing. The solid waste recycling data refer to municipal waste, waste handled by the scrapping industry and other waste from economic activities. Material that is collected for recycling by private sources is included. Internal recycling, i.e. within industrial establishments, is excluded. Recycling is defined as any reuse of material in a production process that diverts it from the waste stream, except reuse as fuel. Reprocessing as the same type of product, and for different purpose, are both included. "Recycling rates" are the ratios of the quantity collected for recycling to the apparent consumption (economic notion of domestic production of the respective material + imports - exports). Definitions may vary from one country to another.

Mean	20.12	Max	91	2.5 Percentile	0		
Median	8	Min	0	97.5 Percentile	86.45		
Albania	0.00	Ecuador	20.00	Lebanon	6.00	Saudi Arabia	..
Algeria	..	Egypt	0.00	Liberia	0.00	Senegal	0.00
Angola	..	El Salvador	0.00	Libya	20.00	Serbia and Mont.	0.70
Argentina	0.30	Estonia	0.00	Lithuania	..	Sierra Leone	..
Armenia	0.00	Ethiopia	0.00	Macedonia	..	Slovakia	40.00
Australia	47.00	Finland	89.00	Madagascar	..	Slovenia	8.00
Austria	84.00	France	55.00	Malawi	..	South Africa	0.00
Azerbaijan	..	Gabon	0.00	Malaysia	10.00	South Korea	67.00
Bangladesh	35.00	Gambia	0.00	Mali	0.00	Spain	54.00
Belarus	0.00	Georgia	..	Mauritania	1.00	Sri Lanka	0.00
Belgium	87.00	Germany	83.00	Mexico	13.00	Sudan	..
Benin	25.00	Ghana	0.00	Moldova	..	Sweden	86.00
Bhutan	..	Greece	35.00	Mongolia	0.00	Switzerland	91.00
Bolivia	2.00	Guatemala	5.00	Morocco	0.00	Syria	21.00
Bosnia and Herz.	..	Guinea	5.00	Mozambique	0.00	Taiwan	14.60
Botswana	1.00	Guinea-Bissau	..	Myanmar	14.00	Tajikistan	..
Brazil	22.00	Guyana	..	Namibia	4.50	Tanzania	..
Bulgaria	22.80	Haiti	..	Nepal	15.90	Thailand	0.00
Burkina Faso	12.00	Honduras	..	Netherlands	78.00	Togo	0.00
Burundi	0.00	Hungary	38.00	New Zealand	65.00	Trin. and Tob.	..
Cambodia	15.00	Iceland	..	Nicaragua	..	Tunisia	5.00
Cameroon	8.00	India	14.50	Niger	..	Turkey	40.00
Canada	54.00	Indonesia	30.00	Nigeria	..	Turkmenistan	..
Central Afr. Rep.	0.00	Iran	..	North Korea	..	Uganda	2.50
Chad	0.00	Iraq	..	Norway	85.00	Ukraine	..
Chile	8.00	Ireland	35.00	Oman	..	United Arab. Em.	..
China	..	Israel	..	P. N. Guinea	..	United Kingdom	41.00
Colombia	11.50	Italy	40.00	Pakistan	12.00	United States	42.00
Congo	26.20	Jamaica	..	Panama	0.00	Uruguay	0.00
Costa Rica	..	Japan	78.00	Paraguay	4.00	Uzbekistan	..
Côte d'Ivoire	3.00	Jordan	0.00	Peru	7.00	Venezuela	..
Croatia	13.00	Kazakhstan	..	Philippines	0.00	Viet Nam	15.00
Cuba	0.00	Kenya	1.00	Poland	17.20	Yemen	5.00
Czech Rep.	42.00	Kuwait	0.00	Portugal	40.00	Zambia	..
Dem. Rep. Congo	4.90	Kyrgyzstan	0.00	Romania	..	Zimbabwe	16.00
Denmark	65.00	Laos	..	Russia	13.90		
Dominican Rep.	..	Latvia	0.00	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 29 **Code:** HAZWST **Reference Year:** MRYA 1992-2001

Description: Generation of hazardous waste

Units: Metric tons of hazardous waste to be managed in the country

Source*: United Nations Environment Program, plus country data.

Logic: Most countries in the world are confronting real difficulties in safely disposing of their hazardous wastes. The more hazardous waste generated, the less likely that a long-term sustainable solution can be found for their proper disposal.

Methodology: The data from the Basel Convention on the amounts of hazardous waste to be managed in the country (thousand tonnes) have been extended by OECD data for the following countries: USA, Japan, and New Zealand. The methodologies underlying both data sources may not be fully comparable although both source refer to "amounts to be managed in the country" (a comparison of OECD data and Basel Convention data for countries reporting to both sources indicates that substantial differences can exist). The objective lies therefore in increasing geographical coverage rather than complete comparability of the data. All Basel data refer to the year 2000, the additional 5 OECD values refer to years between 1992 and 1999. Also note a potential rounding bias due to the fact that the OECD data are reported in thousand metric tons while the Basel data are in metric tons.

Mean	2244961	Max	36312000	2.5 Percentile	67		
Median	325439	Min	24	97.5 Percentile	14849000		
Albania	253	Ecuador	85859	Lebanon	50000	Saudi Arabia	23000
Algeria	58	Egypt	170000	Liberia	..	Senegal	..
Angola	..	El Salvador	..	Libya	..	Serbia and Mont.	..
Argentina	..	Estonia	7540480	Lithuania	11138	Sierra Leone	..
Armenia	429854	Ethiopia	..	Macedonia	15000	Slovakia	16600
Australia	648785	Finland	1203000	Madagascar	..	Slovenia	66779
Austria	969000	France	9000000	Malawi	64055	South Africa	..
Azerbaijan	..	Gabon	..	Malaysia	42019	South Korea	28202
Bangladesh	..	Gambia	200000	Mali	..	Spain	32228
Belarus	1387551	Georgia	92800	Mauritania	..	Sri Lanka	40617
Belgium	2016123	Germany	15532000	Mexico	20742	Sudan	..
Benin	428040	Ghana	..	Moldova	11879	Sweden	80130
Bhutan	..	Greece	287000	Mongolia	44500	Switzerland	10870
Bolivia	..	Guatemala	..	Morocco	98700	Syria	53010
Bosnia and Herz.	..	Guinea	..	Mozambique	..	Taiwan	67390
Botswana	8848	Guinea-Bissau	..	Myanmar	..	Tajikistan	..
Brazil	..	Guyana	..	Namibia	..	Tanzania	..
Bulgaria	754703	Haiti	..	Nepal	575	Thailand	..
Burkina Faso	..	Honduras	..	Netherlands	28356	Togo	..
Burundi	..	Hungary	3413032	New Zealand	47900	Trin. and Tob.	24385
Cambodia	..	Iceland	13408	Nicaragua	..	Tunisia	71067
Cameroon	..	India	..	Niger	23782	Turkey	11660
Canada	5900000	Indonesia	17131	Nigeria	589	Turkmenistan	..
Central Afr. Rep.	..	Iran	167812	North Korea	..	Uganda	38.00
Chad	..	Iraq	..	Norway	63000	Ukraine	25445
Chile	..	Ireland	491669	Oman	24209	United Arab. Em.	22869
China	9520000	Israel	325439	P. N. Guinea	..	United Kingdom	55683
Colombia	..	Italy	4279233	Pakistan	16271	United States	36312
Congo	..	Jamaica	..	Panama	..	Uruguay	..
Costa Rica	..	Japan	2652000	Paraguay	..	Uzbekistan	28471
Côte d'Ivoire	..	Jordan	17390	Peru	..	Venezuela	..
Croatia	58285	Kazakhstan	..	Philippines	..	Viet Nam	10307
Cuba	941118	Kenya	..	Poland	10293	Yemen	42500
Czech Rep.	2785000	Kuwait	24534	Portugal	25846	Zambia	15810
Dem. Rep. Congo	..	Kyrgyzstan	6779859	Romania	79216	Zimbabwe	..
Denmark	374303	Laos	..	Russia	12800		
Dominican Rep.	..	Latvia	92800	Rwanda	..		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 30 **Code:** BODWAT **Reference Year:** BOD: MRYA 1990-2000; Population: 1995
Freshwater availability: long-term average 1961-1995

Description: Industrial organic water pollutant (BOD) emissions per available freshwater

Units: Metric tons of daily BOD emissions per cubic km of available freshwater

Source*: World Bank, plus country data.

Logic: Emissions of organic pollutants from industrial activities degrade water quality by contributing to the eutrophication of water bodies. Given these considerations, the biochemical oxygen demand (BOD) emissions have been normalized per amount of freshwater available (internal water availability + inflows from other countries).

Methodology: Emissions of organic water pollutants were measured by biochemical oxygen demand, which is the amount of oxygen that bacteria in the water will consume in breaking down waste. This is a standard water-treatment test for the presence of organic pollutants. The data from the World Bank, which represent daily BOD emissions in kilograms, were normalized by water availability from the WaterGap version 2.1B model (Kassel University).

Mean	-2.51	Max	38.58	2.5 Percentile	0.00		
Median	0.62	Min	-495.79	97.5 Percentile	10.90		
Albania	0.29	Ecuador	0.10	Lebanon	4.23	Saudi Arabia	3.87
Algeria	2.14	Egypt	1.61	Liberia	[-1.91]	Senegal	0.24
Angola	0.00	El Salvador	1.18	Libya	[3.5]	Serbia and Mont.	0.54
Argentina	0.19	Estonia	[2.04]	Lithuania	1.19	Sierra Leone	0.03
Armenia	2.08	Ethiopia	0.15	Macedonia	4.16	Slovakia	0.75
Australia	0.16	Finland	0.68	Madagascar	[-1.77]	Slovenia	1.29
Austria	0.94	France	1.17	Malawi	0.20	South Africa	4.03
Azerbaijan	1.88	Gabon	0.01	Malaysia	0.38	South Korea	5.38
Bangladesh	0.24	Gambia	0.09	Mali	[-1.87]	Spain	4.21
Belarus	[1.18]	Georgia	[1.24]	Mauritania	[-1.06]	Sri Lanka	2.59
Belgium	5.40	Germany	3.83	Mexico	0.70	Sudan	[-0.84]
Benin	[-0.21]	Ghana	0.27	Moldova	1.37	Sweden	0.75
Bhutan	[-0.3]	Greece	1.22	Mongolia	0.12	Switzerland	3.16
Bolivia	0.02	Guatemala	0.13	Morocco	4.94	Syria	0.42
Bosnia and Herz.	0.16	Guinea	[-1.02]	Mozambique	0.04	Taiwan	38.58
Botswana	0.16	Guinea-Bissau	[-1.37]	Myanmar	0.00	Tajikistan	[-0.7]
Brazil	0.07	Guyana	[-1.67]	Namibia	0.08	Tanzania	0.18
Bulgaria	0.56	Haiti	[1.47]	Nepal	0.20	Thailand	0.71
Burkina Faso	0.27	Honduras	0.32	Netherlands	1.34	Togo	[0.16]
Burundi	0.11	Hungary	1.28	New Zealand	0.16	Trin. and Tob.	4.90
Cambodia	0.02	Iceland	0.08	Nicaragua	[-3.11]	Tunisia	7.78
Cameroon	0.04	India	0.88	Niger	[0.03]	Turkey	0.97
Canada	0.12	Indonesia	0.34	Nigeria	0.25	Turkmenistan	[0.97]
Central Afr. Rep.	0.00	Iran	1.16	North Korea	[5.02]	Uganda	[0.7]
Chad	[2.17]	Iraq	0.28	Norway	0.21	Ukraine	5.03
Chile	0.25	Ireland	0.99	Oman	2.01	United Arab. Em.	[4.95]
China	2.74	Israel	15.63	P. N. Guinea	[-2.66]	United Kingdom	3.04
Colombia	0.03	Italy	4.04	Pakistan	0.82	United States	0.88
Congo	[-3.42]	Jamaica	2.02	Panama	0.15	Uruguay	0.02
Costa Rica	0.41	Japan	4.06	Paraguay	0.01	Uzbekistan	[3.55]
Côte d'Ivoire	0.11	Jordan	10.43	Peru	0.03	Venezuela	0.07
Croatia	0.31	Kazakhstan	[1.59]	Philippines	0.75	Viet Nam	[0.77]
Cuba	[1.52]	Kenya	0.75	Poland	5.76	Yemen	0.02
Czech Rep.	12.50	Kuwait	-495.79	Portugal	2.41	Zambia	0.08
Dem. Rep. Congo	[-2.57]	Kyrgyzstan	0.73	Romania	1.60	Zimbabwe	0.32
Denmark	5.74	Laos	[-1.47]	Russia	0.41		
Dominican Rep.	[1.87]	Latvia	0.76	Rwanda	[0.86]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 31 **Code:** FERTHA **Reference Year:** MRYA 2001-2003

Description: Fertilizer consumption per hectare of arable land

Units: 100 grams fertilizer per hectare of arable land

Source*: World Bank, plus country data.

Logic: Excessive use of fertilizers from agricultural activities has a negative impact on soil and water, altering chemistry and levels of nutrients and leading to eutrophication of water bodies.

Methodology: Fertilizer consumption (100 grams per hectare of arable land) measures the quantity of plant nutrients used per unit of arable land. Fertilizer products cover nitrogenous, potash, and phosphate fertilizers (including ground rock phosphate). The time reference for fertilizer consumption is the crop year (July through June). Arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded. Original source: Food and Agriculture Organization, Production Yearbook and data files.

	Mean		Max		2.5 Percentile		0.00
	Median		Min		97.5 Percentile		6324.85
Albania	323.53	Ecuador	1423.46	Lebanon	3210.7	Saudi Arabia	1066.0
Algeria	137.38	Egypt	4574.16	Liberia	0.00	Senegal	162.20
Angola	0.00	El Salvador	1108.70	Libya	308.54	Serbia and Mont.	[834.0
Argentina	255.11	Estonia	622.68	Lithuania	552.90	Sierra Leone	6.00
Armenia	101.01	Ethiopia	125.95	Macedonia	535.34	Slovakia	865.46
Australia	489.62	Finland	1355.55	Madagascar	22.97	Slovenia	4188.8
Austria	1355.25	France	2264.87	Malawi	103.44	South Africa	500.92
Azerbaijan	70.00	Gabon	9.23	Malaysia	6281.7	South Korea	4225.8
Bangladesh	1675.70	Gambia	32.00	Mali	90.13	Spain	1676.9
Belarus	1272.22	Georgia	528.30	Mauritania	40.98	Sri Lanka	2616.5
Belgium	2070.00	Germany	2211.39	Mexico	753.91	Sudan	48.67
Benin	155.50	Ghana	27.57	Moldova	28.02	Sweden	1065.3
Bhutan	0.00	Greece	1544.12	Mongolia	26.69	Switzerland	2219.1
Bolivia	41.79	Guatemala	1345.18	Morocco	411.66	Syria	599.98
Bosnia and Herz.	472.46	Guinea	35.96	Mozambique	62.25	Taiwan	1525.6
Botswana	124.32	Guinea-Bissau	80.00	Myanmar	164.36	Tajikistan	130.11
Brazil	1150.60	Guyana	270.83	Namibia	3.68	Tanzania	56.25
Bulgaria	354.05	Haiti	178.51	Nepal	226.71	Thailand	1144.6
Burkina Faso	82.32	Honduras	1418.54	Netherlands	4519.3	Togo	76.49
Burundi	38.89	Hungary	700.39	New Zealand	5927.8	Trin. and Tob.	1448.6
Cambodia	0.00	Iceland	30285.71	Nicaragua	117.39	Tunisia	391.85
Cameroon	88.09	India	1073.24	Niger	11.10	Turkey	700.97
Canada	521.77	Indonesia	1231.02	Nigeria	77.54	Turkmenistan	668.57
Central Afr. Rep.	3.11	Iran	925.22	North Korea	1148.0	Uganda	11.37
Chad	48.61	Iraq	576.35	Norway	2170.4	Ukraine	145.56
Chile	2426.84	Ireland	4949.84	Oman	1576.5	United Arab. Em.	3640.0
China	2463.03	Israel	2633.14	P. N. Guinea	561.90	United Kingdom	3377.5
Colombia	2545.31	Italy	2057.02	Pakistan	1360.4	United States	1119.4
Congo	285.71	Jamaica	672.41	Panama	532.85	Uruguay	919.89
Costa Rica	5686.67	Japan	3046.12	Paraguay	221.19	Uzbekistan	1545.8
Côte d'Ivoire	201.61	Jordan	942.62	Peru	812.70	Venezuela	1154.7
Croatia	1474.98	Kazakhstan	23.40	Philippines	1382.9	Viet Nam	3075.6
Cuba	553.17	Kenya	314.44	Poland	1114.2	Yemen	111.19
Czech Rep.	1283.22	Kuwait	804.62	Portugal	1145.7	Zambia	69.20
Dem. Rep. Congo	[20.83]	Kyrgyzstan	50.00	Romania	348.30	Zimbabwe	472.67
Denmark	1383.07	Laos	140.06	Russia	129.40		
Dominican Rep.	895.29	Latvia	347.89	Rwanda	3.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 32 **Code:** PESTHA **Reference Year:** MRYA 1990-2003

Description: Pesticide consumption per hectare of arable land

Units: Kilograms pesticide consumption per hectares of arable land

Source*: United Nations Food and Agricultural Organization (FAO), plus country data.

Logic: Excessive use of pesticides in agricultural activities has negative impacts on soil, water, humans and wildlife.

Methodology: Pesticide use intensity refers to the amount of pesticide used per hectare of arable and permanent cropland. To calculate this figure, total pesticide consumption in agriculture is divided by the total area of arable and permanent cropland. Pesticide consumption is measured in metric tons of active ingredients. Pesticides are organized into eight categories, the sum of which is used to determine total pesticide consumption. The eight categories are: insecticides, mineral oils, herbicides, fungicides and bactericides, seed treatment - fungicides, seed treatment - insecticides, plant growth regulators and rodenticides. Arable and permanent cropland is comprised of both arable and permanent land in a given country for each year. Arable land is 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). The abandoned land resulting from shifting cultivation is not included in this category. Data for "Arable land" are not meant to indicate the amount of land that is potentially cultivable. Permanent Crops is 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.

	Mean		Max		2.5 Percentile		0.10
	Median		Min		97.5 Percentile		19.85
Albania	0.18	Ecuador	2.50	Lebanon	5.60	Saudi Arabia	0.70
Algeria	[0.31]	Egypt	1.40	Liberia	[0.09]	Senegal	0.10
Angola	0.10	El Salvador	4.90	Libya	[0.32]	Serbia and Mont.	0.80
Argentina	1.90	Estonia	0.50	Lithuania	0.20	Sierra Leone	[0.07]
Armenia	0.10	Ethiopia	0.10	Macedonia	0.80	Slovakia	2.49
Australia	2.50	Finland	0.60	Madagascar	[0.18]	Slovenia	7.40
Austria	2.42	France	4.50	Malawi	0.30	South Africa	1.70
Azerbaijan	[0.34]	Gabon	[0.27]	Malaysia	1.50	South Korea	12.80
Bangladesh	0.40	Gambia	0.10	Mali	0.10	Spain	2.00
Belarus	[0.74]	Georgia	[0.87]	Mauritania	[0.08]	Sri Lanka	0.90
Belgium	5.90	Germany	2.30	Mexico	[1.9]	Sudan	[0.14]
Benin	[0.12]	Ghana	0.10	Moldova	1.10	Sweden	0.70
Bhutan	0.10	Greece	2.80	Mongolia	[0.31]	Switzerland	3.60
Bolivia	1.30	Guatemala	0.80	Morocco	1.00	Syria	0.60
Bosnia and Herz.	[0.46]	Guinea	0.10	Mozambique	[0.26]	Taiwan	47.33
Botswana	[0.4]	Guinea-Bissau	0.10	Myanmar	[0.23]	Tajikistan	0.80
Brazil	1.20	Guyana	[0.28]	Namibia	0.10	Tanzania	0.10
Bulgaria	0.90	Haiti	[0.31]	Nepal	[0.44]	Thailand	1.10
Burkina Faso	0.20	Honduras	2.50	Netherlands	8.00	Togo	0.10
Burundi	0.10	Hungary	1.10	New Zealand	1.00	Trin. and Tob.	7.30
Cambodia	[0.15]	Iceland	0.90	Nicaragua	2.40	Tunisia	0.20
Cameroon	0.10	India	0.30	Niger	[0.08]	Turkey	1.00
Canada	0.60	Indonesia	0.10	Nigeria	[0.06]	Turkmenistan	6.40
Central Afr. Rep.	[0.06]	Iran	0.30	North Korea	[1.01]	Uganda	[0.17]
Chad	[0.06]	Iraq	0.10	Norway	0.60	Ukraine	1.90
Chile	6.70	Ireland	2.00	Oman	1.20	United Arab. Em.	0.13
China	[0.77]	Israel	5.70	P. N. Guinea	0.10	United Kingdom	5.80
Colombia	16.70	Italy	1.16	Pakistan	0.50	United States	2.30
Congo	0.10	Jamaica	5.80	Panama	4.70	Uruguay	3.30
Costa Rica	20.40	Japan	[4.31]	Paraguay	3.40	Uzbekistan	[0.75]
Côte d'Ivoire	[0.27]	Jordan	1.40	Peru	1.20	Venezuela	1.20
Croatia	2.20	Kazakhstan	0.30	Philippines	[1.95]	Viet Nam	2.30
Cuba	[1.06]	Kenya	0.30	Poland	0.78	Yemen	0.80
Czech Rep.	1.40	Kuwait	4.60	Portugal	5.50	Zambia	0.30
Dem. Rep. Congo	[0.16]	Kyrgyzstan	1.80	Romania	0.80	Zimbabwe	0.90
Denmark	1.40	Laos	0.10	Russia	0.20		
Dominican Rep.	4.50	Latvia	0.20	Rwanda	0.10		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 33 **Code:** WATSTR **Reference Year:** 1961-1995
(long-term average)

Description: Percentage of country under severe water stress

Units: Percentage of national territory in which water consumption exceeds 40 percent of available water

Source*: Center for Environmental Systems Research, University of Kassel.

Logic: The regional distribution of water availability relative to population and consumption needs is as important as its overall water availability. This variable captures the percent of the territory that is under water stress, which will affect the availability of water for environmental services and human well-being.

Methodology: These data are derived from the WaterGap 2.1 gridded hydrological model developed by the Center for Environmental Systems Research, University of Kassel, Germany. The modelers derived gridcell by gridcell estimates of where water consumption exceeded 40 percent of the water available in that particular grid cell. These were then converted to land area equivalents, and the percent of the territory under severe water stress was calculated.

Mean	25.18	Max	100	2.5 Percentile	0		
Median	5.13	Min	0	97.5 Percentile	97.67		
Albania	23.09	Ecuador	9.83	Lebanon	84.91	Saudi Arabia	90.73
Algeria	67.94	Egypt	88.68	Liberia	0.00	Senegal	17.73
Angola	0.00	El Salvador	0.00	Libya	83.69	Serbia and Mont.	20.29
Argentina	19.64	Estonia	2.74	Lithuania	0.28	Sierra Leone	0.00
Armenia	87.14	Ethiopia	26.29	Macedonia	0.00	Slovakia	0.00
Australia	8.27	Finland	2.14	Madagascar	0.43	Slovenia	0.00
Austria	0.00	France	19.47	Malawi	0.00	South Africa	68.44
Azerbaijan	96.27	Gabon	0.00	Malaysia	3.05	South Korea	9.34
Bangladesh	22.88	Gambia	0.67	Mali	11.87	Spain	87.82
Belarus	0.00	Georgia	50.72	Mauritania	5.15	Sri Lanka	32.93
Belgium	93.54	Germany	1.79	Mexico	44.64	Sudan	31.13
Benin	0.00	Ghana	0.00	Moldova	8.02	Sweden	1.73
Bhutan	0.00	Greece	56.85	Mongolia	2.86	Switzerland	0.00
Bolivia	13.77	Guatemala	0.14	Morocco	82.26	Syria	99.58
Bosnia and Herz.	0.00	Guinea	0.00	Mozambique	12.23	Taiwan	6.80
Botswana	14.51	Guinea-Bissau	0.00	Myanmar	0.00	Tajikistan	94.82
Brazil	0.28	Guyana	0.00	Namibia	17.15	Tanzania	0.03
Bulgaria	55.24	Haiti	9.47	Nepal	97.47	Thailand	0.64
Burkina Faso	0.00	Honduras	0.00	Netherlands	43.19	Togo	0.00
Burundi	0.00	Hungary	0.00	New Zealand	0.44	Trin. and Tob.	99.85
Cambodia	0.00	Iceland	0.24	Nicaragua	0.69	Tunisia	92.04
Cameroon	0.00	India	80.37	Niger	1.21	Turkey	64.36
Canada	0.87	Indonesia	1.02	Nigeria	0.00	Turkmenistan	93.87
Central Afr. Rep.	0.00	Iran	87.30	North Korea	3.51	Uganda	0.00
Chad	1.95	Iraq	86.21	Norway	0.66	Ukraine	16.88
Chile	52.44	Ireland	0.00	Oman	49.91	United Arab. Em.	92.72
China	40.67	Israel	97.62	P. N. Guinea	0.00	United Kingdom	20.87
Colombia	0.44	Italy	32.10	Pakistan	76.37	United States	30.66
Congo	0.00	Jamaica	5.11	Panama	0.00	Uruguay	0.00
Costa Rica	0.00	Japan	13.87	Paraguay	0.00	Uzbekistan	86.67
Côte d'Ivoire	0.00	Jordan	81.20	Peru	20.09	Venezuela	4.90
Croatia	1.45	Kazakhstan	57.14	Philippines	15.20	Viet Nam	10.65
Cuba	28.55	Kenya	1.09	Poland	0.98	Yemen	64.31
Czech Rep.	0.00	Kuwait	100.00	Portugal	63.22	Zambia	0.00
Dem. Rep. Congo	0.00	Kyrgyzstan	93.62	Romania	1.92	Zimbabwe	16.23
Denmark	11.54	Laos	0.00	Russia	2.91		
Dominican Rep.	13.44	Latvia	0.30	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 34 **Code:** OVRFSH **Reference Year:** Average for 1993-1998
Description: Productivity overfishing
Units: Score between 1 and 7 with high scores corresponding to high degrees of overfishing
Source*: South Pacific Applied Geoscience Commission (SOPAC).
Logic: Fish stocks are an important component of marine ecosystems. Overfishing puts pressure on ecosystems and threatens biodiversity.
Methodology: This measure is drawn from the EVI prepared by SOPAC in partnership with UNEP and other support. The indicator's cut-off values are based on the ratio of fisheries productivity to fish catch, or specifically the ratio of tonnes of carbon per square kilometer of exclusive economic zone per year to tonnes of fish catch per square kilometer of shelf per year. The score ranges represent the following: 1=(>=3.2millions], 2=(3.2-1.2 millions], 3=(1.2 millions - 442 thousand], 4=(442-163 thousand], 5=(163-60 thousand], 6=(60-22 thousand], 7=(<=22

Mean	3.89	Max	7	2.5 Percentile	1		
Median	4	Min	1	97.5 Percentile	7		
Albania	3.00	Ecuador	6.00	Lebanon	4.00	Saudi Arabia	3.00
Algeria	5.00	Egypt	6.00	Liberia	3.00	Senegal	6.00
Angola	3.00	El Salvador	4.00	Libya	3.00	Serbia and Mont.	..
Argentina	4.00	Estonia	4.00	Lithuania	5.00	Sierra Leone	4.00
Armenia	..	Ethiopia	..	Macedonia	..	Slovakia	..
Australia	2.00	Finland	4.00	Madagascar	4.00	Slovenia	7.00
Austria	..	France	5.00	Malawi	..	South Africa	5.00
Azerbaijan	..	Gabon	3.00	Malaysia	5.00	South Korea	6.00
Bangladesh	6.00	Gambia	5.00	Mali	..	Spain	6.00
Belarus	..	Georgia	3.00	Mauritania	3.00	Sri Lanka	6.00
Belgium	5.00	Germany	5.00	Mexico	5.00	Sudan	4.00
Benin	6.00	Ghana	6.00	Moldova	..	Sweden	4.00
Bhutan	..	Greece	5.00	Mongolia	..	Switzerland	..
Bolivia	..	Guatemala	4.00	Morocco	6.00	Syria	6.00
Bosnia and Herz.	..	Guinea	4.00	Mozambique	3.00	Taiwan	..
Botswana	..	Guinea-Bissau	2.00	Myanmar	5.00	Tajikistan	..
Brazil	4.00	Guyana	4.00	Namibia	4.00	Tanzania	6.00
Bulgaria	4.00	Haiti	3.00	Nepal	..	Thailand	7.00
Burkina Faso	..	Honduras	3.00	Netherlands	5.00	Togo	6.00
Burundi	..	Hungary	..	New Zealand	5.00	Trin. and Tob.	3.00
Cambodia	5.00	Iceland	7.00	Nicaragua	3.00	Tunisia	4.00
Cameroon	5.00	India	6.00	Niger	..	Turkey	6.00
Canada	3.00	Indonesia	4.00	Nigeria	6.00	Turkmenistan	..
Central Afr. Rep.	..	Iran	4.00	North Korea	6.00	Uganda	..
Chad	..	Iraq	7.00	Norway	7.00	Ukraine	5.00
Chile	7.00	Ireland	5.00	Oman	3.00	United Arab. Em.	5.00
China	7.00	Israel	6.00	P. N. Guinea	2.00	United Kingdom	4.00
Colombia	4.00	Italy	5.00	Pakistan	5.00	United States	6.00
Congo	4.00	Jamaica	3.00	Panama	5.00	Uruguay	4.00
Costa Rica	4.00	Japan	7.00	Paraguay	..	Uzbekistan	..
Côte d'Ivoire	5.00	Jordan	5.00	Peru	7.00	Venezuela	5.00
Croatia	4.00	Kazakhstan	..	Philippines	6.00	Viet Nam	5.00
Cuba	4.00	Kenya	6.00	Poland	6.00	Yemen	3.00
Czech Rep.	..	Kuwait	3.00	Portugal	6.00	Zambia	..
Dem. Rep. Congo	6.00	Kyrgyzstan	..	Romania	4.00	Zimbabwe	..
Denmark	6.00	Laos	..	Russia	4.00		
Dominican Rep.	4.00	Latvia	5.00	Rwanda	..		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 35 **Code:** FORCERT **Reference Year:** Certifications: 2004
Total forest area: 2000

Description: Percentage of total forest area that is certified for sustainable management

Units: Percentage of total forest area that is FSC or PEFC certified

Source*: The Forest Stewardship Council, and Pan-European Forest Certification Council.

Logic: This variable measures the extent to which a country seeks sustainable forestry practices.

Methodology: The forest area certified by either the Forest Stewardship Council (FSC) or the Pan-European Forest Certification Council (PEFC) is divided by the year 2000 total forest area. To avoid double counting, if a country has forest areas under both programs, the maximum is selected. If no data are available for FSC or PEFC certified forest area, the value is set to 0. Also, ratios exceeding 100% are set to 100. This is the case for Croatia, Liechtenstein, Finland, and Norway.

Mean	4.92	Max	100.00	2.5 Percentile	0.00		
Median	0.00	Min	0.00	97.5 Percentile	67.01		
Albania	0.00	Ecuador	0.20	Lebanon	0.00	Saudi Arabia	0.00
Algeria	0.00	Egypt	0.00	Liberia	0.00	Senegal	0.00
Angola	0.00	El Salvador	0.00	Libya	0.00	Serbia and Mont.	0.00
Argentina	0.38	Estonia	51.63	Lithuania	40.29	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	0.00	Slovakia	2.01
Australia	0.71	Finland	100.00	Madagascar	0.00	Slovenia	0.00
Austria	10.14	France	22.55	Malawi	0.00	South Africa	18.17
Azerbaijan	0.00	Gabon	0.00	Malaysia	0.40	South Korea	0.00
Bangladesh	0.00	Gambia	0.00	Mali	0.00	Spain	2.20
Belarus	1.13	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.84
Belgium	31.67	Germany	64.47	Mexico	1.16	Sudan	0.00
Benin	0.00	Ghana	0.00	Moldova	0.00	Sweden	37.11
Bhutan	0.00	Greece	0.00	Mongolia	0.00	Switzerland	25.28
Bolivia	2.78	Guatemala	17.08	Morocco	0.00	Syria	0.00
Bosnia and Herz.	0.00	Guinea	0.00	Mozambique	0.00	Taiwan	0.00
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	0.00	Tajikistan	0.00
Brazil	0.52	Guyana	0.00	Namibia	1.03	Tanzania	0.00
Bulgaria	0.00	Haiti	0.00	Nepal	0.00	Thailand	0.01
Burkina Faso	0.00	Honduras	0.69	Netherlands	29.50	Togo	0.00
Burundi	0.00	Hungary	10.25	New Zealand	7.93	Trin. and Tob.	0.00
Cambodia	0.00	Iceland	0.00	Nicaragua	0.51	Tunisia	0.00
Cameroon	0.00	India	0.00	Niger	0.00	Turkey	0.00
Canada	1.72	Indonesia	0.09	Nigeria	0.00	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	0.00	North Korea	0.00	Uganda	0.84
Chad	0.00	Iraq	0.00	Norway	100.00	Ukraine	2.12
Chile	6.35	Ireland	66.46	Oman	0.00	United Arab. Em.	0.00
China	0.00	Israel	0.00	P. N. Guinea	0.00	United Kingdom	43.29
Colombia	0.12	Italy	0.70	Pakistan	0.00	United States	2.33
Congo	0.00	Jamaica	0.00	Panama	0.38	Uruguay	5.81
Costa Rica	2.77	Japan	0.81	Paraguay	0.01	Uzbekistan	0.00
Côte d'Ivoire	0.00	Jordan	0.00	Peru	0.00	Venezuela	0.28
Croatia	100.00	Kazakhstan	0.00	Philippines	0.26	Viet Nam	0.00
Cuba	0.00	Kenya	0.00	Poland	68.45	Yemen	0.00
Czech Rep.	73.58	Kuwait	0.00	Portugal	0.00	Zambia	0.00
Dem. Rep. Congo	0.00	Kyrgyzstan	0.00	Romania	0.49	Zimbabwe	0.67
Denmark	2.69	Laos	0.00	Russia	0.25		
Dominican Rep.	0.00	Latvia	57.68	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 36 **Code:** WEFSUB **Reference Year:** 2003/4

Description: World Economic Forum Survey on subsidies

Units: Survey Responses Ranging from 1 (strongly disagree) to 7 (strongly agree)

Source*: World Economic Forum (WEF).

Logic: Subsidies encourage wasteful consumption of energy and materials.

Methodology: Response to the statement "No government subsidies for energy or materials usage are present."

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	4.18		5.8		2.73		
	4.15		2.48		5.65		
Albania	[3.89]	Ecuador	2.82	Lebanon	[4.12]	Saudi Arabia	[3.53]
Algeria	3.50	Egypt	3.87	Liberia	[3.13]	Senegal	3.79
Angola	2.69	El Salvador	4.40	Libya	[3.66]	Serbia and Mont.	3.24
Argentina	4.15	Estonia	4.77	Lithuania	4.42	Sierra Leone	[3.16]
Armenia	[3.79]	Ethiopia	3.64	Macedonia	3.35	Slovakia	4.58
Australia	4.83	Finland	5.51	Madagascar	3.74	Slovenia	4.67
Austria	4.85	France	5.17	Malawi	4.33	South Africa	4.24
Azerbaijan	[3.39]	Gabon	[3.87]	Malaysia	4.62	South Korea	[4.7]
Bangladesh	3.38	Gambia	4.03	Mali	3.33	Spain	4.45
Belarus	[3.54]	Georgia	[3.66]	Mauritania	[3.79]	Sri Lanka	3.83
Belgium	5.23	Germany	4.87	Mexico	4.06	Sudan	[3.23]
Benin	[3.92]	Ghana	4.10	Moldova	[3.55]	Sweden	5.56
Bhutan	[3.63]	Greece	[4.45]	Mongolia	[3.51]	Switzerland	5.49
Bolivia	3.35	Guatemala	3.98	Morocco	3.88	Syria	[3.49]
Bosnia and Herz.	[4.02]	Guinea	[3.66]	Mozambique	3.68	Taiwan	4.91
Botswana	4.46	Guinea-Bissau	[3.57]	Myanmar	[3.67]	Tajikistan	[3.63]
Brazil	4.60	Guyana	[3.75]	Namibia	4.46	Tanzania	3.97
Bulgaria	3.43	Haiti	2.78	Nepal	[3.5]	Thailand	4.04
Burkina Faso	[3.48]	Honduras	2.97	Netherlands	5.56	Togo	[3.31]
Burundi	[3.31]	Hungary	4.40	New Zealand	5.08	Trin. and Tob.	4.55
Cambodia	[3.76]	Iceland	5.68	Nicaragua	3.02	Tunisia	[4.53]
Cameroon	4.45	India	3.65	Niger	[3.47]	Turkey	4.00
Canada	4.94	Indonesia	3.54	Nigeria	3.05	Turkmenistan	[3.22]
Central Afr. Rep.	[3.4]	Iran	[3.42]	North Korea	[3.47]	Uganda	3.59
Chad	2.60	Iraq	[3.27]	Norway	5.15	Ukraine	3.36
Chile	5.05	Ireland	4.26	Oman	[4.19]	United Arab. Em.	[4.27]
China	4.08	Israel	4.67	P. N. Guinea	[3.44]	United Kingdom	5.18
Colombia	4.11	Italy	4.81	Pakistan	3.64	United States	5.02
Congo	[3.55]	Jamaica	4.53	Panama	3.81	Uruguay	4.65
Costa Rica	4.27	Japan	4.93	Paraguay	3.70	Uzbekistan	[3.5]
Côte d'Ivoire	[3.56]	Jordan	4.90	Peru	4.06	Venezuela	2.48
Croatia	3.71	Kazakhstan	[3.61]	Philippines	3.49	Viet Nam	4.36
Cuba	[4.04]	Kenya	3.80	Poland	4.07	Yemen	[3.48]
Czech Rep.	4.40	Kuwait	[4.32]	Portugal	4.48	Zambia	4.25
Dem. Rep. Congo	[2.92]	Kyrgyzstan	[3.61]	Romania	3.35	Zimbabwe	2.86
Denmark	5.61	Laos	[3.39]	Russia	3.24		
Dominican Rep.	2.94	Latvia	4.63	Rwanda	[3.6]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 37 **Code:** IRRSAL **Reference Year:** Arable land: 2000,
Salinized area: MRYA 1990-1999

Description: Salinized area due to irrigation as percentage of total arable land

Units: Percentage of total arable land salinized due to irrigation

Source*: United Nations Food and Agricultural Organization (FAO).

Logic: Soil salinization is a form of land degradation. The transport of salts to the land's surface due to irrigation renders the land unfit for production, and is therefore unsustainable in the long term.

Methodology: The area of land salinized due to irrigation is divided by the total arable land area for each country (benchmarked to 2000).

	Mean	3.54	Max	44.36	2.5 Percentile	0	
	Median	0	Min	0	97.5 Percentile	34.6	
Albania	0.00	Ecuador	..	Lebanon	..	Saudi Arabia	..
Algeria	..	Egypt	36.77	Liberia	..	Senegal	..
Angola	..	El Salvador	0.00	Libya	..	Serbia and Mont.	..
Argentina	1.68	Estonia	0.00	Lithuania	0.00	Sierra Leone	..
Armenia	6.02	Ethiopia	..	Macedonia	..	Slovakia	..
Australia	..	Finland	0.00	Madagascar	..	Slovenia	0.00
Austria	0.00	France	..	Malawi	..	South Africa	..
Azerbaijan	9.20	Gabon	..	Malaysia	..	South Korea	..
Bangladesh	1.18	Gambia	..	Mali	..	Spain	..
Belarus	0.00	Georgia	..	Mauritania	..	Sri Lanka	..
Belgium	0.00	Germany	0.00	Mexico	1.41	Sudan	..
Benin	0.00	Ghana	0.00	Moldova	..	Sweden	..
Bhutan	0.00	Greece	..	Mongolia	..	Switzerland	..
Bolivia	0.70	Guatemala	0.26	Morocco	..	Syria	1.12
Bosnia and Herz.	0.00	Guinea	..	Mozambique	..	Taiwan	..
Botswana	..	Guinea-Bissau	..	Myanmar	..	Tajikistan	10.87
Brazil	0.02	Guyana	..	Namibia	..	Tanzania	..
Bulgaria	0.00	Haiti	..	Nepal	0.00	Thailand	..
Burkina Faso	..	Honduras	..	Netherlands	0.00	Togo	..
Burundi	0.00	Hungary	..	New Zealand	..	Trin. and Tob.	..
Cambodia	..	Iceland	..	Nicaragua	0.00	Tunisia	..
Cameroon	..	India	..	Niger	..	Turkey	..
Canada	..	Indonesia	9.82	Nigeria	0.00	Turkmenistan	34.06
Central Afr. Rep.	..	Iran	12.86	North Korea	0.00	Uganda	0.00
Chad	..	Iraq	..	Norway	0.00	Ukraine	..
Chile	1.46	Ireland	0.00	Oman	..	United Arab. Em.	..
China	..	Israel	..	P. N. Guinea	..	United Kingdom	0.00
Colombia	..	Italy	..	Pakistan	..	United States	..
Congo	0.00	Jamaica	0.00	Panama	0.00	Uruguay	..
Costa Rica	0.00	Japan	0.00	Paraguay	..	Uzbekistan	44.36
Côte d'Ivoire	0.00	Jordan	0.57	Peru	7.00	Venezuela	..
Croatia	0.00	Kazakhstan	1.12	Philippines	0.00	Viet Nam	..
Cuba	21.80	Kenya	..	Poland	0.00	Yemen	..
Czech Rep.	..	Kuwait	34.00	Portugal	0.00	Zambia	0.00
Dem. Rep. Congo	..	Kyrgyzstan	4.18	Romania	..	Zimbabwe	..
Denmark	0.00	Laos	0.00	Russia	..		
Dominican Rep.	0.00	Latvia	0.00	Rwanda	..		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 38 **Code:** AGSUB **Reference Year:** PSE and AMS: MRYA 1997-2001, EU15: 2001, Agricultural GDP: MRYA 1992-2001

Description: Agricultural subsidies

Units: Scale from 1 (lowest) to 8 (highest), with 0 being missing data

Source*: Organisation for Economic Co-operation and Development (OECD), World Trade Organization, and European Commission's Directorate General Agriculture.

Logic: Agricultural subsidies reduce environmental sustainability primarily by creating price distortions, promoting the production of input intensive crops, wasteful use of natural resource inputs, use of marginal and fragile lands, and rent-seeking behavior.

Methodology: OECD data for producer support estimates (PSE), WTO data for aggregate measure of support (AMS). For China and India the data were taken from their notifications to the WTO. WTO data were converted from national currencies to US dollars using annual average exchange rates for 1999: ECU to USD using historic weighted 12 month average (<http://www.x-rates.com/d/USD/EUR/hist1999.html>), all other currencies were converted using annual average exchange rates (World Bank WDI 2004). OECD data for the EU15 refer to total PSE for the 15 members. A breakdown by member state was calculated as follows: The total PSE for EU15 was multiplied by each country's fraction of total EU15 agricultural production. OECD countries (John Finn, WTO) provided updated PSE data as percentage of total agricultural GDP replaced older OECD data. Final data were classified into 8 groups as follows: [0-10%)=1; [10-20%)=2; [20-30%)=3; [30-40%)=4; [40-50%)=5; [50-60%)=6; [60-70%)=7; [>70%)=8. All other countries with no information are classified as 0.

Mean	0.67	Max	8	2.5 Percentile	0		
Median	0	Min	0	97.5 Percentile	7		
Albania	0.00	Ecuador	0.00	Lebanon	0.00	Saudi Arabia	0.00
Algeria	0.00	Egypt	0.00	Liberia	0.00	Senegal	0.00
Angola	0.00	El Salvador	0.00	Libya	0.00	Serbia and Mont.	0.00
Argentina	1.00	Estonia	0.00	Lithuania	0.00	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	0.00	Slovakia	2.00
Australia	1.00	Finland	4.00	Madagascar	0.00	Slovenia	1.00
Austria	5.00	France	6.00	Malawi	0.00	South Africa	1.00
Azerbaijan	0.00	Gabon	0.00	Malaysia	0.00	South Korea	7.00
Bangladesh	0.00	Gambia	0.00	Mali	0.00	Spain	7.00
Belarus	0.00	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.00
Belgium	8.00	Germany	3.00	Mexico	3.00	Sudan	0.00
Benin	0.00	Ghana	0.00	Moldova	0.00	Sweden	4.00
Bhutan	0.00	Greece	5.00	Mongolia	0.00	Switzerland	8.00
Bolivia	0.00	Guatemala	0.00	Morocco	1.00	Syria	0.00
Bosnia and Herz.	0.00	Guinea	0.00	Mozambique	0.00	Taiwan	0.00
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	0.00	Tajikistan	0.00
Brazil	1.00	Guyana	0.00	Namibia	0.00	Tanzania	0.00
Bulgaria	1.00	Haiti	0.00	Nepal	0.00	Thailand	1.00
Burkina Faso	0.00	Honduras	0.00	Netherlands	7.00	Togo	0.00
Burundi	0.00	Hungary	6.00	New Zealand	1.00	Trin. and Tob.	0.00
Cambodia	0.00	Iceland	7.00	Nicaragua	0.00	Tunisia	1.00
Cameroon	0.00	India	1.00	Niger	0.00	Turkey	1.00
Canada	2.00	Indonesia	0.00	Nigeria	0.00	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	0.00	North Korea	0.00	Uganda	0.00
Chad	0.00	Iraq	0.00	Norway	7.00	Ukraine	0.00
Chile	0.00	Ireland	6.00	Oman	0.00	United Arab. Em.	0.00
China	1.00	Israel	..	P. N. Guinea	0.00	United Kingdom	6.00
Colombia	1.00	Italy	5.00	Pakistan	0.00	United States	3.00
Congo	0.00	Jamaica	0.00	Panama	0.00	Uruguay	0.00
Costa Rica	1.00	Japan	6.00	Paraguay	0.00	Uzbekistan	0.00
Côte d'Ivoire	0.00	Jordan	0.00	Peru	0.00	Venezuela	1.00
Croatia	0.00	Kazakhstan	0.00	Philippines	0.00	Viet Nam	0.00
Cuba	0.00	Kenya	0.00	Poland	2.00	Yemen	0.00
Czech Rep.	3.00	Kuwait	0.00	Portugal	6.00	Zambia	0.00
Dem. Rep. Congo	0.00	Kyrgyzstan	0.00	Romania	0.00	Zimbabwe	0.00
Denmark	7.00	Laos	0.00	Russia	0.00		
Dominican Rep.	0.00	Latvia	0.00	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 39 **Code:** DISINT **Reference Year:** MRYA 1995-2002

Description: Death rate from intestinal infectious diseases

Units: Deaths per 100,000 population

Source*: World Health Organization (WHO).

Logic: Indicator of the degree to which the population is affected by poor sanitation and water quality, which are related to environmental conditions.

Methodology: Standardized, age-specific death rate from intestinal infectious diseases. Results calculated as follows: For ICD-9, the codes extracted are B01 and CH01 (which cover B01-B07 in ICD-9) for Armenia, Belarus, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and the former USSR (for some years), and C004-C006 for China (which cover 001-005, 008, and 009 in the detailed ICD-9). For ICD-10 the codes extracted are A00, A03-A09, and A010. The data were extracted by age group and aggregated by sex. They were then combined with annual population data by age group prepared by CIESIN for the year 2000. The data were then standardized for differences in the national age distributions using Canada's population structure in 2000 as it offers a relatively stable and suitable reference distribution.

Mean	9.86	Max	104.52	2.5 Percentile	0.03		
Median	1.2	Min	0.01	97.5 Percentile	94.58		
Albania	1.44	Ecuador	21.32	Lebanon	[7.38]	Saudi Arabia	[4.55]
Algeria	[19.32]	Egypt	94.58	Liberia	[33.64]	Senegal	[13.67]
Angola	[49.88]	El Salvador	36.89	Libya	[5.65]	Serbia and Mont.	[3.94]
Argentina	2.04	Estonia	0.77	Lithuania	0.03	Sierra Leone	[22.08]
Armenia	2.14	Ethiopia	[36.31]	Macedonia	3.48	Slovakia	0.09
Australia	0.07	Finland	0.46	Madagascar	[14.19]	Slovenia	0.57
Austria	0.14	France	1.08	Malawi	[41.52]	South Africa	[3.1]
Azerbaijan	9.64	Gabon	[17.35]	Malaysia	2.39	South Korea	1.20
Bangladesh	[8.22]	Gambia	[22.46]	Mali	[24.03]	Spain	0.48
Belarus	0.71	Georgia	1.06	Mauritania	[17.08]	Sri Lanka	[8.33]
Belgium	0.96	Germany	0.20	Mexico	15.91	Sudan	[29.76]
Benin	[8.67]	Ghana	[13.53]	Moldova	0.94	Sweden	0.08
Bhutan	[23.41]	Greece	0.02	Mongolia	[13.58]	Switzerland	[0.69]
Bolivia	[33.61]	Guatemala	[27.11]	Morocco	[8.24]	Syria	[6.39]
Bosnia and Herz.	[4.05]	Guinea	[24.02]	Mozambique	[50.26]	Taiwan	[3.85]
Botswana	[6.73]	Guinea-Bissau	[18.82]	Myanmar	[3.83]	Tajikistan	85.90
Brazil	12.85	Guyana	97.25	Namibia	[6.95]	Tanzania	[26.42]
Bulgaria	0.76	Haiti	[21.1]	Nepal	[10.24]	Thailand	[5.3]
Burkina Faso	[15.01]	Honduras	[18.84]	Netherlands	0.07	Togo	[22.65]
Burundi	[48.95]	Hungary	0.13	New Zealand	0.10	Trin. and Tob.	2.93
Cambodia	[13.85]	Iceland	0.80	Nicaragua	37.72	Tunisia	[3.78]
Cameroon	[16.01]	India	[4.27]	Niger	[33.44]	Turkey	[0.69]
Canada	0.04	Indonesia	[9.85]	Nigeria	[17.58]	Turkmenistan	104.52
Central Afr. Rep.	[25.11]	Iran	[9.65]	North Korea	[6.09]	Uganda	[15.39]
Chad	[27.58]	Iraq	[20.06]	Norway	0.59	Ukraine	0.80
Chile	3.23	Ireland	0.27	Oman	[13.9]	United Arab. Em.	[1.46]
China	0.19	Israel	1.41	P. N. Guinea	[17.81]	United Kingdom	0.82
Colombia	13.69	Italy	0.08	Pakistan	[16.66]	United States	0.03
Congo	[53.79]	Jamaica	[3.61]	Panama	[11.38]	Uruguay	2.87
Costa Rica	7.26	Japan	0.67	Paraguay	31.35	Uzbekistan	9.20
Côte d'Ivoire	[13.97]	Jordan	[5.76]	Peru	12.66	Venezuela	29.54
Croatia	0.23	Kazakhstan	3.35	Philippines	49.15	Viet Nam	[8.37]
Cuba	3.03	Kenya	[16.41]	Poland	0.12	Yemen	[40.28]
Czech Rep.	0.01	Kuwait	2.10	Portugal	0.14	Zambia	[16.94]
Dem. Rep. Congo	[63.52]	Kyrgyzstan	15.91	Romania	1.21	Zimbabwe	[22.66]
Denmark	0.94	Laos	[24.7]	Russia	1.60		
Dominican Rep.	23.29	Latvia	0.40	Rwanda	[23.09]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 40 **Code:** DISRES **Reference Year:** MRYA 1995-2002

Description: Child death rate from respiratory diseases

Units: Deaths per 100,000 population aged 0-14

Source*: World Health Organization (WHO).

Logic: Indicator of the degree to which children are impacted by poor air quality.

Methodology: The final results were calculated as follows: For ICD-9, the codes extracted are B31, B320, B321, CH08 (which covers B31 and B32 in ICD-9), S310 (which covers B310-B312, B320 in ICD-9) for Armenia, Belarus, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and the former USSR (for some years), and C052 and C053 for China (which cover 460-519 and 480-486 in the detailed ICD-9). For ICD-10 the codes extracted are J03, J04, J06, J311, J312, J32, J33, J342, J35, J20, J21, J12-J16, and J18. The data were extracted by age group (0-14 years) and aggregated by sex. They were then combined with annual population data by age group prepared by CIESIN for the year 2000.

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	11.54		291.49		0.00		
	0.58		0.00		117.64		
Albania	12.85	Ecuador	0.02	Lebanon	[18.21]	Saudi Arabia	[53.62]
Algeria	[29.02]	Egypt	49.62	Liberia	[32.58]	Senegal	[13.86]
Angola	[29.49]	El Salvador	13.52	Libya	[32.05]	Serbia and Mont.	[2.67]
Argentina	0.00	Estonia	1.42	Lithuania	0.00	Sierra Leone	[31.72]
Armenia	12.41	Ethiopia	[19.51]	Macedonia	3.33	Slovakia	0.00
Australia	2.91	Finland	0.00	Madagascar	[15.18]	Slovenia	0.44
Austria	0.00	France	0.40	Malawi	[27.38]	South Africa	14.64
Azerbaijan	118.38	Gabon	[12.01]	Malaysia	2.45	South Korea	0.72
Bangladesh	[8.33]	Gambia	[26.76]	Mali	[31.33]	Spain	0.00
Belarus	5.30	Georgia	8.67	Mauritania	[69.79]	Sri Lanka	0.00
Belgium	0.38	Germany	0.00	Mexico	0.02	Sudan	[17.04]
Benin	[14.75]	Ghana	[6.02]	Moldova	8.60	Sweden	0.00
Bhutan	[17.86]	Greece	1.05	Mongolia	[34.9]	Switzerland	[1.15]
Bolivia	[6.8]	Guatemala	[3.33]	Morocco	[10.65]	Syria	[26.58]
Bosnia and Herz.	[7.17]	Guinea	[17.82]	Mozambique	[15.54]	Taiwan	[7.54]
Botswana	[5.02]	Guinea-Bissau	[21.13]	Myanmar	[9.12]	Tajikistan	88.69
Brazil	0.01	Guyana	12.55	Namibia	[3.43]	Tanzania	[10.9]
Bulgaria	9.61	Haiti	[23.11]	Nepal	[6.9]	Thailand	[0.36]
Burkina Faso	[22.41]	Honduras	[3.84]	Netherlands	0.03	Togo	[17.04]
Burundi	[17.56]	Hungary	0.00	New Zealand	0.26	Trin. and Tob.	2.77
Cambodia	[5.69]	Iceland	0.00	Nicaragua	0.04	Tunisia	[19.03]
Cameroon	[3.57]	India	[7.86]	Niger	[35.21]	Turkey	[5.28]
Canada	0.00	Indonesia	[2.6]	Nigeria	[21.8]	Turkmenistan	291.49
Central Afr. Rep.	[26.88]	Iran	[14.9]	North Korea	[55.62]	Uganda	[17.7]
Chad	[37.16]	Iraq	[44.87]	Norway	0.00	Ukraine	7.86
Chile	0.02	Ireland	0.89	Oman	[38.84]	United Arab. Em.	[11.9]
China	2.00	Israel	0.00	P. N. Guinea	[7.93]	United Kingdom	1.27
Colombia	0.01	Italy	0.38	Pakistan	[26.74]	United States	0.01
Congo	[18.37]	Jamaica	[1.3]	Panama	[0.21]	Uruguay	0.00
Costa Rica	4.87	Japan	0.00	Paraguay	0.04	Uzbekistan	142.34
Côte d'Ivoire	[12.76]	Jordan	[13.57]	Peru	0.01	Venezuela	0.01
Croatia	0.00	Kazakhstan	22.40	Philippines	26.84	Viet Nam	[7.31]
Cuba	0.00	Kenya	[14.28]	Poland	0.01	Yemen	[39.72]
Czech Rep.	0.00	Kuwait	[36.68]	Portugal	1.02	Zambia	[18.22]
Dem. Rep. Congo	[25.3]	Kyrgyzstan	[38.93]	Romania	0.00	Zimbabwe	[22.25]
Denmark	0.08	Laos	[8.63]	Russia	18.77		
Dominican Rep.	7.93	Latvia	0.84	Rwanda	[13.94]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 41 **Code:** U5MORT **Reference Year:** MRYA 2002-2004

Description: Children under five mortality rate per 1,000 live births

Units: Children under five mortality rate per 1,000 live births

Source*: United Nations Statistics Division (UNSD).

Logic: Under-5 mortality rate is a measure of the vulnerability of the most vulnerable population group.

Methodology: Deaths between birth and age five divided by live births (in thousands).

Mean	62.25	Max	284	2.5 Percentile	4.4		
Median	29.5	Min	3	97.5 Percentile	226.25		
Albania	30.00	Ecuador	29.00	Lebanon	32.00	Saudi Arabia	28.00
Algeria	49.00	Egypt	39.00	Liberia	235.00	Senegal	138.00
Angola	260.00	El Salvador	39.00	Libya	19.00	Serbia and Mont.	19.00
Argentina	19.00	Estonia	12.00	Lithuania	10.40	Sierra Leone	284.00
Armenia	35.00	Ethiopia	171.00	Macedonia	26.00	Slovakia	9.00
Australia	5.00	Finland	5.00	Madagascar	135.00	Slovenia	5.00
Austria	4.46	France	6.00	Malawi	182.00	South Africa	65.00
Azerbaijan	105.00	Gabon	91.00	Malaysia	8.00	South Korea	5.00
Bangladesh	73.00	Gambia	126.00	Mali	222.00	Spain	6.00
Belarus	20.00	Georgia	29.00	Mauritania	183.00	Sri Lanka	19.00
Belgium	6.00	Germany	5.00	Mexico	29.00	Sudan	94.00
Benin	156.00	Ghana	97.00	Moldova	32.00	Sweden	3.00
Bhutan	94.00	Greece	5.00	Mongolia	71.00	Switzerland	6.00
Bolivia	71.00	Guatemala	49.00	Morocco	43.00	Syria	28.00
Bosnia and Herz.	18.00	Guinea	165.00	Mozambique	205.00	Taiwan	4.97
Botswana	110.00	Guinea-Bissau	211.00	Myanmar	108.00	Tajikistan	72.00
Brazil	37.00	Guyana	72.00	Namibia	67.00	Tanzania	165.00
Bulgaria	16.00	Haiti	123.00	Nepal	87.00	Thailand	28.00
Burkina Faso	207.00	Honduras	42.00	Netherlands	5.00	Togo	141.00
Burundi	190.00	Hungary	9.00	New Zealand	5.28	Trin. and Tob.	20.00
Cambodia	138.00	Iceland	4.00	Nicaragua	41.00	Tunisia	26.00
Cameroon	166.00	India	90.00	Niger	264.00	Turkey	41.00
Canada	7.00	Indonesia	43.00	Nigeria	201.00	Turkmenistan	98.00
Central Afr. Rep.	180.00	Iran	41.00	North Korea	55.00	Uganda	141.00
Chad	200.00	Iraq	125.00	Norway	4.00	Ukraine	20.00
Chile	12.00	Ireland	6.00	Oman	13.00	United Arab. Em.	9.78
China	38.00	Israel	6.00	P. N. Guinea	94.00	United Kingdom	7.00
Colombia	23.00	Italy	6.00	Pakistan	104.00	United States	8.00
Congo	108.00	Jamaica	20.00	Panama	25.00	Uruguay	15.00
Costa Rica	6.86	Japan	5.00	Paraguay	30.00	Uzbekistan	68.00
Côte d'Ivoire	191.00	Jordan	33.00	Peru	39.00	Venezuela	22.00
Croatia	8.00	Kazakhstan	76.00	Philippines	37.00	Viet Nam	26.00
Cuba	9.00	Kenya	122.00	Poland	7.50	Yemen	114.00
Czech Rep.	5.00	Kuwait	10.00	Portugal	6.00	Zambia	182.00
Dem. Rep. Congo	205.00	Kyrgyzstan	61.00	Romania	21.00	Zimbabwe	123.00
Denmark	4.00	Laos	100.00	Russia	21.00		
Dominican Rep.	38.00	Latvia	21.00	Rwanda	203.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 42 **Code:** UND_NO **Reference Year:** MRYA 1999-2001

Description: Percentage of undernourished in total population

Units: Percentage of undernourished in total population

Source*: United Nations Food and Agriculture Organization (FAO).

Logic: This indicator represents the population vulnerability to malnutrition, famine or diseases, in addition to showing the incapacity of an economy to supply an adequate amount of food and to manage food resources.

Methodology: The value of 1% was allocated to the following countries: Australia, Austria, Belgium, Canada, Switzerland, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Iceland, Israel, Italy, Japan, South Korea, The Netherlands, Norway, New Zealand, Portugal, Sweden, and the United States of America. These countries are not covered in the FAO State of Food Insecurity in the World 2003 report but are considered to have a small proportion of undernourished people.

	Mean	16.93	Max	75	2.5 Percentile	0	
	Median	11	Min	0	97.5 Percentile	70	
Albania	4.00	Ecuador	4.00	Lebanon	3.00	Saudi Arabia	3.00
Algeria	6.00	Egypt	3.00	Liberia	42.00	Senegal	24.00
Angola	49.00	El Salvador	14.00	Libya	0.00	Serbia and Mont.	9.00
Argentina	0.00	Estonia	4.00	Lithuania	0.00	Sierra Leone	50.00
Armenia	51.00	Ethiopia	42.00	Macedonia	10.00	Slovakia	5.00
Australia	1.00	Finland	1.00	Madagascar	36.00	Slovenia	0.00
Austria	1.00	France	1.00	Malawi	33.00	South Africa	[14.7]
Azerbaijan	21.00	Gabon	7.00	Malaysia	0.00	South Korea	0.00
Bangladesh	32.00	Gambia	27.00	Mali	21.00	Spain	1.00
Belarus	3.00	Georgia	26.00	Mauritania	10.00	Sri Lanka	25.00
Belgium	1.00	Germany	1.00	Mexico	5.00	Sudan	25.00
Benin	16.00	Ghana	12.00	Moldova	12.00	Sweden	1.00
Bhutan	[32.42]	Greece	1.00	Mongolia	38.00	Switzerland	1.00
Bolivia	22.00	Guatemala	25.00	Morocco	7.00	Syria	4.00
Bosnia and Herz.	8.00	Guinea	28.00	Mozambique	53.00	Taiwan	[13.27]
Botswana	24.00	Guinea-Bissau	[31.93]	Myanmar	7.00	Tajikistan	71.00
Brazil	9.00	Guyana	14.00	Namibia	7.00	Tanzania	43.00
Bulgaria	16.00	Haiti	49.00	Nepal	17.00	Thailand	19.00
Burkina Faso	17.00	Honduras	20.00	Netherlands	1.00	Togo	25.00
Burundi	70.00	Hungary	0.00	New Zealand	1.00	Trin. and Tob.	12.00
Cambodia	38.00	Iceland	1.00	Nicaragua	29.00	Tunisia	0.00
Cameroon	27.00	India	21.00	Niger	34.00	Turkey	3.00
Canada	1.00	Indonesia	6.00	Nigeria	8.00	Turkmenistan	7.00
Central Afr. Rep.	44.00	Iran	5.00	North Korea	34.00	Uganda	19.00
Chad	34.00	Iraq	27.00	Norway	1.00	Ukraine	4.00
Chile	4.00	Ireland	1.00	Oman	[4.17]	United Arab. Em.	0.00
China	11.00	Israel	1.00	P. N. Guinea	27.00	United Kingdom	1.00
Colombia	13.00	Italy	1.00	Pakistan	19.00	United States	1.00
Congo	30.00	Jamaica	9.00	Panama	26.00	Uruguay	3.00
Costa Rica	6.00	Japan	1.00	Paraguay	13.00	Uzbekistan	26.00
Côte d'Ivoire	15.00	Jordan	6.00	Peru	11.00	Venezuela	18.00
Croatia	12.00	Kazakhstan	22.00	Philippines	22.00	Viet Nam	19.00
Cuba	11.00	Kenya	37.00	Poland	0.00	Yemen	33.00
Czech Rep.	0.00	Kuwait	4.00	Portugal	1.00	Zambia	50.00
Dem. Rep. Congo	75.00	Kyrgyzstan	7.00	Romania	0.00	Zimbabwe	39.00
Denmark	1.00	Laos	22.00	Russia	4.00		
Dominican Rep.	25.00	Latvia	6.00	Rwanda	41.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 43 **Code:** WATSUP **Reference Year:** MRYA 1991-2004

Description: Percentage of population with access to improved drinking water source

Units: Percentage of population with access to improved drinking water source

Source*: World Health Organization (WHO) and United Nations Children's Fund (UNICEF), plus country data.

Logic: The percentage of population with access to improved sources of drinking water supply is directly related to the capacity of a country to provide a healthy environment, reducing the risks associated with water-borne diseases and exposure to pollutants.

Methodology: Proportion of population with sustainable access to an improved water source, whole Area (UNICEF-WHO)

	Mean	81.42	Max	100	2.5 Percentile	36.25	
	Median	86	Min	13	97.5 Percentile	100	
Albania	97.00	Ecuador	86.00	Lebanon	100.00	Saudi Arabia	[87.55]
Algeria	87.00	Egypt	98.00	Liberia	62.00	Senegal	72.00
Angola	50.00	El Salvador	82.00	Libya	72.00	Serbia and Mont.	93.00
Argentina	[88.93]	Estonia	[101.83]	Lithuania	[98.01]	Sierra Leone	57.00
Armenia	92.00	Ethiopia	22.00	Macedonia	[86.05]	Slovakia	100.00
Australia	100.00	Finland	100.00	Madagascar	45.00	Slovenia	[103.1]
Austria	100.00	France	[101.75]	Malawi	67.00	South Africa	87.00
Azerbaijan	77.00	Gabon	87.00	Malaysia	95.00	South Korea	92.00
Bangladesh	75.00	Gambia	82.00	Mali	48.00	Spain	[99.85]
Belarus	100.00	Georgia	76.00	Mauritania	56.00	Sri Lanka	78.00
Belgium	96.45	Germany	100.00	Mexico	91.00	Sudan	69.00
Benin	68.00	Ghana	79.00	Moldova	92.00	Sweden	100.00
Bhutan	62.00	Greece	[102.16]	Mongolia	62.00	Switzerland	100.00
Bolivia	85.00	Guatemala	95.00	Morocco	80.00	Syria	79.00
Bosnia and Herz.	98.00	Guinea	51.00	Mozambique	42.00	Taiwan	100.00
Botswana	95.00	Guinea-Bissau	59.00	Myanmar	80.00	Tajikistan	58.00
Brazil	89.00	Guyana	83.00	Namibia	80.00	Tanzania	73.00
Bulgaria	100.00	Haiti	71.00	Nepal	84.00	Thailand	85.00
Burkina Faso	51.00	Honduras	90.00	Netherlands	100.00	Togo	51.00
Burundi	79.00	Hungary	99.00	New Zealand	[97.7]	Trin. and Tob.	91.00
Cambodia	34.00	Iceland	100.00	Nicaragua	81.00	Tunisia	82.00
Cameroon	63.00	India	86.00	Niger	46.00	Turkey	93.00
Canada	100.00	Indonesia	78.00	Nigeria	60.00	Turkmenistan	71.00
Central Afr. Rep.	75.00	Iran	93.00	North Korea	100.00	Uganda	56.00
Chad	34.00	Iraq	81.00	Norway	100.00	Ukraine	98.00
Chile	95.00	Ireland	100.00	Oman	79.00	United Arab. Em.	98.00
China	77.00	Israel	100.00	P. N. Guinea	39.00	United Kingdom	[100.1]
Colombia	92.00	Italy	94.10	Pakistan	90.00	United States	100.00
Congo	46.00	Jamaica	93.00	Panama	91.00	Uruguay	98.00
Costa Rica	97.00	Japan	100.00	Paraguay	83.00	Uzbekistan	89.00
Côte d'Ivoire	84.00	Jordan	91.00	Peru	81.00	Venezuela	83.00
Croatia	[95.48]	Kazakhstan	86.00	Philippines	85.00	Viet Nam	73.00
Cuba	91.00	Kenya	62.00	Poland	[102.2]	Yemen	69.00
Czech Rep.	[96.86]	Kuwait	[98.75]	Portugal	[98.51]	Zambia	55.00
Dem. Rep. Congo	46.00	Kyrgyzstan	76.00	Romania	57.00	Zimbabwe	83.00
Denmark	100.00	Laos	43.00	Russia	96.00		
Dominican Rep.	93.00	Latvia	[98.73]	Rwanda	73.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 44 **Code:** DISCAS **Reference Year:** 1980-2000

Description: Average number of deaths per million inhabitants from floods, tropical cyclones, and droughts

Units: Average number of deaths per million inhabitants

Source*: United Nations Development Programme (UNDP) Bureau for Crisis Prevention and Recovery.

Logic: Vulnerability to natural disasters is a function of the exposure to hazards (how often and how severe they are), the sensitivity to such hazards (how big the linkages are to social systems), and the resilience within a society to hazard impacts. By averaging deaths from environmentally-related natural disasters, this measure provides a useful summary of overall human vulnerability to environmental change.

Methodology: The UNDP compiled these measures by aggregating and normalizing information from the OFDA/CRED International Disasters Data Base, Center for Research on the Epidemiology of Disasters.

	Mean		Max		2.5 Percentile		0.00
	Median		Min		97.5 Percentile		289.10
Albania	0.22	Ecuador	2.92	Lebanon	0.00	Saudi Arabia	0.00
Algeria	0.50	Egypt	0.48	Liberia	0.19	Senegal	0.00
Angola	0.11	El Salvador	8.82	Libya	0.00	Serbia and Mont.	0.38
Argentina	0.34	Estonia	0.00	Lithuania	0.00	Sierra Leone	0.14
Armenia	0.05	Ethiopia	286.74	Macedonia	0.00	Slovakia	0.49
Australia	0.52	Finland	0.00	Madagascar	4.65	Slovenia	0.00
Austria	0.12	France	0.09	Malawi	2.36	South Africa	1.38
Azerbaijan	0.10	Gabon	0.00	Malaysia	0.84	South Korea	2.86
Bangladesh	68.13	Gambia	2.09	Mali	0.18	Spain	0.21
Belarus	0.01	Georgia	0.90	Mauritania	57.86	Sri Lanka	1.62
Belgium	0.03	Germany	0.01	Mexico	2.34	Sudan	294.62
Benin	0.91	Ghana	0.60	Moldova	0.62	Sweden	0.00
Bhutan	5.44	Greece	0.11	Mongolia	0.00	Switzerland	0.01
Bolivia	2.27	Guatemala	5.71	Morocco	1.40	Syria	0.00
Bosnia and Herz.	0.00	Guinea	0.10	Mozambique	361.13	Taiwan	..
Botswana	1.07	Guinea-Bissau	0.00	Myanmar	0.20	Tajikistan	0.00
Brazil	0.68	Guyana	0.00	Namibia	0.00	Tanzania	0.77
Bulgaria	0.00	Haiti	13.35	Nepal	10.92	Thailand	1.91
Burkina Faso	0.23	Honduras	145.74	Netherlands	0.00	Togo	0.04
Burundi	0.15	Hungary	0.04	New Zealand	0.22	Trin. and Tob.	0.19
Cambodia	4.08	Iceland	0.00	Nicaragua	3739.6	Tunisia	1.13
Cameroon	0.13	India	2.81	Niger	0.47	Turkey	0.36
Canada	0.05	Indonesia	1.01	Nigeria	0.12	Turkmenistan	0.00
Central Afr. Rep.	0.09	Iran	2.20	North Korea	580.78	Uganda	0.65
Chad	28.50	Iraq	0.00	Norway	0.01	Ukraine	0.06
Chile	1.21	Ireland	0.04	Oman	0.00	United Arab. Em.	0.00
China	1.83	Israel	0.09	P. N. Guinea	2.40	United Kingdom	0.01
Colombia	1.39	Italy	0.24	Pakistan	2.28	United States	0.95
Congo	0.03	Jamaica	2.79	Panama	0.32	Uruguay	0.00
Costa Rica	1.73	Japan	0.57	Paraguay	0.85	Uzbekistan	0.00
Côte d'Ivoire	0.10	Jordan	0.26	Peru	4.56	Venezuela	68.56
Croatia	0.00	Kazakhstan	0.03	Philippines	15.58	Viet Nam	8.38
Cuba	0.47	Kenya	0.66	Poland	0.08	Yemen	3.65
Czech Rep.	0.13	Kuwait	0.06	Portugal	0.34	Zambia	0.00
Dem. Rep. Congo	0.07	Kyrgyzstan	0.02	Romania	0.41	Zimbabwe	0.41
Denmark	0.00	Laos	1.35	Russia	0.06		
Dominican Rep.	3.10	Latvia	0.00	Rwanda	0.34		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 45 **Code:** DISEXP **Reference Year:** 2005

Description: Environmental Hazard Exposure Index

Units: An index of population-weighted exposure to high levels of environmentally-related natural hazards.

Source*: The World Bank.

Logic: Vulnerability to natural disasters is a function of the exposure to hazards (how often and how severe they are), the sensitivity to such hazards (how big the linkages are to social systems), and the resilience within a society to hazard impacts. This measure provides a useful proxy of the exposure term.

Methodology: To calculate the environmental hazard exposure index, data from Dilley et al. were used. Data on exposure to landslides, droughts, cyclones and floods were put into a consistent GIS database. The world's land area was classified into degrees of exposure to these four hazards. Those grid cells falling into the highest three deciles of exposure were flagged. The number of high-exposure hazards was summed for each grid cell. The values range from 0-4. The resulting gridded data set was then overlaid with a gridded population data set for the year 2000. Each person was assigned a score equal to the number of high-exposure hazards identified in that grid cell. We calculated the sum of personal exposure scores, and divided by the total population, by country. The theoretically possible range was 0-4. The actual index ranged from 0 to 2.04.

	Mean		Max		2.5 Percentile		97.5 Percentile
	0.59	Median	0.51	Min	0	2.04	0
Albania	0.04	Ecuador	1.76	Lebanon	1.02	Saudi Arabia	0.00
Algeria	0.20	Egypt	..	Liberia	..	Senegal	..
Angola	0.55	El Salvador	1.23	Libya	0.33	Serbia and Mont.	0.16
Argentina	0.59	Estonia	..	Lithuania	..	Sierra Leone	0.38
Armenia	0.16	Ethiopia	0.11	Macedonia	0.34	Slovakia	0.31
Australia	0.28	Finland	0.00	Madagascar	0.99	Slovenia	0.00
Austria	0.11	France	0.24	Malawi	0.08	South Africa	0.48
Azerbaijan	0.16	Gabon	..	Malaysia	0.72	South Korea	1.45
Bangladesh	1.31	Gambia	..	Mali	0.00	Spain	0.42
Belarus	0.01	Georgia	0.13	Mauritania	0.00	Sri Lanka	0.74
Belgium	..	Germany	0.42	Mexico	0.69	Sudan	0.34
Benin	0.12	Ghana	0.21	Moldova	..	Sweden	..
Bhutan	0.85	Greece	0.20	Mongolia	0.03	Switzerland	0.83
Bolivia	0.46	Guatemala	2.04	Morocco	0.54	Syria	0.49
Bosnia and Herz.	0.02	Guinea	0.19	Mozambique	0.66	Taiwan	1.97
Botswana	0.26	Guinea-Bissau	..	Myanmar	0.90	Tajikistan	0.38
Brazil	0.64	Guyana	..	Namibia	0.34	Tanzania	0.14
Bulgaria	0.00	Haiti	0.96	Nepal	0.99	Thailand	0.94
Burkina Faso	0.03	Honduras	1.00	Netherlands	..	Togo	0.06
Burundi	0.34	Hungary	0.13	New Zealand	0.36	Trin. and Tob.	0.00
Cambodia	0.91	Iceland	0.07	Nicaragua	1.08	Tunisia	..
Cameroon	0.01	India	0.79	Niger	0.33	Turkey	0.21
Canada	0.02	Indonesia	0.68	Nigeria	0.28	Turkmenistan	0.12
Central Afr. Rep.	0.01	Iran	0.74	North Korea	0.58	Uganda	0.65
Chad	0.14	Iraq	0.47	Norway	..	Ukraine	0.05
Chile	1.43	Ireland	..	Oman	0.01	United Arab. Em.	0.39
China	0.72	Israel	0.35	P. N. Guinea	0.30	United Kingdom	0.77
Colombia	1.01	Italy	0.31	Pakistan	0.92	United States	0.56
Congo	0.00	Jamaica	1.01	Panama	0.22	Uruguay	0.14
Costa Rica	1.03	Japan	1.30	Paraguay	0.60	Uzbekistan	0.04
Côte d'Ivoire	..	Jordan	0.95	Peru	0.54	Venezuela	0.48
Croatia	0.00	Kazakhstan	0.13	Philippines	1.63	Viet Nam	1.41
Cuba	0.44	Kenya	0.86	Poland	0.18	Yemen	0.55
Czech Rep.	0.03	Kuwait	0.18	Portugal	0.43	Zambia	0.34
Dem. Rep. Congo	0.12	Kyrgyzstan	0.06	Romania	0.36	Zimbabwe	0.76
Denmark	..	Laos	0.79	Russia	0.09		
Dominican Rep.	0.86	Latvia	..	Rwanda	0.97		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 46 **Code:** GASPR **Reference Year:** 2002

Description: Ratio of gasoline price to world average

Units: Ratio of gasoline price to world average price

Source*: World Bank.

Logic: Unsubsidized gasoline prices are an indicator that appropriate price signals are being sent and that environmental externalities have been internalized. High taxes on gasoline act as an incentive for public transportation use and development of alternative fuels.

Methodology: Pump price for super gasoline (US dollars per liter): Fuel prices refer to the pump prices of the most widely sold grade of gasoline expressed in US dollars. The ratio of the gas price to the world average in the same time period was used to normalize the data.

Mean	1	Max	2.41	2.5 Percentile	0.18		
Median	0.95	Min	0.03	97.5 Percentile	1.84		
Albania	1.31	Ecuador	0.90	Lebanon	1.07	Saudi Arabia	0.39
Algeria	0.36	Egypt	0.31	Liberia	[1.02]	Senegal	1.23
Angola	0.31	El Salvador	0.75	Libya	0.16	Serbia and Mont.	1.21
Argentina	1.03	Estonia	0.95	Lithuania	1.13	Sierra Leone	0.84
Armenia	0.69	Ethiopia	0.85	Macedonia	1.39	Slovakia	1.21
Australia	0.82	Finland	1.84	Madagascar	1.77	Slovenia	1.25
Austria	1.38	France	1.72	Malawi	1.08	South Africa	0.70
Azerbaijan	0.61	Gabon	1.13	Malaysia	0.57	South Korea	1.79
Bangladesh	0.85	Gambia	0.75	Mali	1.13	Spain	1.36
Belarus	0.82	Georgia	0.79	Mauritania	1.03	Sri Lanka	0.89
Belgium	1.70	Germany	1.69	Mexico	1.02	Sudan	0.49
Benin	0.89	Ghana	0.46	Moldova	0.74	Sweden	1.74
Bhutan	0.95	Greece	1.28	Mongolia	0.62	Switzerland	1.46
Bolivia	1.13	Guatemala	0.79	Morocco	1.43	Syria	0.87
Bosnia and Herz.	1.21	Guinea	1.08	Mozambique	0.75	Taiwan	1.00
Botswana	0.67	Guinea-Bissau	[1.05]	Myanmar	0.59	Tajikistan	0.59
Brazil	0.90	Guyana	0.51	Namibia	0.74	Tanzania	1.10
Bulgaria	1.11	Haiti	0.89	Nepal	1.08	Thailand	0.59
Burkina Faso	1.36	Honduras	1.03	Netherlands	1.84	Togo	0.92
Burundi	0.95	Hungary	1.54	New Zealand	0.90	Trin. and Tob.	0.66
Cambodia	1.03	Iceland	1.90	Nicaragua	0.89	Tunisia	0.48
Cameroon	1.11	India	1.08	Niger	1.26	Turkey	1.67
Canada	0.84	Indonesia	0.44	Nigeria	0.33	Turkmenistan	0.03
Central Afr. Rep.	1.64	Iran	0.11	North Korea	0.90	Uganda	1.36
Chad	1.30	Iraq	0.03	Norway	2.02	Ukraine	0.77
Chile	0.95	Ireland	1.48	Oman	0.51	United Arab. Em.	0.48
China	0.69	Israel	1.48	P. N. Guinea	0.87	United Kingdom	1.93
Colombia	0.72	Italy	1.72	Pakistan	0.85	United States	0.66
Congo	1.13	Jamaica	0.85	Panama	0.84	Uruguay	0.75
Costa Rica	1.05	Japan	1.49	Paraguay	0.92	Uzbekistan	0.62
Côte d'Ivoire	1.39	Jordan	0.85	Peru	1.21	Venezuela	0.08
Croatia	1.46	Kazakhstan	0.57	Philippines	0.57	Viet Nam	0.56
Cuba	1.48	Kenya	1.15	Poland	1.36	Yemen	0.34
Czech Rep.	1.33	Kuwait	0.33	Portugal	1.59	Zambia	1.18
Dem. Rep. Congo	1.15	Kyrgyzstan	0.64	Romania	1.05	Zimbabwe	[0.73]
Denmark	1.79	Laos	0.59	Russia	0.57		
Dominican Rep.	0.80	Latvia	1.15	Rwanda	1.38		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 47 **Code:** GRAFT **Reference Year:** 2002

Description: Corruption measure

Units: Standardized scale (z-score); with high scores corresponding to effective control of corruption

Source*: World Bank.

Logic: Corruption contributes to lax enforcement of environmental regulations and an ability on the part of producers and consumers to evade responsibility for the environmental harms they cause.

Methodology: Multi-pronged, experiential surveys of households, firms and public officials were used to measure social and economic costs of corruption. The quality of public service delivery, business, environmental, and public sector vulnerability were also examined, and the indicators on institutions, expenditure flows, and procurement were then added to yield the standardized score.

	Mean		Max		2.5 Percentile		-1.35
	Median		Min		97.5 Percentile		2.2
Albania	-0.85	Ecuador	-1.02	Lebanon	-0.34	Saudi Arabia	0.57
Algeria	-0.70	Egypt	-0.29	Liberia	-0.98	Senegal	-0.17
Angola	-1.12	El Salvador	-0.54	Libya	-0.82	Serbia and Mont.	-0.80
Argentina	-0.77	Estonia	0.66	Lithuania	0.25	Sierra Leone	-0.82
Armenia	-0.72	Ethiopia	-0.35	Macedonia	-0.73	Slovakia	0.28
Australia	1.91	Finland	2.39	Madagascar	0.14	Slovenia	0.89
Austria	1.85	France	1.45	Malawi	-0.91	South Africa	0.36
Azerbaijan	-1.07	Gabon	-0.55	Malaysia	0.38	South Korea	0.33
Bangladesh	-1.12	Gambia	-0.83	Mali	-0.32	Spain	1.46
Belarus	-0.78	Georgia	-1.03	Mauritania	0.23	Sri Lanka	-0.14
Belgium	1.57	Germany	1.82	Mexico	-0.19	Sudan	-1.09
Benin	-0.61	Ghana	-0.40	Moldova	-0.89	Sweden	2.25
Bhutan	0.91	Greece	0.58	Mongolia	-0.14	Switzerland	2.17
Bolivia	-0.82	Guatemala	-0.71	Morocco	-0.04	Syria	-0.29
Bosnia and Herz.	-0.60	Guinea	-0.58	Mozambique	-1.01	Taiwan	0.81
Botswana	0.76	Guinea-Bissau	-0.61	Myanmar	-1.37	Tajikistan	-1.07
Brazil	-0.05	Guyana	-0.50	Namibia	0.21	Tanzania	-1.00
Bulgaria	-0.17	Haiti	-1.70	Nepal	-0.30	Thailand	-0.15
Burkina Faso	-0.04	Honduras	-0.78	Netherlands	2.15	Togo	-0.68
Burundi	-1.02	Hungary	0.60	New Zealand	2.28	Trin. and Tob.	-0.04
Cambodia	-0.90	Iceland	2.19	Nicaragua	-0.44	Tunisia	0.35
Cameroon	-1.10	India	-0.25	Niger	-1.10	Turkey	-0.38
Canada	2.03	Indonesia	-1.16	Nigeria	-1.35	Turkmenistan	-1.21
Central Afr. Rep.	-1.02	Iran	-0.38	North Korea	-1.18	Uganda	-0.92
Chad	-1.02	Iraq	-1.43	Norway	2.00	Ukraine	-0.96
Chile	1.55	Ireland	1.67	Oman	1.03	United Arab. Em.	1.19
China	-0.41	Israel	1.08	P. N. Guinea	-0.90	United Kingdom	1.97
Colombia	-0.47	Italy	0.80	Pakistan	-0.73	United States	1.77
Congo	-0.94	Jamaica	-0.46	Panama	-0.24	Uruguay	0.79
Costa Rica	0.88	Japan	1.20	Paraguay	-1.22	Uzbekistan	-1.03
Côte d'Ivoire	-0.86	Jordan	0.00	Peru	-0.20	Venezuela	-0.94
Croatia	0.23	Kazakhstan	-1.05	Philippines	-0.52	Viet Nam	-0.68
Cuba	-0.13	Kenya	-1.05	Poland	0.39	Yemen	-0.69
Czech Rep.	0.38	Kuwait	1.06	Portugal	1.33	Zambia	-0.97
Dem. Rep. Congo	-1.42	Kyrgyzstan	-0.84	Romania	-0.34	Zimbabwe	-1.17
Denmark	2.26	Laos	-1.25	Russia	-0.90		
Dominican Rep.	-0.39	Latvia	0.09	Rwanda	-0.58		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 48 **Code:** GOVEFF **Reference Year:** 2002

Description: Government effectiveness

Units: Standardized score (z-score), with high values corresponding to high levels of effectiveness.

Source*: World Bank.

Logic: Governmental effectiveness is defined in this data set as "quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies." It is relevant for environmental sustainability because basic governmental competence enhances a society's ability to monitor and respond to environmental

Methodology: The World Bank aggregates 25 sources of information on governmental effectiveness to produce comparable indicators.

Mean	0	Max	2.26	2.5 Percentile	-1.54		
Median	-0.2	Min	-1.97	97.5 Percentile	2.01		
Albania	-0.47	Ecuador	-0.96	Lebanon	-0.41	Saudi Arabia	-0.05
Algeria	-0.59	Egypt	-0.32	Liberia	-1.51	Senegal	-0.18
Angola	-1.16	El Salvador	-0.53	Libya	-0.87	Serbia and Mont.	-0.73
Argentina	-0.49	Estonia	0.78	Lithuania	0.61	Sierra Leone	-1.54
Armenia	-0.42	Ethiopia	-0.89	Macedonia	-0.39	Slovakia	0.40
Australia	1.84	Finland	2.01	Madagascar	-0.38	Slovenia	0.82
Austria	1.79	France	1.67	Malawi	-0.68	South Africa	0.52
Azerbaijan	-0.96	Gabon	-0.45	Malaysia	0.92	South Korea	0.84
Bangladesh	-0.53	Gambia	-0.81	Mali	-0.84	Spain	1.53
Belarus	-1.03	Georgia	-0.77	Mauritania	-0.16	Sri Lanka	0.03
Belgium	1.85	Germany	1.76	Mexico	0.15	Sudan	-1.11
Benin	-0.62	Ghana	0.01	Moldova	-0.63	Sweden	1.84
Bhutan	0.93	Greece	0.79	Mongolia	-0.18	Switzerland	2.26
Bolivia	-0.53	Guatemala	-0.61	Morocco	0.07	Syria	-0.57
Bosnia and Herz.	-0.90	Guinea	-0.78	Mozambique	-0.41	Taiwan	1.00
Botswana	0.87	Guinea-Bissau	-1.35	Myanmar	-1.29	Tajikistan	-1.23
Brazil	-0.22	Guyana	-0.32	Namibia	0.18	Tanzania	-0.51
Bulgaria	-0.06	Haiti	-1.56	Nepal	-0.51	Thailand	0.28
Burkina Faso	-0.69	Honduras	-0.73	Netherlands	2.14	Togo	-1.17
Burundi	-1.46	Hungary	0.78	New Zealand	1.97	Trin. and Tob.	0.47
Cambodia	-0.56	Iceland	1.98	Nicaragua	-0.87	Tunisia	0.65
Cameroon	-0.62	India	-0.13	Niger	-0.79	Turkey	-0.20
Canada	1.88	Indonesia	-0.56	Nigeria	-1.12	Turkmenistan	-1.47
Central Afr. Rep.	-1.43	Iran	-0.46	North Korea	-1.78	Uganda	-0.41
Chad	-0.75	Iraq	-1.64	Norway	1.84	Ukraine	-0.74
Chile	1.19	Ireland	1.62	Oman	0.69	United Arab. Em.	0.83
China	0.18	Israel	1.02	P. N. Guinea	-0.78	United Kingdom	2.03
Colombia	-0.39	Italy	0.91	Pakistan	-0.50	United States	1.70
Congo	-1.25	Jamaica	-0.07	Panama	-0.14	Uruguay	0.51
Costa Rica	0.37	Japan	1.07	Paraguay	-1.29	Uzbekistan	-1.10
Côte d'Ivoire	-0.89	Jordan	0.36	Peru	-0.47	Venezuela	-1.14
Croatia	0.19	Kazakhstan	-0.80	Philippines	-0.06	Viet Nam	-0.27
Cuba	-0.26	Kenya	-0.85	Poland	0.61	Yemen	-0.87
Czech Rep.	0.70	Kuwait	0.16	Portugal	1.03	Zambia	-0.93
Dem. Rep. Congo	-1.60	Kyrgyzstan	-0.81	Romania	-0.33	Zimbabwe	-0.80
Denmark	1.99	Laos	-0.80	Russia	-0.40		
Dominican Rep.	-0.41	Latvia	0.67	Rwanda	-0.82		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 49 **Code:** PRAREA **Reference Year:** 2003

Description: Percentage of total land area under protected status

Units: Percentage of total land area under protected status

Source*: United Nations Environment Program - World Conservation Monitoring Centre (UNEP-WCMC), plus country data.

Logic: The percentage of land area dedicated to protected areas represents an investment by the country in biodiversity conservation.

Methodology: Marine protected areas were subtracted from the total area of protected areas in order to limit the focus to land-based ecosystem protection.

Mean	10.91	Max	72.3	2.5 Percentile	0		
Median	7.1	Min	0	97.5 Percentile	41.76		
Albania	2.60	Ecuador	26.00	Lebanon	0.70	Saudi Arabia	41.80
Algeria	5.10	Egypt	5.70	Liberia	15.80	Senegal	11.00
Angola	10.00	El Salvador	2.00	Libya	0.10	Serbia and Mont.	3.70
Argentina	6.30	Estonia	19.60	Lithuania	9.10	Sierra Leone	4.50
Armenia	10.00	Ethiopia	16.40	Macedonia	7.90	Slovakia	22.50
Australia	7.50	Finland	8.90	Madagascar	3.10	Slovenia	7.40
Austria	36.40	France	11.30	Malawi	16.30	South Africa	6.20
Azerbaijan	4.60	Gabon	3.40	Malaysia	30.60	South Korea	3.60
Bangladesh	0.50	Gambia	3.20	Mali	3.70	Spain	9.20
Belarus	6.40	Georgia	4.30	Mauritania	0.20	Sri Lanka	26.50
Belgium	13.73	Germany	31.70	Mexico	5.00	Sudan	4.90
Benin	22.70	Ghana	15.40	Moldova	1.40	Sweden	7.20
Bhutan	30.20	Greece	3.20	Mongolia	14.00	Switzerland	28.80
Bolivia	19.40	Guatemala	25.30	Morocco	1.20	Syria	1.90
Bosnia and Herz.	0.20	Guinea	4.30	Mozambique	5.70	Taiwan	8.30
Botswana	30.20	Guinea-Bissau	[12.63]	Myanmar	5.40	Tajikistan	18.30
Brazil	18.00	Guyana	2.30	Namibia	5.60	Tanzania	39.60
Bulgaria	10.10	Haiti	0.30	Nepal	18.10	Thailand	15.70
Burkina Faso	15.40	Honduras	20.80	Netherlands	26.20	Togo	11.30
Burundi	5.40	Hungary	8.90	New Zealand	24.40	Trin. and Tob.	4.70
Cambodia	23.70	Iceland	4.70	Nicaragua	21.80	Tunisia	1.50
Cameroon	8.00	India	5.20	Niger	8.20	Turkey	2.60
Canada	6.30	Indonesia	12.50	Nigeria	6.00	Turkmenistan	4.20
Central Afr. Rep.	16.60	Iran	6.50	North Korea	2.60	Uganda	26.40
Chad	9.40	Iraq	0.00	Norway	6.20	Ukraine	3.30
Chile	3.60	Ireland	1.30	Oman	9.60	United Arab. Em.	7.38
China	7.80	Israel	19.10	P. N. Guinea	1.60	United Kingdom	10.50
Colombia	72.30	Italy	11.20	Pakistan	9.20	United States	15.80
Congo	15.80	Jamaica	15.90	Panama	19.50	Uruguay	0.40
Costa Rica	25.60	Japan	14.00	Paraguay	4.10	Uzbekistan	4.60
Côte d'Ivoire	16.90	Jordan	10.90	Peru	16.70	Venezuela	70.30
Croatia	6.90	Kazakhstan	2.90	Philippines	7.80	Viet Nam	4.20
Cuba	1.60	Kenya	12.30	Poland	23.50	Yemen	[6.04]
Czech Rep.	16.00	Kuwait	0.00	Portugal	5.10	Zambia	41.40
Dem. Rep. Congo	8.30	Kyrgyzstan	3.60	Romania	2.50	Zimbabwe	14.70
Denmark	25.60	Laos	18.80	Russia	7.60		
Dominican Rep.	24.50	Latvia	15.10	Rwanda	7.70		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 50 **Code:** WEFGOV **Reference Year:** 2003/4

Description: World Economic Forum Survey on environmental governance

Units: Principal components of several survey questions

Source*: World Economic Forum (WEF).

Logic: Effective governance is vital for environmental sustainability.

Methodology: This represents principal components of survey questions addressing several aspects of environmental governance: air pollution regulations, chemical waste regulations, clarity and stability of regulations, flexibility of regulations, environmental regulatory innovation, leadership in environmental policy, consistency of regulation enforcement, environmental regulatory stringency, toxic waste disposal regulations, and water pollution regulations (questions Q1101-Q1111)

	Mean		Max		2.5 Percentile		22.86
	Median		Min		97.5 Percentile		59.32
Albania	[29.19]	Ecuador	24.10	Lebanon	[37.65]	Saudi Arabia	[36.72]
Algeria	29.16	Egypt	34.33	Liberia	[22.48]	Senegal	31.37
Angola	17.74	El Salvador	31.07	Libya	[30.66]	Serbia and Mont.	28.87
Argentina	32.26	Estonia	44.57	Lithuania	40.96	Sierra Leone	[20.11]
Armenia	[33.51]	Ethiopia	24.21	Macedonia	26.16	Slovakia	46.05
Australia	52.95	Finland	59.50	Madagascar	28.59	Slovenia	45.91
Austria	53.45	France	52.65	Malawi	33.61	South Africa	42.02
Azerbaijan	[30.74]	Gabon	[28.43]	Malaysia	44.01	South Korea	43.08
Bangladesh	26.98	Gambia	38.82	Mali	26.58	Spain	44.11
Belarus	[31.55]	Georgia	[27.7]	Mauritania	[29.48]	Sri Lanka	29.98
Belgium	51.93	Germany	59.74	Mexico	37.56	Sudan	[24.03]
Benin	[33.1]	Ghana	35.20	Moldova	[28.8]	Sweden	59.56
Bhutan	[28.88]	Greece	39.66	Mongolia	[30.55]	Switzerland	59.14
Bolivia	23.73	Guatemala	24.44	Morocco	30.73	Syria	[27.35]
Bosnia and Herz.	[28.78]	Guinea	[25.2]	Mozambique	25.27	Taiwan	48.58
Botswana	35.83	Guinea-Bissau	[25.91]	Myanmar	[29.07]	Tajikistan	[22.22]
Brazil	41.48	Guyana	[34.06]	Namibia	37.35	Tanzania	33.65
Bulgaria	27.83	Haiti	15.30	Nepal	[29.07]	Thailand	38.59
Burkina Faso	[29.75]	Honduras	26.38	Netherlands	56.96	Togo	[24.2]
Burundi	[25.17]	Hungary	41.18	New Zealand	53.36	Trin. and Tob.	28.63
Cambodia	[30.31]	Iceland	55.00	Nicaragua	24.08	Tunisia	47.33
Cameroon	30.72	India	34.13	Niger	[26.96]	Turkey	32.08
Canada	47.65	Indonesia	34.58	Nigeria	25.61	Turkmenistan	[22.25]
Central Afr. Rep.	[27.93]	Iran	[29.47]	North Korea	[24.87]	Uganda	30.96
Chad	22.41	Iraq	[21.09]	Norway	55.84	Ukraine	32.52
Chile	42.26	Ireland	41.98	Oman	[36.57]	United Arab. Em.	[42.84]
China	35.39	Israel	41.67	P. N. Guinea	[25.46]	United Kingdom	52.95
Colombia	36.10	Italy	46.02	Pakistan	28.50	United States	51.17
Congo	[24.27]	Jamaica	32.88	Panama	30.82	Uruguay	35.71
Costa Rica	39.14	Japan	51.21	Paraguay	23.27	Uzbekistan	[28.9]
Côte d'Ivoire	[24.35]	Jordan	41.21	Peru	28.25	Venezuela	25.60
Croatia	35.81	Kazakhstan	[28.22]	Philippines	28.66	Viet Nam	31.09
Cuba	[31.51]	Kenya	27.79	Poland	38.51	Yemen	[22.77]
Czech Rep.	44.45	Kuwait	[36.48]	Portugal	43.30	Zambia	35.32
Dem. Rep. Congo	[18.68]	Kyrgyzstan	[24.79]	Romania	29.09	Zimbabwe	27.62
Denmark	59.16	Laos	[26.71]	Russia	31.35		
Dominican Rep.	30.07	Latvia	42.34	Rwanda	[24.73]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 51 Code: LAW Reference Year: 2002

Description: Rule of law

Units: Standardized score (z-score), where high values correspond to high degrees of rule of law.

Source*: World Bank.

Logic: The rule of law is important in terms of establishing the "rules of the game" for the civil society, the private sector, and government; for ensuring that violations of environmental regulations are enforced; and for promoting stable expectations that facilitate long-range planning.

Methodology: The indicators measuring rule of law are defined as the extent to which agents have confidence in and abide by the rules of society. They are: perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts.

	Mean	0	Max	2.03	2.5 Percentile	-1.61	
	Median	-0.27	Min	-2.05	97.5 Percentile	1.96	
Albania	-0.92	Ecuador	-0.60	Lebanon	-0.27	Saudi Arabia	0.44
Algeria	-0.54	Egypt	0.09	Liberia	-1.42	Senegal	-0.20
Angola	-1.56	El Salvador	-0.46	Libya	-0.91	Serbia and Mont.	-0.95
Argentina	-0.73	Estonia	0.80	Lithuania	0.48	Sierra Leone	-1.25
Armenia	-0.44	Ethiopia	-0.44	Macedonia	-0.41	Slovakia	0.40
Australia	1.85	Finland	1.99	Madagascar	-0.19	Slovenia	1.09
Austria	1.91	France	1.33	Malawi	-0.34	South Africa	0.19
Azerbaijan	-0.79	Gabon	-0.27	Malaysia	0.58	South Korea	0.88
Bangladesh	-0.78	Gambia	-0.50	Mali	-0.54	Spain	1.15
Belarus	-1.12	Georgia	-1.17	Mauritania	-0.33	Sri Lanka	0.23
Belgium	1.45	Germany	1.73	Mexico	-0.22	Sudan	-1.36
Benin	-0.42	Ghana	-0.15	Moldova	-0.49	Sweden	1.92
Bhutan	0.10	Greece	0.79	Mongolia	0.36	Switzerland	2.03
Bolivia	-0.60	Guatemala	-0.84	Morocco	0.11	Syria	-0.41
Bosnia and Herz.	-0.88	Guinea	-0.75	Mozambique	-0.65	Taiwan	0.95
Botswana	0.72	Guinea-Bissau	-1.00	Myanmar	-1.62	Tajikistan	-1.27
Brazil	-0.30	Guyana	-0.43	Namibia	0.45	Tanzania	-0.49
Bulgaria	0.05	Haiti	-1.76	Nepal	-0.50	Thailand	0.30
Burkina Faso	-0.55	Honduras	-0.79	Netherlands	1.83	Togo	-0.67
Burundi	-1.49	Hungary	0.90	New Zealand	1.91	Trin. and Tob.	0.34
Cambodia	-0.86	Iceland	2.00	Nicaragua	-0.63	Tunisia	0.27
Cameroon	-1.28	India	0.07	Niger	-0.78	Turkey	0.00
Canada	1.79	Indonesia	-0.80	Nigeria	-1.35	Turkmenistan	-1.16
Central Afr. Rep.	-0.88	Iran	-0.58	North Korea	-1.00	Uganda	-0.84
Chad	-0.93	Iraq	-1.70	Norway	1.96	Ukraine	-0.79
Chile	1.30	Ireland	1.72	Oman	0.83	United Arab. Em.	0.95
China	-0.22	Israel	0.97	P. N. Guinea	-0.82	United Kingdom	1.81
Colombia	-0.75	Italy	0.82	Pakistan	-0.70	United States	1.70
Congo	-1.22	Jamaica	-0.38	Panama	0.00	Uruguay	0.56
Costa Rica	0.67	Japan	1.41	Paraguay	-1.12	Uzbekistan	-1.16
Côte d'Ivoire	-1.21	Jordan	0.33	Peru	-0.44	Venezuela	-1.04
Croatia	0.11	Kazakhstan	-0.90	Philippines	-0.50	Viet Nam	-0.39
Cuba	-0.94	Kenya	-1.04	Poland	0.65	Yemen	-1.23
Czech Rep.	0.74	Kuwait	0.81	Portugal	1.30	Zambia	-0.52
Dem. Rep. Congo	-1.79	Kyrgyzstan	-0.83	Romania	-0.12	Zimbabwe	-1.33
Denmark	1.97	Laos	-1.05	Russia	-0.78		
Dominican Rep.	-0.43	Latvia	0.46	Rwanda	-1.01		

* Full source information for this variable can be found at the end of Appendix C. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 52 **Code:** AGENDA21 **Reference Year:** 2001

Description: Local Agenda 21 initiatives per million people

Units: Number of Local Agenda 21 initiatives per million people

Source*: International Council for Local Environmental Initiatives (ICLEI).

Logic: Local Agenda 21 (LA21) is an international sustainability planning process that provides an opportunity for local governments to work with their communities to create a sustainable future. The number of Local Agenda 21 initiatives in a country measures the degree to which civil society is engaged in environmental governance.

Methodology: For each country, the number of existing Local Agenda 21 initiatives was counted and divided by the total country population.

	Mean		Max		2.5 Percentile		0.02
	Median		Min		97.5 Percentile		59.20
Albania	2.22	Ecuador	1.01	Lebanon	1.35	Saudi Arabia	0.18
Algeria	0.10	Egypt	0.11	Liberia	..	Senegal	0.30
Angola	..	El Salvador	..	Libya	0.37	Serbia and Mont.	2.45
Argentina	0.03	Estonia	21.35	Lithuania	4.04	Sierra Leone	..
Armenia	..	Ethiopia	..	Macedonia	..	Slovakia	5.58
Australia	8.95	Finland	58.28	Madagascar	0.30	Slovenia	1.53
Austria	7.95	France	1.16	Malawi	0.37	South Africa	0.44
Azerbaijan	..	Gabon	0.76	Malaysia	0.37	South Korea	3.61
Bangladesh	0.01	Gambia	..	Mali	0.18	Spain	8.77
Belarus	..	Georgia	..	Mauritania	0.36	Sri Lanka	1.27
Belgium	10.26	Germany	24.75	Mexico	0.02	Sudan	0.03
Benin	0.15	Ghana	0.15	Moldova	..	Sweden	32.38
Bhutan	..	Greece	3.67	Mongolia	8.98	Switzerland	11.39
Bolivia	0.11	Guatemala	..	Morocco	0.17	Syria	0.12
Bosnia and Herz.	0.24	Guinea	..	Mozambique	0.11	Taiwan	..
Botswana	..	Guinea-Bissau	..	Myanmar	..	Tajikistan	..
Brazil	0.21	Guyana	1.31	Namibia	2.52	Tanzania	0.37
Bulgaria	2.76	Haiti	..	Nepal	0.17	Thailand	0.34
Burkina Faso	..	Honduras	0.88	Netherlands	6.19	Togo	0.42
Burundi	0.28	Hungary	0.89	New Zealand	9.39	Trin. and Tob.	0.77
Cambodia	..	Iceland	130.28	Nicaragua	0.94	Tunisia	0.10
Cameroon	0.06	India	0.01	Niger	..	Turkey	0.72
Canada	0.45	Indonesia	0.04	Nigeria	0.04	Turkmenistan	..
Central Afr. Rep.	..	Iran	0.03	North Korea	..	Uganda	0.20
Chad	..	Iraq	..	Norway	62.36	Ukraine	0.18
Chile	0.96	Ireland	7.40	Oman	0.39	United Arab. Em.	0.62
China	0.02	Israel	0.46	P. N. Guinea	..	United Kingdom	7.18
Colombia	0.14	Italy	7.44	Pakistan	0.01	United States	0.30
Congo	..	Jamaica	1.91	Panama	..	Uruguay	..
Costa Rica	1.01	Japan	0.87	Paraguay	..	Uzbekistan	..
Côte d'Ivoire	..	Jordan	0.77	Peru	0.64	Venezuela	0.12
Croatia	4.48	Kazakhstan	..	Philippines	0.35	Viet Nam	0.25
Cuba	0.18	Kenya	0.35	Poland	1.81	Yemen	0.11
Czech Rep.	4.11	Kuwait	0.43	Portugal	2.65	Zambia	0.39
Dem. Rep. Congo	0.04	Kyrgyzstan	..	Romania	0.54	Zimbabwe	3.00
Denmark	40.19	Laos	..	Russia	0.20		
Dominican Rep.	..	Latvia	2.14	Rwanda	0.12		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 53 **Code:** CIVLIB **Reference Year:** 2003

Description: Civil and Political Liberties

Units: Average of political and civil liberties indices, each ranging from 1 (high levels of liberties) to 7 (low levels of liberties)

Source*: Freedom House.

Logic: In countries that guarantee freedom of expression, rights to organize, rule of law, economic rights, and multi-party elections, there is more likely to be a vigorous public debate about values and issues relevant to environmental quality, and legal safeguards that encourage innovation.

Methodology: Each country and territory was awarded from 0 to 4 raw points for each of 10 questions grouped into three subcategories in a political rights checklist, and for each of 15 questions grouped into four subcategories in a civil liberties checklist. The total raw points in each checklist correspond to two final numerical ratings of 1 to 7. These two ratings are then averaged to determine a status category of Free, Partly Free, or Not Free.

Mean	3.35	Max	7	2.5 Percentile	1		
Median	3	Min	1	97.5 Percentile	7		
Albania	3.00	Ecuador	3.00	Lebanon	5.50	Saudi Arabia	7.00
Algeria	5.50	Egypt	6.00	Liberia	6.00	Senegal	2.50
Angola	5.50	El Salvador	2.50	Libya	7.00	Serbia and Mont.	2.50
Argentina	3.00	Estonia	1.50	Lithuania	1.50	Sierra Leone	4.00
Armenia	4.00	Ethiopia	5.00	Macedonia	3.00	Slovakia	1.50
Australia	1.00	Finland	1.00	Madagascar	3.50	Slovenia	1.00
Austria	1.00	France	1.00	Malawi	4.00	South Africa	1.50
Azerbaijan	5.50	Gabon	4.50	Malaysia	5.00	South Korea	2.00
Bangladesh	4.00	Gambia	4.00	Mali	2.50	Spain	1.00
Belarus	6.00	Georgia	4.00	Mauritania	5.00	Sri Lanka	3.50
Belgium	1.00	Germany	1.00	Mexico	2.00	Sudan	7.00
Benin	2.50	Ghana	2.50	Moldova	3.50	Sweden	1.00
Bhutan	5.50	Greece	1.50	Mongolia	2.00	Switzerland	1.00
Bolivia	2.50	Guatemala	4.00	Morocco	5.00	Syria	7.00
Bosnia and Herz.	4.00	Guinea	5.50	Mozambique	3.50	Taiwan	2.00
Botswana	2.00	Guinea-Bissau	4.50	Myanmar	7.00	Tajikistan	5.50
Brazil	2.50	Guyana	2.00	Namibia	2.50	Tanzania	3.50
Bulgaria	1.50	Haiti	6.00	Nepal	4.00	Thailand	2.50
Burkina Faso	4.00	Honduras	3.00	Netherlands	1.00	Togo	5.50
Burundi	5.50	Hungary	1.50	New Zealand	1.00	Trin. and Tob.	3.00
Cambodia	5.50	Iceland	1.00	Nicaragua	3.00	Tunisia	5.50
Cameroon	6.00	India	2.50	Niger	4.00	Turkey	3.50
Canada	1.00	Indonesia	3.50	Nigeria	4.50	Turkmenistan	7.00
Central Afr. Rep.	5.00	Iran	6.00	North Korea	7.00	Uganda	5.00
Chad	5.50	Iraq	7.00	Norway	1.00	Ukraine	4.00
Chile	1.50	Ireland	1.00	Oman	5.50	United Arab. Em.	5.50
China	6.50	Israel	2.00	P. N. Guinea	2.50	United Kingdom	1.00
Colombia	4.00	Italy	1.00	Pakistan	5.50	United States	1.00
Congo	5.00	Jamaica	2.50	Panama	1.50	Uruguay	1.00
Costa Rica	1.50	Japan	1.50	Paraguay	3.50	Uzbekistan	6.50
Côte d'Ivoire	4.50	Jordan	5.50	Peru	2.50	Venezuela	3.50
Croatia	2.00	Kazakhstan	5.50	Philippines	2.50	Viet Nam	6.50
Cuba	7.00	Kenya	4.00	Poland	1.50	Yemen	5.50
Czech Rep.	1.50	Kuwait	4.50	Portugal	1.00	Zambia	4.00
Dem. Rep. Congo	..	Kyrgyzstan	5.50	Romania	2.00	Zimbabwe	6.00
Denmark	1.00	Laos	6.50	Russia	5.00		
Dominican Rep.	2.00	Latvia	1.50	Rwanda	6.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	54	Code:	CSDMIS	Reference Year:	2002		
Description:	Percentage of variables missing from the CGSDI "Rio to Joburg Dashboard"						
Units:	Percentage of variables missing						
Source*:	Consultative Group on Sustainable Development Indicators (CGSDI).						
Logic:	The greater the number of missing variables, the poorer the data availability in that country. Environmental monitoring and data systems are vital for tracking progress towards environmental sustainability.						
Methodology:	The CGSDI (Consultative Group on Sustainable Development Indicators) published the "From Rio to Johannesburg" Dashboard. The index contains 60 indicators for more than 200 countries and is a tool for the assessment of the 10 years since the Rio Summit. The percentage of variables in the list of the CGSDI for which data are available for each country is calculated. Indicators evaluated: Population, CO2 Fuel emissions, Other GHG, Urban air pollution (TSP), Arable and permanent crop Land area, Fertilizer consumption, Use of pesticides, Forest area, Population in coastal area, Withdrawal of ground and surface water, BOD in water bodies, Protected areas, Population living below poverty line (1ppp\$/day), Gini coefficient, Unemployment total, Female/Male manufacturing wages, Prevalence of child malnutrition, Child mortality rate, Life expectancy at birth, Access to adequate sanitation, Access to safe water, WHO Index of overall health system attainment, Immunization, DPT or measles, Contraceptive prevalence, Persistence to Grade 5, Total adult literacy rate, Floor area in main city, Number of homicides, Population growth rate, percent population in urban areas, Income per capita, Investment, Current account balance, Value of external debt present, Aid given or received, Intensity of metals & minerals use, Commercial energy use, Renewable energy resources, Energy intensity of GDP, Municipal waste generated, Hazardous waste generated, Nuclear waste generated, Waste recycling paper or glass, Internet hosts, Telephone mainlines, Research and development expenditure. Not calculated for Taiwan.						
Mean	28.68	Max	80.43	2.5 Percentile	6.52		
Median	26.09	Min	2.17	97.5 Percentile	69.57		
Albania	34.78	Ecuador	13.04	Lebanon	34.78	Saudi Arabia	39.13
Algeria	21.74	Egypt	15.22	Liberia	58.70	Senegal	19.57
Angola	32.61	El Salvador	17.39	Libya	43.48	Serbia and Mont.	..
Argentina	26.09	Estonia	28.26	Lithuania	23.91	Sierra Leone	..
Armenia	34.78	Ethiopia	23.91	Macedonia	43.48	Slovakia	17.39
Australia	8.70	Finland	4.35	Madagascar	23.91	Slovenia	30.43
Austria	8.70	France	8.70	Malawi	34.78	South Africa	17.39
Azerbaijan	34.78	Gabon	32.61	Malaysia	23.91	South Korea	8.70
Bangladesh	15.22	Gambia	..	Mali	32.61	Spain	13.04
Belarus	32.61	Georgia	41.30	Mauritania	..	Sri Lanka	17.39
Belgium	15.22	Germany	10.87	Mexico	13.04	Sudan	26.09
Benin	32.61	Ghana	19.57	Moldova	23.91	Sweden	6.52
Bhutan	..	Greece	15.22	Mongolia	..	Switzerland	10.87
Bolivia	19.57	Guatemala	19.57	Morocco	19.57	Syria	26.09
Bosnia and Herz.	58.70	Guinea	34.78	Mozambique	23.91	Taiwan	..
Botswana	30.43	Guinea-Bissau	..	Myanmar	36.96	Tajikistan	43.48
Brazil	15.22	Guyana	..	Namibia	36.96	Tanzania	23.91
Bulgaria	15.22	Haiti	28.26	Nepal	23.91	Thailand	17.39
Burkina Faso	32.61	Honduras	21.74	Netherlands	2.17	Togo	32.61
Burundi	..	Hungary	2.17	New Zealand	13.04	Trin. and Tob.	23.91
Cameroon	28.26	India	15.22	Niger	34.78	Turkey	10.87
Canada	6.52	Indonesia	15.22	Nigeria	21.74	Turkmenistan	47.83
Central Afr. Rep.	30.43	Iran	21.74	North Korea	56.52	Uganda	28.26
Chad	41.30	Iraq	43.48	Norway	10.87	Ukraine	23.91
Chile	17.39	Ireland	15.22	Oman	32.61	United Arab. Em.	47.83
China	15.22	Israel	34.78	P. N. Guinea	34.78	United Kingdom	6.52
Colombia	15.22	Italy	13.04	Pakistan	19.57	United States	8.70
Congo	32.61	Jamaica	21.74	Panama	23.91	Uruguay	23.91
Costa Rica	15.22	Japan	10.87	Paraguay	17.39	Uzbekistan	30.43
Côte d'Ivoire	28.26	Jordan	15.22	Peru	23.91	Venezuela	21.74
Croatia	28.26	Kazakhstan	26.09	Philippines	13.04	Viet Nam	30.43
Cuba	34.78	Kenya	21.74	Poland	15.22	Yemen	28.26
Czech Rep.	13.04	Kuwait	36.96	Portugal	15.22	Zambia	19.57
Dem. Rep. Congo	32.61	Kyrgyzstan	30.43	Romania	..	Zimbabwe	17.39
Denmark	6.52	Laos	32.61	Russia	15.22		
Dominican Rep.	28.26	Latvia	26.09	Rwanda	30.43		

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 55 **Code:** IUCN **Reference Year:** IUCN memberships: 2004, Population: 2003

Description: IUCN member organizations per million population

Units: Number of member organizations per million population

Source*: IUCN-The World Conservation Union.

Logic: IUCN is the oldest international environmental membership organization, currently with more than 1000 members (governmental and NGO) worldwide, including the most significant environmental NGOs in each

Methodology: The number of IUCN member organizations is divided by the country's population (in millions). Countries for which no data on IUCN memberships is available are counted as having no memberships.

	Mean		Max		2.5 Percentile		0.00
	Median		Min		97.5 Percentile		11.14
Albania	0.00	Ecuador	1.56	Lebanon	1.35	Saudi Arabia	0.14
Algeria	0.10	Egypt	0.06	Liberia	0.00	Senegal	0.60
Angola	0.23	El Salvador	1.25	Libya	0.18	Serbia and Mont.	0.25
Argentina	0.47	Estonia	1.47	Lithuania	0.58	Sierra Leone	0.19
Armenia	0.00	Ethiopia	0.01	Macedonia	0.00	Slovakia	0.93
Australia	1.63	Finland	0.96	Madagascar	0.06	Slovenia	0.51
Austria	0.75	France	0.66	Malawi	0.19	South Africa	0.37
Azerbaijan	0.00	Gabon	0.76	Malaysia	0.25	South Korea	0.10
Bangladesh	0.12	Gambia	0.72	Mali	0.62	Spain	0.88
Belarus	0.00	Georgia	0.39	Mauritania	0.72	Sri Lanka	0.58
Belgium	0.97	Germany	0.28	Mexico	0.12	Sudan	0.03
Benin	0.31	Ghana	0.25	Moldova	0.47	Sweden	0.90
Bhutan	0.00	Greece	0.66	Mongolia	0.41	Switzerland	1.23
Bolivia	0.79	Guatemala	1.08	Morocco	0.20	Syria	0.06
Bosnia and Herz.	0.00	Guinea	0.13	Mozambique	0.11	Taiwan	0.00
Botswana	4.67	Guinea-Bissau	4.15	Myanmar	0.00	Tajikistan	0.16
Brazil	0.09	Guyana	0.00	Namibia	1.01	Tanzania	0.09
Bulgaria	0.25	Haiti	0.00	Nepal	0.50	Thailand	0.05
Burkina Faso	0.34	Honduras	0.74	Netherlands	1.98	Togo	0.00
Burundi	0.00	Hungary	0.59	New Zealand	1.78	Trin. and Tob.	0.00
Cambodia	0.08	Iceland	7.04	Nicaragua	1.31	Tunisia	0.61
Cameroon	0.13	India	0.02	Niger	0.18	Turkey	0.07
Canada	1.15	Indonesia	0.00	Nigeria	0.03	Turkmenistan	0.21
Central Afr. Rep.	0.00	Iran	0.06	North Korea	0.04	Uganda	0.28
Chad	0.00	Iraq	0.00	Norway	1.32	Ukraine	0.06
Chile	0.38	Ireland	0.77	Oman	0.39	United Arab. Em.	0.93
China	0.01	Israel	0.61	P. N. Guinea	0.19	United Kingdom	0.89
Colombia	0.21	Italy	0.38	Pakistan	0.16	United States	0.25
Congo	0.55	Jamaica	1.53	Panama	4.08	Uruguay	1.19
Costa Rica	3.55	Japan	0.15	Paraguay	1.09	Uzbekistan	0.04
Côte d'Ivoire	0.06	Jordan	2.13	Peru	0.30	Venezuela	0.20
Croatia	0.67	Kazakhstan	0.27	Philippines	0.04	Viet Nam	0.04
Cuba	0.18	Kenya	0.29	Poland	0.23	Yemen	0.11
Czech Rep.	0.49	Kuwait	1.29	Portugal	0.39	Zambia	0.59
Dem. Rep. Congo	0.08	Kyrgyzstan	0.20	Romania	0.13	Zimbabwe	1.62
Denmark	1.67	Laos	0.18	Russia	0.07		
Dominican Rep.	0.35	Latvia	0.43	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	56	Code:	KNWLDG	Reference Year:	1993, 1998, 2003
Description:	Knowledge creation in environmental science, technology, and policy				
Units:	Average rank between 1 and 78 of three individual regressions with small values corresponding to above average performance				
Source*:	Yale Center for Environmental Law and Policy (YCELP) Knowledge Divide Project, plus country data.				
Logic:	Creation and dissemination of knowledge about, inter alia, environmental, ecological, and socio-economic processes is important for achieving environmental sustainability for several reasons: i) it promotes decision-making on the basis of sound information and data, ii) it facilitates knowledge exchange and propagation between producers and users, iii) it allows adoption of new knowledge and technologies in other regions and sectors ("leapfrogging").				
Methodology:	Publication of scientific knowledge in the top-rated peer-reviewed journals in the fields of environmental science, technology, and policy. We collected data on the primary author's institutional affiliation and the location where the research was carried out for 9 highly ranked peer-reviewed journals for each paper published during 1993, 1998, and 2003. The 9 journals are: Ecology, Conservation Biology, Environmental Science and Technology, Biological Conservation, Global Change Biology (founded in 1995), Environmental Health Perspectives, Water Resources Research, Environmental Toxicology and Chemistry, and Global Biogeochemical Cycles. Three regressions were carried out: Publications per author per million population ~ Researchers per million population + R&D spending as % of GDP + Publications per area and population; Publications about foreign countries ~ log(GDP) + Publications per area; Publications per area ~ Publications per author + Population. The residuals of each regression were ranked and aggregated to form an average rank score.				

Mean	39.5	Max	74.67	2.5 Percentile	9.85
Median	42.67	Min	1.67	97.5 Percentile	67.04
Albania	..	Ecuador	19.00	Lebanon	..
Algeria	..	Egypt	..	Liberia	..
Angola	..	El Salvador	46.33	Libya	..
Argentina	19.33	Estonia	55.00	Lithuania	59.33
Armenia	46.33	Ethiopia	..	Macedonia	..
Australia	10.00	Finland	23.33	Madagascar	17.33
Austria	66.67	France	28.33	Malawi	..
Azerbaijan	48.00	Gabon	..	Malaysia	32.33
Bangladesh	..	Gambia	..	Mali	..
Belarus	47.00	Georgia	55.33	Mauritania	..
Belgium	48.33	Germany	71.67	Mexico	10.33
Benin	..	Ghana	..	Moldova	50.33
Bhutan	..	Greece	42.00	Mongolia	..
Bolivia	50.33	Guatemala	..	Morocco	..
Bosnia and Herz.	..	Guinea	..	Mozambique	..
Botswana	..	Guinea-Bissau	..	Myanmar	..
Brazil	14.33	Guyana	..	Namibia	..
Bulgaria	58.33	Haiti	..	Nepal	..
Burkina Faso	26.33	Honduras	..	Netherlands	48.67
Burundi	..	Hungary	59.67	New Zealand	8.00
Cambodia	..	Iceland	42.67	Nicaragua	38.67
Cameroon	..	India	33.33	Niger	..
Canada	1.67	Indonesia	..	Nigeria	..
Central Afr. Rep.	..	Iran	..	North Korea	..
Chad	..	Iraq	..	Norway	12.67
Chile	18.00	Ireland	65.00	Oman	..
China	30.33	Israel	32.00	P. N. Guinea	..
Colombia	23.67	Italy	15.00	Pakistan	..
Congo	..	Jamaica	..	Panama	25.00
Costa Rica	..	Japan	74.67	Paraguay	33.67
Côte d'Ivoire	..	Jordan	57.00	Peru	15.67
Croatia	56.67	Kazakhstan	32.33	Philippines	..
Cuba	44.33	Kenya	..	Poland	47.33
Czech Rep.	47.00	Kuwait	48.67	Portugal	52.33
Dem. Rep. Congo	..	Kyrgyzstan	40.33	Romania	42.67
Denmark	28.33	Laos	..	Russia	33.00
Dominican Rep.	..	Latvia	49.33	Rwanda	..
				Saudi Arabia	..
				Senegal	28.33
				Serbia and Mont.	..
				Sierra Leone	..
				Slovakia	48.33
				Slovenia	42.67
				South Africa	..
				South Korea	65.33
				Spain	64.00
				Sri Lanka	42.00
				Sudan	..
				Sweden	12.00
				Switzerland	19.33
				Syria	49.67
				Taiwan	54.67
				Tajikistan	..
				Tanzania	..
				Thailand	22.00
				Togo	..
				Trin. and Tob.	35.00
				Tunisia	55.67
				Turkey	59.00
				Turkmenistan	..
				Uganda	43.33
				Ukraine	48.33
				United Arab. Em.	..
				United Kingdom	49.33
				United States	32.67
				Uruguay	45.33
				Uzbekistan	..
				Venezuela	37.33
				Viet Nam	..
				Yemen	..
				Zambia	..
				Zimbabwe	..

* Full source information for this variable can be found at the end of this Appendix. Data in "[]" indicate imputed values; ".." means the data point is missing.

Variable #: 57 **Code:** POLITY **Reference Year:** Average of 1993-2002 Polity

Description: Democracy measure

Units: Trend-adjusted 10-year average score with high values corresponding to high levels of democratic institutions

Source*: Polity IV Project, University of Maryland.

Logic: The presence of democratic institutions increases the likelihood that important environmental issues will be debated, that alternative views will be aired, and that decision-making and implementation will be carried out in an open manner. These factors improve the quality of environmental governance.

Methodology: Average of the Polity IV scores for 10 years 1993-2002 adjusted for trend: if the trend was positive, the average was increased by 1, if the trend was negative, the average was reduced by 1. The purpose of the adjustment was to reward improvement.

Mean	2.79	Max	10.7	2.5 Percentile	-9		
Median	5.2	Min	-10	97.5 Percentile	10		
Albania	5.70	Ecuador	7.00	Lebanon	..	Saudi Arabia	-10.00
Algeria	-2.80	Egypt	-5.20	Liberia	0.00	Senegal	2.70
Angola	-3.40	El Salvador	7.00	Libya	-7.00	Serbia and Mont.	-1.50
Argentina	8.40	Estonia	6.00	Lithuania	10.00	Sierra Leone	0.00
Armenia	4.00	Ethiopia	1.00	Macedonia	7.30	Slovakia	9.00
Australia	10.00	Finland	10.00	Madagascar	6.90	Slovenia	10.00
Austria	10.00	France	9.00	Malawi	6.10	South Africa	9.90
Azerbaijan	-6.90	Gabon	-4.00	Malaysia	2.20	South Korea	8.00
Bangladesh	6.00	Gambia	-5.20	Mali	5.40	Spain	10.00
Belarus	-4.50	Georgia	5.80	Mauritania	-6.00	Sri Lanka	6.20
Belgium	10.00	Germany	10.00	Mexico	6.40	Sudan	-5.90
Benin	6.00	Ghana	2.90	Moldova	8.20	Sweden	10.00
Bhutan	-8.00	Greece	10.00	Mongolia	10.70	Switzerland	10.00
Bolivia	9.00	Guatemala	7.50	Morocco	-5.50	Syria	-7.40
Bosnia and Herz.	0.00	Guinea	-0.80	Mozambique	5.80	Taiwan	9.30
Botswana	9.60	Guinea-Bissau	4.20	Myanmar	-7.00	Tajikistan	-2.40
Brazil	8.00	Guyana	6.00	Namibia	6.00	Tanzania	-0.10
Bulgaria	9.20	Haiti	1.40	Nepal	3.40	Thailand	9.00
Burkina Faso	-2.50	Honduras	7.40	Netherlands	10.00	Togo	-2.00
Burundi	-0.30	Hungary	10.00	New Zealand	10.00	Trin. and Tob.	10.60
Cambodia	1.70	Iceland	..	Nicaragua	8.60	Tunisia	-4.10
Cameroon	-4.00	India	9.80	Niger	1.20	Turkey	6.40
Canada	10.00	Indonesia	-0.20	Nigeria	-0.70	Turkmenistan	-9.00
Central Afr. Rep.	5.00	Iran	0.40	North Korea	-9.00	Uganda	-4.00
Chad	-1.60	Iraq	-9.00	Norway	10.00	Ukraine	7.70
Chile	9.30	Ireland	10.00	Oman	-7.90	United Arab. Em.	-8.00
China	-7.00	Israel	10.40	P. N. Guinea	10.00	United Kingdom	10.00
Colombia	6.40	Italy	10.00	Pakistan	1.30	United States	10.00
Congo	-2.30	Jamaica	9.00	Panama	9.90	Uruguay	10.00
Costa Rica	10.00	Japan	10.00	Paraguay	5.90	Uzbekistan	-9.00
Côte d'Ivoire	-1.60	Jordan	-2.00	Peru	3.78	Venezuela	6.40
Croatia	0.60	Kazakhstan	-5.00	Philippines	8.00	Viet Nam	-7.00
Cuba	-7.00	Kenya	-1.20	Poland	9.80	Yemen	-2.00
Czech Rep.	10.00	Kuwait	-7.00	Portugal	10.00	Zambia	1.50
Dem. Rep. Congo	0.00	Kyrgyzstan	-3.00	Romania	8.10	Zimbabwe	-7.00
Denmark	10.00	Laos	-7.00	Russia	5.90		
Dominican Rep.	8.20	Latvia	..	Rwanda	-4.40		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 58 **Code:** ENEFF **Reference Year:** MRYA 1998-2002

Description: Energy efficiency

Units: Terajoules energy consumption per million dollars GDP (PPP)

Source*: US Energy Information Agency (EIA).

Logic: The more efficient an economy is, the less energy it needs to produce a given set of goods and services.

Methodology: The original data are in billion British Thermal Units (BTUs), which are converted to terajoules. The factor applied to convert 10⁹ BTUs to terajoules is .9478 (Source: Energy Information Administration). Total energy consumption was normalized by GDP in million US dollars in purchasing power parities (PPPs).

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	8.17		47.74		1.04		
	5.91		0.24		31.46		
Albania	5.99	Ecuador	7.55	Lebanon	11.09	Saudi Arabia	17.60
Algeria	6.77	Egypt	8.80	Liberia	[3.22]	Senegal	3.84
Angola	4.30	El Salvador	3.57	Libya	[17.48]	Serbia and Mont.	[13.19]
Argentina	5.66	Estonia	9.88	Lithuania	11.89	Sierra Leone	4.79
Armenia	15.96	Ethiopia	1.28	Macedonia	7.89	Slovakia	11.54
Australia	9.54	Finland	8.56	Madagascar	2.21	Slovenia	7.87
Austria	5.62	France	6.51	Malawi	3.40	South Africa	9.42
Azerbaijan	21.90	Gabon	4.18	Malaysia	9.94	South Korea	9.86
Bangladesh	2.34	Gambia	1.65	Mali	1.19	Spain	6.33
Belarus	19.93	Georgia	15.37	Mauritania	7.74	Sri Lanka	2.67
Belgium	9.08	Germany	6.04	Mexico	6.94	Sudan	2.37
Benin	3.54	Ghana	3.08	Moldova	24.88	Sweden	9.09
Bhutan	[2.7]	Greece	6.57	Mongolia	18.95	Switzerland	5.50
Bolivia	6.71	Guatemala	3.29	Morocco	3.86	Syria	13.21
Bosnia and Herz.	[10.99]	Guinea	1.37	Mozambique	4.93	Taiwan	11.28
Botswana	3.49	Guinea-Bissau	4.84	Myanmar	[3.23]	Tajikistan	35.43
Brazil	6.03	Guyana	6.79	Namibia	3.77	Tanzania	3.25
Bulgaria	14.21	Haiti	1.87	Nepal	1.72	Thailand	6.75
Burkina Faso	1.27	Honduras	5.38	Netherlands	7.90	Togo	2.37
Burundi	1.60	Hungary	7.33	New Zealand	9.72	Trin. and Tob.	38.67
Cambodia	0.30	Iceland	15.61	Nicaragua	4.44	Tunisia	4.84
Cameroon	2.47	India	4.73	Niger	1.78	Turkey	6.59
Canada	13.39	Indonesia	6.18	Nigeria	7.80	Turkmenistan	24.07
Central Afr. Rep.	1.19	Iran	12.68	North Korea	[22.57]	Uganda	1.01
Chad	0.34	Iraq	[12.03]	Norway	11.38	Ukraine	26.19
Chile	6.54	Ireland	4.16	Oman	10.11	United Arab. Em.	32.28
China	6.98	Israel	5.88	P. N. Guinea	3.56	United Kingdom	5.86
Colombia	4.12	Italy	4.76	Pakistan	6.17	United States	8.99
Congo	4.48	Jamaica	13.66	Panama	10.78	Uruguay	5.45
Costa Rica	4.19	Japan	6.07	Paraguay	14.67	Uzbekistan	47.74
Côte d'Ivoire	3.95	Jordan	9.78	Peru	4.03	Venezuela	20.39
Croatia	7.80	Kazakhstan	22.63	Philippines	3.35	Viet Nam	4.46
Cuba	[5.52]	Kenya	4.62	Poland	7.77	Yemen	8.79
Czech Rep.	9.29	Kuwait	23.89	Portugal	5.50	Zambia	11.59
Dem. Rep. Congo	2.31	Kyrgyzstan	26.83	Romania	11.12	Zimbabwe	5.99
Denmark	4.75	Laos	3.98	Russia	21.93		
Dominican Rep.	4.39	Latvia	8.43	Rwanda	1.25		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 59 **Code:** RENPC **Reference Year:** MRYA 2002-2003

Description: Hydropower and renewable energy production as a percentage of total energy consumption

Units: Hydropower and renewable energy production as a percentage of total energy consumption

Source*: US Energy Information Agency.

Logic: The higher the proportion of hydroelectric and other renewable energy sources, the less reliance on more environmentally damaging sources such as fossil fuel and nuclear energy.

Methodology: Hydroelectric, biomass, geothermal, solar and wind electric power production were calculated as a percent of total energy consumption. Some countries exceed 100 percent because they are net exporters of renewable energy.

	Mean		Max		2.5 Percentile		0
	Median		Min		97.5 Percentile		73.33
Albania	39.60	Ecuador	20.25	Lebanon	1.09	Saudi Arabia	0.00
Algeria	0.05	Egypt	6.21	Liberia	0.00	Senegal	0.00
Angola	8.74	El Salvador	31.34	Libya	0.00	Serbia and Mont.	..
Argentina	14.92	Estonia	0.09	Lithuania	7.89	Sierra Leone	0.00
Armenia	10.58	Ethiopia	30.47	Macedonia	10.33	Slovakia	6.27
Australia	3.45	Finland	16.95	Madagascar	19.20	Slovenia	11.46
Austria	23.15	France	5.95	Malawi	48.12	South Africa	0.52
Azerbaijan	2.16	Gabon	23.27	Malaysia	2.92	South Korea	0.43
Bangladesh	1.85	Gambia	0.00	Mali	38.28	Spain	5.92
Belarus	0.02	Georgia	29.01	Mauritania	1.00	Sri Lanka	17.14
Belgium	0.76	Germany	3.54	Mexico	5.47	Sudan	8.70
Benin	7.72	Ghana	47.20	Moldova	1.98	Sweden	32.40
Bhutan	108.47	Greece	2.68	Mongolia	0.00	Switzerland	29.10
Bolivia	14.97	Guatemala	17.20	Morocco	1.85	Syria	12.45
Bosnia and Herz.	16.79	Guinea	21.41	Mozambique	87.52	Taiwan	1.55
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	..	Tajikistan	65.31
Brazil	34.94	Guyana	0.35	Namibia	23.64	Tanzania	37.23
Bulgaria	2.55	Haiti	10.23	Nepal	30.71	Thailand	2.50
Burkina Faso	4.46	Honduras	22.38	Netherlands	1.19	Togo	0.17
Burundi	17.35	Hungary	0.26	New Zealand	34.59	Trin. and Tob.	0.08
Cambodia	4.39	Iceland	70.73	Nicaragua	12.26	Tunisia	0.33
Cameroon	42.81	India	5.23	Niger	0.00	Turkey	11.03
Canada	25.00	Indonesia	3.87	Nigeria	7.46	Turkmenistan	0.01
Central Afr. Rep.	15.33	Iran	1.38	North Korea	22.42	Uganda	48.81
Chad	0.00	Iraq	0.51	Norway	63.68	Ukraine	1.58
Chile	22.19	Ireland	1.94	Oman	0.00	United Arab. Em.	0.00
China	7.29	Israel	0.01	P. N. Guinea	20.96	United Kingdom	1.24
Colombia	29.30	Italy	7.17	Pakistan	10.15	United States	3.72
Congo	20.75	Jamaica	1.46	Panama	12.10	Uruguay	60.56
Costa Rica	49.63	Japan	4.87	Paraguay	124.46	Uzbekistan	2.91
Côte d'Ivoire	17.41	Jordan	0.22	Peru	31.97	Venezuela	20.53
Croatia	18.62	Kazakhstan	4.21	Philippines	24.30	Viet Nam	24.15
Cuba	2.26	Kenya	26.11	Poland	0.90	Yemen	0.00
Czech Rep.	2.00	Kuwait	0.00	Portugal	9.14	Zambia	78.23
Dem. Rep. Congo	73.89	Kyrgyzstan	46.68	Romania	9.88	Zimbabwe	13.11
Denmark	8.59	Laos	87.48	Russia	6.74		
Dominican Rep.	2.07	Latvia	16.16	Rwanda	12.15		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 60 **Code:** DJSGI **Reference Year:** 2004-2005

Description: Dow Jones Sustainability Group Index (DJSGI)

Units: Ratio of the market capitalization of the firms included in the 2005 Dow Jones Sustainability Index to the market capitalization of the firms eligible for inclusion in the Dow Jones Sustainability Index

Source*: Dow Jones SAM Sustainability Group.

Logic: The Dow Jones Sustainability Group Index tracks a group of companies that have been rated as the top 10% in terms of sustainability. Firms that are already in the Dow Jones Global Index are eligible to enter the Sustainability Group Index. Countries in which a higher percentage of eligible firms meet the requirements have a private sector that is contributing more strongly to environmental sustainability.

Methodology: This variable measures the ratio of the market capitalization of the firms included in the 2005 Dow Jones Sustainability Index (World) and the market capitalization of the firms eligible for inclusion in the Dow Jones Sustainability Index (World). Market capitalization is as of 30 July 2004.

	Mean		Max		2.5 Percentile		
	Median		Min		97.5 Percentile		
	0.28		0.89		0		
	0.18		0		0.86		
Albania	..	Ecuador	..	Lebanon	..	Saudi Arabia	..
Algeria	..	Egypt	..	Liberia	..	Senegal	..
Angola	..	El Salvador	..	Libya	..	Serbia and Mont.	..
Argentina	..	Estonia	..	Lithuania	..	Sierra Leone	..
Armenia	..	Ethiopia	..	Macedonia	..	Slovakia	..
Australia	0.45	Finland	0.89	Madagascar	..	Slovenia	..
Austria	0.00	France	0.46	Malawi	..	South Africa	0.16
Azerbaijan	..	Gabon	..	Malaysia	0.03	South Korea	0.03
Bangladesh	..	Gambia	..	Mali	..	Spain	0.70
Belarus	..	Georgia	..	Mauritania	..	Sri Lanka	..
Belgium	0.18	Germany	0.64	Mexico	0.00	Sudan	..
Benin	..	Ghana	..	Moldova	..	Sweden	0.43
Bhutan	..	Greece	0.00	Mongolia	..	Switzerland	0.85
Bolivia	..	Guatemala	..	Morocco	..	Syria	..
Bosnia and Herz.	..	Guinea	..	Mozambique	..	Taiwan	0.15
Botswana	..	Guinea-Bissau	..	Myanmar	..	Tajikistan	..
Brazil	0.21	Guyana	..	Namibia	..	Tanzania	..
Bulgaria	..	Haiti	..	Nepal	..	Thailand	0.23
Burkina Faso	..	Honduras	..	Netherlands	0.79	Togo	..
Burundi	..	Hungary	..	New Zealand	0.00	Trin. and Tob.	..
Cambodia	..	Iceland	..	Nicaragua	..	Tunisia	..
Cameroon	..	India	..	Niger	..	Turkey	..
Canada	0.19	Indonesia	0.00	Nigeria	..	Turkmenistan	..
Central Afr. Rep.	..	Iran	..	North Korea	..	Uganda	..
Chad	..	Iraq	..	Norway	0.66	Ukraine	..
Chile	0.00	Ireland	0.18	Oman	..	United Arab. Em.	..
China	..	Israel	..	P. N. Guinea	..	United Kingdom	0.80
Colombia	..	Italy	0.29	Pakistan	..	United States	0.22
Congo	..	Jamaica	..	Panama	..	Uruguay	..
Costa Rica	..	Japan	..	Paraguay	..	Uzbekistan	..
Côte d'Ivoire	..	Jordan	..	Peru	..	Venezuela	0.00
Croatia	..	Kazakhstan	..	Philippines	0.00	Viet Nam	..
Cuba	..	Kenya	..	Poland	..	Yemen	..
Czech Rep.	..	Kuwait	..	Portugal	0.00	Zambia	..
Dem. Rep. Congo	..	Kyrgyzstan	..	Romania	..	Zimbabwe	..
Denmark	..	Laos	..	Russia	..		
Dominican Rep.	..	Latvia	..	Rwanda	..		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 61 Code: ECOVAL Reference Year: 2004

Description: Average Innovest EcoValue rating of firms headquartered in a country

Units: Average weighted score of EcoValue rating weighted by market capitalization share (values > 0 mean better environmental performance relative to peer countries, values < 0 mean poorer environmental performance)

Source*: Innovest Strategic Value Advisors.

Logic: The Innovest EcoValue '21 rating measures environmental performance at the firm level. Countries in which firm-level scores are higher have a private sector that is contributing more strongly to environmental

Methodology: Each country starts with a neutral score (0.0 -- equal to Innovest's BBB). Then the weighted average EV21 score for all rated companies in a given country either raises or lowers the neutral weight. A relevance factor, based on EV21 coverage in a given country, determines the allowed deviation from neutral. Having a country score greater than zero means that, on average, companies in a given country have better environmental performance relative to their global peer group. Within each country, EcoValue levels were weighted by market capitalization share and then averaged to get a value for the individual country, based on the location of company headquarters.

Mean	0.18	Max	1.62	2.5 Percentile	-0.74		
Median	0	Min	-1.29	97.5 Percentile	1.59		
Albania	..	Ecuador	..	Lebanon	..	Saudi Arabia	..
Algeria	..	Egypt	..	Liberia	..	Senegal	..
Angola	..	El Salvador	..	Libya	..	Serbia and Mont.	..
Argentina	..	Estonia	..	Lithuania	..	Sierra Leone	..
Armenia	..	Ethiopia	..	Macedonia	..	Slovakia	..
Australia	0.01	Finland	1.62	Madagascar	..	Slovenia	..
Austria	-0.39	France	0.27	Malawi	..	South Africa	..
Azerbaijan	..	Gabon	..	Malaysia	0.00	South Korea	0.94
Bangladesh	..	Gambia	..	Mali	..	Spain	0.15
Belarus	..	Georgia	..	Mauritania	..	Sri Lanka	..
Belgium	-0.02	Ghana	0.94	Mexico	-0.15	Sudan	..
Benin	..	Greece	-0.63	Moldova	..	Sweden	1.28
Bhutan	..	Guatemala	..	Mongolia	..	Switzerland	1.59
Bolivia	..	Guinea	..	Morocco	..	Syria	..
Bosnia and Herz.	..	Guinea-Bissau	..	Mozambique	..	Taiwan	0.10
Botswana	..	Honduras	..	Myanmar	..	Tajikistan	..
Brazil	0.02	Hungary	-0.31	Namibia	..	Tanzania	..
Bulgaria	..	Iceland	..	Nepal	..	Thailand	-0.07
Burkina Faso	..	India	..	Netherlands	1.54	Togo	..
Burundi	..	Indonesia	-0.01	New Zealand	0.04	Trin. and Tob.	..
Cambodia	..	Iran	..	Nicaragua	..	Tunisia	..
Cameroon	..	Iraq	..	Niger	..	Turkey	..
Canada	0.47	Ireland	-0.63	Nigeria	..	Turkmenistan	..
Central Afr. Rep.	..	Israel	0.00	North Korea	..	Uganda	..
Chad	..	Italy	-0.60	Norway	0.96	Ukraine	..
Chile	..	Jamaica	..	Oman	..	United Arab. Em.	..
China	-0.68	Japan	1.55	P. N. Guinea	..	United Kingdom	1.34
Colombia	..	Jordan	..	Pakistan	..	United States	0.45
Congo	..	Kazakhstan	..	Panama	..	Uruguay	..
Costa Rica	..	Kenya	..	Paraguay	..	Uzbekistan	..
Côte d'Ivoire	..	Kuwait	..	Peru	..	Venezuela	-0.43
Croatia	..	Kyrgyzstan	..	Philippines	..	Viet Nam	..
Cuba	..	Laos	..	Poland	-0.34	Yemen	..
Czech Rep.	-0.20	Latvia	..	Portugal	-0.55	Zambia	..
Dem. Rep. Congo	Romania	..	Zimbabwe	..
Denmark	-0.13		..	Russia	-1.29		..
Dominican Rep.	Rwanda

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 62 **Code:** ISO14 **Reference Year:** ISO14001: 2003, GDP: MRYA 1998-2002

Description: Number of ISO 14001 certified companies per billion dollars GDP (PPP)

Units: Number of ISO 14001 certified companies per billion GDP in US dollars (PPP)

Source*: Reinhard Peglau, Federal Environmental Agency, Germany.

Logic: ISO 14001 specifies standards for environmental management. The more firms that receive ISO 14001 certification, the more likely it is that industries are instituting management practices that reduce waste and resource consumption.

Methodology: Number of ISO 14001 certified companies divided by their GDP in billion US dollars (PPP).

	Mean		0.85	Max	41.51	2.5 Percentile	0.00
	Median		0.03	Min	0.00	97.5 Percentile	5.40
Albania	0.00	Ecuador	0.04	Lebanon	0.26	Saudi Arabia	0.03
Algeria	0.02	Egypt	0.77	Liberia	0.00	Senegal	0.13
Angola	0.00	El Salvador	0.00	Libya	0.00	Serbia and Mont.	..
Argentina	41.51	Estonia	4.45	Lithuania	2.01	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	0.08	Slovakia	1.06
Australia	1.50	Finland	7.78	Madagascar	0.00	Slovenia	5.63
Austria	2.13	France	1.46	Malawi	0.48	South Africa	0.58
Azerbaijan	0.19	Gabon	0.00	Malaysia	1.66	South Korea	1.85
Bangladesh	0.02	Gambia	0.00	Mali	0.00	Spain	5.54
Belarus	0.04	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.19
Belgium	1.06	Germany	1.86	Mexico	0.45	Sudan	0.02
Benin	0.00	Ghana	0.02	Moldova	0.00	Sweden	9.94
Bhutan	0.00	Greece	0.45	Mongolia	0.00	Switzerland	5.28
Bolivia	0.23	Guatemala	0.04	Morocco	0.10	Syria	0.55
Bosnia and Herz.	..	Guinea	0.00	Mozambique	0.05	Taiwan	..
Botswana	0.14	Guinea-Bissau	0.00	Myanmar	0.03	Tajikistan	0.00
Brazil	0.74	Guyana	0.92	Namibia	0.32	Tanzania	0.05
Bulgaria	0.30	Haiti	0.00	Nepal	0.03	Thailand	1.70
Burkina Faso	0.00	Honduras	0.11	Netherlands	2.47	Togo	0.00
Burundi	0.00	Hungary	4.68	New Zealand	1.17	Trin. and Tob.	0.57
Cambodia	0.04	Iceland	0.36	Nicaragua	0.00	Tunisia	0.27
Cameroon	0.06	India	0.22	Niger	0.11	Turkey	0.30
Canada	1.34	Indonesia	0.36	Nigeria	0.09	Turkmenistan	..
Central Afr. Rep.	0.00	Iran	0.22	North Korea	0.00	Uganda	0.09
Chad	0.00	Iraq	0.00	Norway	2.11	Ukraine	0.02
Chile	0.52	Ireland	0.75	Oman	0.18	United Arab. Em.	1.71
China	0.86	Israel	0.87	P. N. Guinea	0.00	United Kingdom	1.88
Colombia	0.32	Italy	2.05	Pakistan	0.09	United States	0.34
Congo	0.00	Jamaica	0.10	Panama	0.06	Uruguay	1.22
Costa Rica	1.15	Japan	4.03	Paraguay	0.00	Uzbekistan	0.00
Côte d'Ivoire	0.00	Jordan	0.73	Peru	0.23	Venezuela	0.13
Croatia	1.14	Kazakhstan	0.05	Philippines	0.50	Viet Nam	0.30
Cuba	0.00	Kenya	0.03	Poland	1.06	Yemen	0.00
Czech Rep.	3.76	Kuwait	0.08	Portugal	1.33	Zambia	0.23
Dem. Rep. Congo	0.00	Kyrgyzstan	0.00	Romania	0.66	Zimbabwe	..
Denmark	4.28	Laos	0.00	Russia	0.04		
Dominican Rep.	0.02	Latvia	0.93	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 63 **Code:** WFPRI **Reference Year:** 2003/4

Description: World Economic Forum Survey on private sector environmental innovation

Units: Principal components of several survey questions

Source*: World Economic Forum (WEF).

Logic: Private sector innovation contributes to solutions to environmental problems.

Methodology: This represents principal components of survey questions addressing several aspects of private sector environmental innovation: environmental competitiveness, prevalence of environmental management systems, and private sector cooperation with government (questions Q1112-1114).

	Mean		Max		2.5 Percentile		7.87
	Median		Min		97.5 Percentile		14.07
Albania	[9.79]	Ecuador	8.12	Lebanon	[10.17]	Saudi Arabia	[10.84]
Algeria	9.43	Egypt	10.42	Liberia	[8.64]	Senegal	10.21
Angola	7.45	El Salvador	8.71	Libya	[10.27]	Serbia and Mont.	9.49
Argentina	9.48	Estonia	10.46	Lithuania	10.79	Sierra Leone	[8.56]
Armenia	[10.21]	Ethiopia	9.22	Macedonia	9.27	Slovakia	10.85
Australia	12.88	Finland	14.71	Madagascar	9.47	Slovenia	11.19
Austria	12.92	France	12.46	Malawi	11.74	South Africa	11.63
Azerbaijan	[9.63]	Gabon	[9.29]	Malaysia	12.84	South Korea	12.43
Bangladesh	8.84	Gambia	11.96	Mali	10.37	Spain	11.38
Belarus	[9.84]	Georgia	[9.97]	Mauritania	[9.7]	Sri Lanka	10.07
Belgium	10.98	Germany	13.91	Mexico	10.31	Sudan	[9.35]
Benin	[10.42]	Ghana	12.26	Moldova	[9.15]	Sweden	13.76
Bhutan	[10.02]	Greece	10.41	Mongolia	[9.26]	Switzerland	13.64
Bolivia	7.82	Guatemala	8.45	Morocco	9.94	Syria	[9.55]
Bosnia and Herz.	[9.64]	Guinea	[9.53]	Mozambique	9.09	Taiwan	13.60
Botswana	11.09	Guinea-Bissau	[9.51]	Myanmar	[9.82]	Tajikistan	[8.99]
Brazil	11.81	Guyana	[9.02]	Namibia	11.26	Tanzania	11.61
Bulgaria	9.07	Haiti	7.97	Nepal	[9.81]	Thailand	11.81
Burkina Faso	[9.69]	Honduras	8.11	Netherlands	13.09	Togo	[9.53]
Burundi	[9.1]	Hungary	9.58	New Zealand	11.60	Trin. and Tob.	9.76
Cambodia	[10.39]	Iceland	12.86	Nicaragua	7.92	Tunisia	12.85
Cameroon	10.22	India	10.49	Niger	[9.03]	Turkey	9.19
Canada	12.79	Indonesia	10.24	Nigeria	10.64	Turkmenistan	[8.37]
Central Afr. Rep.	[10.01]	Iran	[9.68]	North Korea	[9.44]	Uganda	10.62
Chad	8.74	Iraq	[9.7]	Norway	12.79	Ukraine	8.82
Chile	10.56	Ireland	11.80	Oman	[10.73]	United Arab. Em.	[12.49]
China	10.60	Israel	10.90	P. N. Guinea	[8.72]	United Kingdom	13.17
Colombia	10.26	Italy	12.90	Pakistan	8.99	United States	12.61
Congo	[8.9]	Jamaica	11.16	Panama	9.37	Uruguay	9.88
Costa Rica	11.13	Japan	14.24	Paraguay	7.20	Uzbekistan	[9.22]
Côte d'Ivoire	[9.03]	Jordan	11.18	Peru	8.92	Venezuela	8.77
Croatia	10.66	Kazakhstan	[9.81]	Philippines	9.49	Viet Nam	11.16
Cuba	[10.35]	Kenya	10.22	Poland	10.28	Yemen	[9.36]
Czech Rep.	10.91	Kuwait	[11.38]	Portugal	10.07	Zambia	11.20
Dem. Rep. Congo	[8.34]	Kyrgyzstan	[9.74]	Romania	9.69	Zimbabwe	10.41
Denmark	13.39	Laos	[9.89]	Russia	9.04		
Dominican Rep.	9.58	Latvia	11.04	Rwanda	[10.01]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 64 **Code:** RESCARE **Reference Year:** 2002

Description: Participation in the Responsible Care Program of the Chemical Manufacturer's Association

Units: Score from 0 (low) to 4 (high) levels of participation

Source*: International Council of Chemical Associations (ICCA).

Logic: Responsible Care is an initiative of the global chemical industry in which companies, through their national associations, commit to work together to continuously improve the health, safety and environmental performance of their products and processes, and so contribute to the sustainable development of local communities and of society as a whole (Source: ICCA Responsible Care Status Report 2002, URL: <http://www.icca-chem.org/rcreport/>). Responsible handling of chemicals is important for environmental sustainability.

Methodology: The Responsible Care Program is an initiative of the chemical industry. Eight or more years of membership was considered a mature membership and allocated four points. Five to seven years of membership was considered a senior membership and allocated three points. Two to four years of membership was considered a junior membership and allocated 2 points. Up to one year of membership was considered a new membership and allocated 1 point. Not a member = 0 points.

	Mean		Max		2.5 Percentile		0
	Median	0.77	Min	4	97.5 Percentile		4
Albania	0.00	Ecuador	3.00	Lebanon	0.00	Saudi Arabia	0.00
Algeria	0.00	Egypt	0.00	Liberia	0.00	Senegal	0.00
Angola	0.00	El Salvador	0.00	Libya	0.00	Serbia and Mont.	0.00
Argentina	4.00	Estonia	0.00	Lithuania	0.00	Sierra Leone	0.00
Armenia	0.00	Ethiopia	0.00	Macedonia	0.00	Slovakia	4.00
Australia	4.00	Finland	4.00	Madagascar	0.00	Slovenia	0.00
Austria	4.00	France	4.00	Malawi	0.00	South Africa	4.00
Azerbaijan	0.00	Gabon	0.00	Malaysia	4.00	South Korea	3.00
Bangladesh	0.00	Gambia	0.00	Mali	0.00	Spain	4.00
Belarus	0.00	Georgia	0.00	Mauritania	0.00	Sri Lanka	0.00
Belgium	4.00	Germany	4.00	Mexico	4.00	Sudan	0.00
Benin	0.00	Ghana	0.00	Moldova	0.00	Sweden	4.00
Bhutan	0.00	Greece	4.00	Mongolia	0.00	Switzerland	4.00
Bolivia	0.00	Guatemala	0.00	Morocco	3.00	Syria	0.00
Bosnia and Herz.	0.00	Guinea	0.00	Mozambique	0.00	Taiwan	3.00
Botswana	0.00	Guinea-Bissau	0.00	Myanmar	0.00	Tajikistan	0.00
Brazil	4.00	Guyana	0.00	Namibia	0.00	Tanzania	0.00
Bulgaria	0.00	Haiti	0.00	Nepal	0.00	Thailand	4.00
Burkina Faso	0.00	Honduras	0.00	Netherlands	4.00	Togo	0.00
Burundi	0.00	Hungary	4.00	New Zealand	4.00	Trin. and Tob.	0.00
Cambodia	0.00	Iceland	0.00	Nicaragua	0.00	Tunisia	0.00
Cameroon	0.00	India	4.00	Niger	0.00	Turkey	4.00
Canada	4.00	Indonesia	3.00	Nigeria	0.00	Turkmenistan	0.00
Central Afr. Rep.	0.00	Iran	0.00	North Korea	0.00	Uganda	0.00
Chad	0.00	Iraq	0.00	Norway	4.00	Ukraine	0.00
Chile	4.00	Ireland	4.00	Oman	0.00	United Arab. Em.	0.00
China	0.00	Israel	2.00	P. N. Guinea	0.00	United Kingdom	4.00
Colombia	4.00	Italy	4.00	Pakistan	0.00	United States	4.00
Congo	0.00	Jamaica	0.00	Panama	0.00	Uruguay	3.00
Costa Rica	0.00	Japan	4.00	Paraguay	0.00	Uzbekistan	0.00
Côte d'Ivoire	0.00	Jordan	0.00	Peru	4.00	Venezuela	0.00
Croatia	0.00	Kazakhstan	0.00	Philippines	4.00	Viet Nam	0.00
Cuba	0.00	Kenya	0.00	Poland	4.00	Yemen	0.00
Czech Rep.	4.00	Kuwait	0.00	Portugal	4.00	Zambia	0.00
Dem. Rep. Congo	0.00	Kyrgyzstan	0.00	Romania	0.00	Zimbabwe	0.00
Denmark	4.00	Laos	0.00	Russia	0.00		
Dominican Rep.	0.00	Latvia	0.00	Rwanda	0.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 65 Code: INNOV Reference Year: 2003/4

Description: Innovation Index

Units: Standardized score between 1 (lowest) and 7 (highest)

Source*: World Economic Forum (WEF).

Logic: This index measures the underlying capacity of a country to engage in technological innovation by examining factors such as scientific infrastructure and policy environment.

Methodology: Objectively measures national innovation capacity of countries through indicators including investment in research and development and the number of new US patents.

Mean	2.71	Max	6.44	2.5 Percentile	1.37		
Median	2.33	Min	1.34	97.5 Percentile	5.61		
Albania	[2]	Ecuador	1.94	Lebanon	[2.43]	Saudi Arabia	[2.69]
Algeria	1.86	Egypt	2.71	Liberia	[1.13]	Senegal	1.70
Angola	1.34	El Salvador	2.05	Libya	[2.27]	Serbia and Mont.	2.13
Argentina	2.94	Estonia	3.38	Lithuania	3.14	Sierra Leone	[0.85]
Armenia	[2.25]	Ethiopia	1.36	Macedonia	2.12	Slovakia	2.58
Australia	3.96	Finland	5.71	Madagascar	1.55	Slovenia	3.51
Austria	3.87	France	3.92	Malawi	1.49	South Africa	2.27
Azerbaijan	[1.76]	Gabon	[1.93]	Malaysia	2.66	South Korea	4.69
Bangladesh	1.58	Gambia	1.48	Mali	1.42	Spain	3.46
Belarus	[2.47]	Georgia	[2.05]	Mauritania	[1.54]	Sri Lanka	1.76
Belgium	4.00	Germany	4.36	Mexico	2.25	Sudan	[1.17]
Benin	[1.23]	Ghana	1.69	Moldova	[2.02]	Sweden	5.52
Bhutan	[1.64]	Greece	3.02	Mongolia	[2.51]	Switzerland	4.65
Bolivia	2.31	Guatemala	1.74	Morocco	1.95	Syria	[1.88]
Bosnia and Herz.	[2.06]	Guinea	[1.31]	Mozambique	1.46	Taiwan	5.92
Botswana	1.73	Guinea-Bissau	[0.86]	Myanmar	[1.67]	Tajikistan	[1.55]
Brazil	2.25	Guyana	[2]	Namibia	1.82	Tanzania	1.63
Bulgaria	2.59	Haiti	1.37	Nepal	[1.38]	Thailand	2.76
Burkina Faso	[1.34]	Honduras	1.76	Netherlands	4.04	Togo	[1.14]
Burundi	[1.38]	Hungary	2.76	New Zealand	4.02	Trin. and Tob.	1.86
Cambodia	[1.45]	Iceland	3.70	Nicaragua	1.72	Tunisia	2.38
Cameroon	1.68	India	2.06	Niger	[1.17]	Turkey	2.01
Canada	4.45	Indonesia	2.08	Nigeria	1.66	Turkmenistan	[1.95]
Central Afr. Rep.	[1.41]	Iran	[2.21]	North Korea	[2.59]	Uganda	1.67
Chad	1.36	Iraq	[2]	Norway	4.23	Ukraine	2.79
Chile	2.79	Ireland	3.48	Oman	[2.7]	United Arab. Em.	[3.48]
China	1.97	Israel	4.80	P. N. Guinea	[1.41]	United Kingdom	4.11
Colombia	2.28	Italy	3.33	Pakistan	1.54	United States	6.44
Congo	[1.04]	Jamaica	2.10	Panama	2.64	Uruguay	2.51
Costa Rica	2.21	Japan	5.49	Paraguay	1.65	Uzbekistan	[1.97]
Côte d'Ivoire	[1.46]	Jordan	2.44	Peru	2.30	Venezuela	2.34
Croatia	2.44	Kazakhstan	[2.64]	Philippines	2.41	Viet Nam	1.98
Cuba	[2]	Kenya	1.68	Poland	3.20	Yemen	[1.45]
Czech Rep.	2.57	Kuwait	[3.18]	Portugal	2.98	Zambia	1.55
Dem. Rep. Congo	[1.35]	Kyrgyzstan	[1.8]	Romania	2.30	Zimbabwe	1.66
Denmark	4.26	Laos	[1.27]	Russia	3.36		
Dominican Rep.	2.30	Latvia	3.52	Rwanda	[1.5]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #:	66	Code:	DAI	Reference Year:	2003		
Description:	Digital Access Index						
Units:	Score between 0 and 1 with higher scores corresponding to better access						
Source*:	International Telecommunication Union (ITU).						
Logic:	The Internet has created a new economy and promoted an unprecedented increase in the amount of environmental information that can be accessed and disseminated worldwide. Access to the Internet thus is important for access to information, stakeholder participation, decision-making, and generation of innovative solutions to environmental problems.						
Methodology:	The DAI is a composite index composed of the equally average of Infrastructure, Affordability, Knowledge, Quality, and Usage. Each subcomponent is comprised of the weighted average of benchmarked variables. The variables and their weights are fixed telephone subscribers per 100 inhabitants (weight 0.5), Mobile cellular subscribers per 100 inhabitants (0.5), Internet access price as percentage of GNI per capita (1), Adult literacy (0.66), Combined primary, secondary, and tertiary school enrolment level (0.33), International internet bandwidth (bits) per capita (0.5), Broadband subscribers per 100 inhabitants (0.5), Internet users per 100 inhabitants (1).						
Mean	0.42	Max	0.85	2.5 Percentile	0.1		
Median	0.43	Min	0.04	97.5 Percentile	0.79		
Albania	0.39	Ecuador	0.41	Lebanon	0.48	Saudi Arabia	0.44
Algeria	0.37	Egypt	0.40	Liberia	[0.05]	Senegal	0.14
Angola	0.11	El Salvador	0.38	Libya	0.42	Serbia and Mont.	0.45
Argentina	0.53	Estonia	0.67	Lithuania	0.56	Sierra Leone	0.10
Armenia	0.30	Ethiopia	0.10	Macedonia	0.48	Slovakia	0.59
Australia	0.74	Finland	0.79	Madagascar	0.15	Slovenia	0.72
Austria	0.75	France	0.72	Malawi	0.15	South Africa	0.45
Azerbaijan	0.24	Gabon	0.34	Malaysia	0.57	South Korea	0.82
Bangladesh	0.18	Gambia	0.13	Mali	0.09	Spain	0.67
Belarus	0.49	Georgia	0.37	Mauritania	0.14	Sri Lanka	0.38
Belgium	0.74	Germany	0.74	Mexico	0.50	Sudan	0.13
Benin	0.12	Ghana	0.16	Moldova	0.37	Sweden	0.85
Bhutan	0.13	Greece	0.66	Mongolia	0.35	Switzerland	0.76
Bolivia	0.38	Guatemala	0.38	Morocco	0.33	Syria	0.28
Bosnia and Herz.	0.46	Guinea	0.10	Mozambique	0.12	Taiwan	0.79
Botswana	0.43	Guinea-Bissau	0.10	Myanmar	0.17	Tajikistan	0.21
Brazil	0.50	Guyana	0.43	Namibia	0.39	Tanzania	0.15
Bulgaria	0.53	Haiti	0.15	Nepal	0.19	Thailand	0.48
Burkina Faso	0.08	Honduras	0.29	Netherlands	0.79	Togo	0.18
Burundi	0.10	Hungary	0.63	New Zealand	0.72	Trin. and Tob.	0.53
Cambodia	0.17	Iceland	0.82	Nicaragua	0.19	Tunisia	0.41
Cameroon	0.16	India	0.32	Niger	0.04	Turkey	0.48
Canada	0.78	Indonesia	0.34	Nigeria	0.15	Turkmenistan	0.37
Central Afr. Rep.	0.10	Iran	0.43	North Korea	[0.38]	Uganda	0.17
Chad	0.10	Iraq	[0.29]	Norway	0.79	Ukraine	0.43
Chile	0.58	Ireland	0.69	Oman	0.43	United Arab. Em.	0.64
China	0.43	Israel	0.70	P. N. Guinea	0.26	United Kingdom	0.77
Colombia	0.45	Italy	0.72	Pakistan	0.24	United States	0.78
Congo	0.17	Jamaica	0.53	Panama	0.47	Uruguay	0.54
Costa Rica	0.52	Japan	0.75	Paraguay	0.39	Uzbekistan	0.31
Côte d'Ivoire	0.13	Jordan	0.45	Peru	0.44	Venezuela	0.47
Croatia	0.59	Kazakhstan	0.41	Philippines	0.43	Viet Nam	0.31
Cuba	0.38	Kenya	0.19	Poland	0.59	Yemen	0.18
Czech Rep.	0.66	Kuwait	0.51	Portugal	0.65	Zambia	0.17
Dem. Rep. Congo	0.12	Kyrgyzstan	0.32	Romania	0.48	Zimbabwe	0.29
Denmark	0.83	Laos	0.15	Russia	0.50		
Dominican Rep.	0.42	Latvia	0.54	Rwanda	0.15		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 67 **Code:** PECR **Reference Year:** MRYA 1998-2003

Description: Female primary education completion rate

Units: Female primary education completion rate as percentage of females in the relevant age group

Source*: United Nations Educational, Scientific and Cultural Organization (UNESCO), plus country data.

Logic: Female education is widely seen as an important factor for social and economic development. It also correlates with the overall level of schooling of a country and hence with the environmental and technological awareness, reduced incidences of water-borne diseases, and increased participation in decision-making at the household level.

Methodology: The proxy indicator for the primary completion rate is the gross intake rate at the last grade of primary education. It is calculated as the total number of new entrants in the last grade of primary education, regardless of age, expressed as a percentage of the population of the theoretical entrance age to the last grade (Source: UNESCO Institute for Statistics). Survival rates may at times exceed 100 due to fluctuations in enrolment. Where such results are published they should be interpreted as the country having a survival rate approaching 100%. Completion rates exceeding 100% are set to 100% so as not to give countries with greater than 100% PECR an advantage over countries with real or close to 100% PECR.

Mean	91.43	Max	100	2.5 Percentile	48		
Median	100	Min	0	97.5 Percentile	100		
Albania	97.00	Ecuador	100.00	Lebanon	96.00	Saudi Arabia	67.00
Algeria	100.00	Egypt	94.00	Liberia	49.00	Senegal	86.00
Angola	71.00	El Salvador	100.00	Libya	[94.72]	Serbia and Mont.	100.00
Argentina	100.00	Estonia	95.00	Lithuania	98.90	Sierra Leone	79.00
Armenia	95.00	Ethiopia	74.00	Macedonia	98.00	Slovakia	94.00
Australia	[97.54]	Finland	99.00	Madagascar	100.00	Slovenia	100.00
Austria	100.00	France	97.00	Malawi	100.00	South Africa	94.00
Azerbaijan	88.00	Gabon	92.00	Malaysia	93.00	South Korea	100.00
Bangladesh	100.00	Gambia	88.00	Mali	54.00	Spain	[101.7]
Belarus	100.00	Georgia	92.00	Mauritania	100.00	Sri Lanka	100.00
Belgium	[97.67]	Germany	97.00	Mexico	100.00	Sudan	48.00
Benin	100.00	Ghana	84.00	Moldova	92.00	Sweden	99.00
Bhutan	44.16	Greece	97.00	Mongolia	100.00	Switzerland	95.00
Bolivia	100.00	Guatemala	100.00	Morocco	100.00	Syria	100.00
Bosnia and Herz.	[90.00]	Guinea	67.00	Mozambique	100.00	Taiwan	100.00
Botswana	100.00	Guinea-Bissau	78.00	Myanmar	100.00	Tajikistan	100.00
Brazil	100.00	Guyana	100.00	Namibia	98.00	Tanzania	100.00
Bulgaria	98.00	Haiti	70.44	Nepal	50.70	Thailand	91.00
Burkina Faso	39.00	Honduras	100.00	Netherlands	97.00	Togo	100.00
Burundi	73.00	Hungary	96.00	New Zealand	[105.7]	Trin. and Tob.	98.00
Cambodia	100.00	Iceland	92.00	Nicaragua	100.00	Tunisia	99.00
Cameroon	99.00	India	100.00	Niger	48.00	Turkey	85.33
Canada	[98.48]	Indonesia	100.00	Nigeria	100.00	Turkmenistan	[90.43]
Central Afr. Rep.	53.00	Iran	86.00	North Korea	[92.83]	Uganda	61.71
Chad	70.00	Iraq	100.00	Norway	100.00	Ukraine	100.00
Chile	93.00	Ireland	100.00	Oman	74.00	United Arab. Em.	90.67
China	99.00	Israel	[90.89]	P. N. Guinea	83.00	United Kingdom	[96.07]
Colombia	100.00	Italy	100.00	Pakistan	79.00	United States	100.00
Congo	61.00	Jamaica	99.00	Panama	100.00	Uruguay	100.00
Costa Rica	100.00	Japan	[104.09]	Paraguay	100.00	Uzbekistan	100.00
Côte d'Ivoire	62.00	Jordan	100.00	Peru	100.00	Venezuela	100.00
Croatia	98.00	Kazakhstan	100.00	Philippines	100.00	Viet Nam	97.00
Cuba	96.00	Kenya	100.00	Poland	98.00	Yemen	79.00
Czech Rep.	100.00	Kuwait	95.00	Portugal	[97.17]	Zambia	79.00
Dem. Rep. Congo	54.00	Kyrgyzstan	100.00	Romania	100.00	Zimbabwe	86.00
Denmark	100.00	Laos	100.00	Russia	[101.5]		
Dominican Rep.	100.00	Latvia	90.00	Rwanda	100.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 68 **Code:** ENROL **Reference Year:** MRYA 1999-2003

Description: Gross tertiary enrollment rate

Units: Percentage of pupils (both sexes) of relevant age enrolled at tertiary level of schooling

Source*: United Nations Educational, Scientific and Cultural Organization (UNESCO), plus country data.

Logic: The higher the level of education within a population, the higher the capacity for scientific and technological innovation, environmental awareness and ability to address environmental problems.

Methodology: The measure was calculated on the basis of pupils enrolled in tertiary educational institutions as a proportion of the population in the relevant official age group.

	Mean		Max		2.5 Percentile		0.88
	Median		Min		97.5 Percentile		69.51
Albania	15.00	Ecuador	[26.6]	Lebanon	42.31	Saudi Arabia	22.44
Algeria	14.98	Egypt	39.00	Liberia	7.07	Senegal	[12.22]
Angola	0.67	El Salvador	17.53	Libya	48.79	Serbia and Mont.	26.16
Argentina	47.96	Estonia	57.55	Lithuania	35.00	Sierra Leone	2.18
Armenia	[28.02]	Ethiopia	1.58	Macedonia	24.45	Slovakia	30.32
Australia	63.26	Finland	45.50	Madagascar	2.16	Slovenia	60.55
Austria	45.80	France	53.58	Malawi	[-0.81]	South Africa	15.24
Azerbaijan	22.52	Gabon	7.97	Malaysia	28.16	South Korea	77.62
Bangladesh	6.61	Gambia	[1.9]	Mali	1.91	Spain	59.36
Belarus	55.95	Georgia	34.53	Mauritania	3.66	Sri Lanka	[16.47]
Belgium	58.05	Germany	46.30	Mexico	20.71	Sudan	6.85
Benin	3.60	Ghana	3.30	Moldova	27.91	Sweden	70.04
Bhutan	[6.34]	Greece	62.67	Mongolia	32.68	Switzerland	42.14
Bolivia	35.66	Guatemala	[9.61]	Morocco	10.30	Syria	[22.9]
Bosnia and Herz.	[28.64]	Guinea	[2.22]	Mozambique	0.57	Taiwan	68.00
Botswana	4.65	Guinea-Bissau	[-3.96]	Myanmar	11.53	Tajikistan	14.04
Brazil	16.51	Guyana	[19.27]	Namibia	5.94	Tanzania	0.61
Bulgaria	40.82	Haiti	[11.19]	Nepal	4.62	Thailand	35.27
Burkina Faso	[3.2]	Honduras	14.73	Netherlands	55.01	Togo	3.72
Burundi	1.23	Hungary	40.01	New Zealand	69.24	Trin. and Tob.	6.48
Cambodia	2.84	Iceland	48.66	Nicaragua	[16.38]	Tunisia	21.71
Cameroon	4.93	India	10.49	Niger	1.47	Turkey	23.61
Canada	59.20	Indonesia	14.58	Nigeria	[2.18]	Turkmenistan	[21.37]
Central Afr. Rep.	1.92	Iran	9.91	North Korea	[33.59]	Uganda	2.98
Chad	0.88	Iraq	13.57	Norway	70.01	Ukraine	43.30
Chile	37.52	Ireland	47.53	Oman	8.49	United Arab. Em.	18.10
China	12.61	Israel	52.67	P. N. Guinea	2.33	United Kingdom	59.53
Colombia	23.33	Italy	35.10	Pakistan	[15.11]	United States	72.62
Congo	5.04	Jamaica	16.44	Panama	34.90	Uruguay	36.10
Costa Rica	16.04	Japan	47.70	Paraguay	16.55	Uzbekistan	[30.42]
Côte d'Ivoire	7.00	Jordan	28.62	Peru	[20.11]	Venezuela	29.06
Croatia	32.58	Kazakhstan	30.92	Philippines	31.21	Viet Nam	9.73
Cuba	24.73	Kenya	3.00	Poland	55.54	Yemen	10.77
Czech Rep.	29.84	Kuwait	21.08	Portugal	50.20	Zambia	2.47
Dem. Rep. Congo	1.42	Kyrgyzstan	41.10	Romania	27.32	Zimbabwe	4.40
Denmark	58.86	Laos	3.32	Russia	64.09		
Dominican Rep.	[18.67]	Latvia	63.11	Rwanda	1.67		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 69 **Code:** RESEARCH **Reference Year:** 2003

Description: Number of researchers per million inhabitants

Units: Number of researchers per million inhabitants

Source*: United Nations Educational, Scientific and Cultural Organization (UNESCO), plus country data.

Logic: Scientific capacity is important for the development of new technologies for sustainable environmental

Methodology: The variable measures the number of scientific researchers per million inhabitants. Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, and in the planning and management of R&D projects. Post-graduate students engaged in R&D are considered as

	Mean		Max		2.5 Percentile		15.85
	Median		Min		97.5 Percentile		5518.55
Albania	[451.31]	Ecuador	83.29	Lebanon	[2005.59]	Saudi Arabia	[969.33]
Algeria	[-4.23]	Egypt	[1321.94]	Liberia	[-977.07]	Senegal	1.82
Angola	[-354.55]	El Salvador	46.67	Libya	[1644.9]	Serbia and Mont.	[915.0]
Argentina	684.38	Estonia	1946.70	Lithuania	2303.2	Sierra Leone	[-623.94]
Armenia	1534.00	Ethiopia	[-544.65]	Macedonia	[641.0]	Slovakia	1773.6
Australia	3438.51	Finland	7110.45	Madagascar	15.03	Slovenia	2258.0
Austria	2313.29	France	2717.85	Malawi	[-971.19]	South Africa	[826.3]
Azerbaijan	2798.58	Gabon	[433.96]	Malaysia	159.93	South Korea	2879.7
Bangladesh	[-163.45]	Gambia	[545.27]	Mali	[-252.28]	Spain	1947.6
Belarus	[1004.23]	Georgia	2420.78	Mauritania	[671.54]	Sri Lanka	190.54
Belgium	2953.26	Germany	3153.01	Mexico	224.73	Sudan	[-991.66]
Benin	[-405.16]	Ghana	[557.12]	Moldova	329.49	Sweden	5186.0
Bhutan	[147.9]	Greece	1400.06	Mongolia	[1365.79]	Switzerland	3591.8
Bolivia	123.31	Guatemala	[-183.78]	Morocco	[257.41]	Syria	29.44
Bosnia and Herz.	[1136.14]	Guinea	[-975.42]	Mozambique	[37.06]	Taiwan	1258.4
Botswana	[1051.19]	Guinea-Bissau	[-194.44]	Myanmar	[280.15]	Tajikistan	[965.55]
Brazil	323.36	Guyana	[607.39]	Namibia	[1086.91]	Tanzania	[174.8]
Bulgaria	1166.65	Haiti	[-1027.86]	Nepal	[56.42]	Thailand	73.81
Burkina Faso	16.00	Honduras	[-631.7]	Netherlands	2572.2	Togo	[-670.92]
Burundi	[-713.55]	Hungary	1439.68	New Zealand	2197.1	Trin. and Tob.	455.82
Cambodia	[166.95]	Iceland	6639.29	Nicaragua	72.67	Tunisia	336.41
Cameroon	[-111.32]	India	[285.91]	Niger	[143.07]	Turkey	305.52
Canada	2978.16	Indonesia	[218.59]	Nigeria	[-851.62]	Turkmenistan	[116.29]
Central Afr. Rep.	[184.72]	Iran	[-14.32]	North Korea	[1516.76]	Uganda	23.56
Chad	[29.32]	Iraq	[257.49]	Norway	4376.6	Ukraine	2117.6
Chile	418.58	Ireland	2190.03	Oman	[761.3]	United Arab. Em.	[2327.82]
China	583.93	Israel	1563.29	P. N. Guinea	[100.9]	United Kingdom	2666.4
Colombia	100.70	Italy	1127.85	Pakistan	[86.7]	United States	4099.3
Congo	[197.44]	Jamaica	[762.49]	Panama	95.27	Uruguay	276.29
Costa Rica	[1014.64]	Japan	5320.77	Paraguay	166.03	Uzbekistan	[1261.55]
Côte d'Ivoire	[-631.24]	Jordan	1948.37	Peru	228.83	Venezuela	193.08
Croatia	1186.95	Kazakhstan	715.80	Philippines	[-391.16]	Viet Nam	[525.62]
Cuba	489.40	Kenya	[-47.48]	Poland	1473.0	Yemen	[1.13]
Czech Rep.	1465.87	Kuwait	212.08	Portugal	1754.1	Zambia	[283.39]
Dem. Rep. Congo	[-962.82]	Kyrgyzstan	581.27	Romania	879.25	Zimbabwe	[295.33]
Denmark	3475.75	Laos	[116.56]	Russia	3494.1		
Dominican Rep.	[-339.29]	Latvia	1078.24	Rwanda	[-238.34]		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 70 **Code:** EIONUM **Reference Year:** 2003-2004

Description: Number of memberships in environmental intergovernmental organizations

Units: Number of memberships environmental intergovernmental organizations (out of a maximum of 100)

Source*: Union of International Associations.

Logic: Countries contribute to global environmental governance by participating in intergovernmental environmental organizations.

Methodology: Based on a list of 100 Intergovernmental organizations classified as "environmental" and selected by the ESI Team, the number of memberships for each country were counted.

	Mean	7.1	Max	29	2.5 Percentile	0	
	Median	6	Min	0	97.5 Percentile	20	
Albania	3.00	Ecuador	16.00	Lebanon	8.00	Saudi Arabia	4.00
Algeria	11.00	Egypt	16.00	Liberia	9.00	Senegal	11.00
Angola	9.00	El Salvador	11.00	Libya	10.00	Serbia and Mont.	5.00
Argentina	16.00	Estonia	6.00	Lithuania	4.00	Sierra Leone	8.00
Armenia	2.00	Ethiopia	10.00	Macedonia	1.00	Slovakia	7.00
Australia	13.00	Finland	20.00	Madagascar	8.00	Slovenia	5.00
Austria	17.00	France	29.00	Malawi	10.00	South Africa	12.00
Azerbaijan	2.00	Gabon	13.00	Malaysia	11.00	South Korea	17.00
Bangladesh	9.00	Gambia	6.00	Mali	13.00	Spain	19.00
Belarus	4.00	Georgia	2.00	Mauritania	8.00	Sri Lanka	9.00
Belgium	19.00	Germany	28.00	Mexico	15.00	Sudan	13.00
Benin	11.00	Ghana	12.00	Moldova	3.00	Sweden	18.00
Bhutan	2.00	Greece	16.00	Mongolia	4.00	Switzerland	16.00
Bolivia	12.00	Guatemala	13.00	Morocco	15.00	Syria	9.00
Bosnia and Herz.	2.00	Guinea	11.00	Mozambique	6.00	Taiwan	5.00
Botswana	3.00	Guinea-Bissau	6.00	Myanmar	4.00	Tajikistan	1.00
Brazil	19.00	Guyana	8.00	Namibia	5.00	Tanzania	13.00
Bulgaria	7.00	Haiti	6.00	Nepal	4.00	Thailand	11.00
Burkina Faso	8.00	Honduras	9.00	Netherlands	22.00	Togo	11.00
Burundi	6.00	Hungary	8.00	New Zealand	8.00	Trin. and Tob.	8.00
Cambodia	5.00	Iceland	5.00	Nicaragua	10.00	Tunisia	15.00
Cameroon	15.00	India	18.00	Niger	0.00	Turkey	8.00
Canada	17.00	Indonesia	12.00	Nigeria	18.00	Turkmenistan	0.00
Central Afr. Rep.	9.00	Iran	12.00	North Korea	2.00	Uganda	10.00
Chad	7.00	Iraq	11.00	Norway	15.00	Ukraine	7.00
Chile	12.00	Ireland	14.00	Oman	16.00	United Arab. Em.	6.00
China	12.00	Israel	6.00	P. N. Guinea	6.00	United Kingdom	22.00
Colombia	14.00	Italy	20.00	Pakistan	9.00	United States	21.00
Congo	9.00	Jamaica	8.00	Panama	12.00	Uruguay	10.00
Costa Rica	12.00	Japan	19.00	Paraguay	8.00	Uzbekistan	3.00
Côte d'Ivoire	17.00	Jordan	8.00	Peru	11.00	Venezuela	10.00
Croatia	5.00	Kazakhstan	4.00	Philippines	11.00	Viet Nam	7.00
Cuba	15.00	Kenya	15.00	Poland	11.00	Yemen	5.00
Czech Rep.	7.00	Kuwait	8.00	Portugal	17.00	Zambia	0.00
Dem. Rep. Congo	10.00	Kyrgyzstan	2.00	Romania	9.00	Zimbabwe	10.00
Denmark	20.00	Laos	1.00	Russia	16.00		
Dominican Rep.	11.00	Latvia	5.00	Rwanda	6.00		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 71 **Code:** FUNDING **Reference Year:** 2004

Description: Contribution to international and bilateral funding of environmental projects and development aid

Units: Score from 0-100 based on aid given and aid received (0 corresponds to low levels of aid and 100 corresponds to high levels of aid)

Source*: Global Environmental Facility (GEF) and Organisation for Economic Co-operation and Development (OECD).

Logic: Participation in environment and development assistance programs, either as a donor or a recipient (depending on income level), is an important sign of government commitment to environmental sustainability.

Methodology: Two sets of rank percentiles based on standardized residuals were combined. The first is based on the residuals from regressing log aid donated on log population, log gni, log gni/cap, and (log gni)^2. The second set of rank percentiles is based on the residuals from regressing log aid received on the same regressors. Three countries have both donations and receipts and in these cases the most favorable rank was chosen.

	Mean		Max		2.5 Percentile		4.21
	Median		Min		97.5 Percentile		97.8
Albania	88.46	Ecuador	80.13	Lebanon	64.10	Saudi Arabia	13.46
Algeria	14.74	Egypt	93.59	Liberia	9.62	Senegal	80.77
Angola	37.18	El Salvador	31.41	Libya	1.92	Serbia and Mont.	[49.99]
Argentina	19.87	Estonia	16.03	Lithuania	51.92	Sierra Leone	5.77
Armenia	82.05	Ethiopia	58.33	Macedonia	[52.84]	Slovakia	39.74
Australia	36.00	Finland	92.00	Madagascar	75.64	Slovenia	80.00
Austria	16.00	France	32.00	Malawi	74.36	South Africa	44.23
Azerbaijan	99.36	Gabon	18.59	Malaysia	100.00	South Korea	4.00
Bangladesh	50.00	Gambia	36.54	Mali	85.26	Spain	24.00
Belarus	15.38	Georgia	92.95	Mauritania	66.67	Sri Lanka	62.82
Belgium	44.00	Germany	96.00	Mexico	68.59	Sudan	3.21
Benin	81.41	Ghana	73.08	Moldova	41.67	Sweden	88.00
Bhutan	75.00	Greece	20.00	Mongolia	94.23	Switzerland	56.00
Bolivia	89.74	Guatemala	83.97	Morocco	69.23	Syria	48.08
Bosnia and Herz.	89.10	Guinea	41.03	Mozambique	67.31	Taiwan	[44.41]
Botswana	40.38	Guinea-Bissau	56.41	Myanmar	10.26	Tajikistan	28.85
Brazil	48.72	Guyana	38.46	Namibia	97.44	Tanzania	85.90
Bulgaria	58.97	Haiti	27.56	Nepal	91.67	Thailand	98.72
Burkina Faso	86.54	Honduras	77.56	Netherlands	84.00	Togo	8.33
Burundi	28.21	Hungary	22.44	New Zealand	68.00	Trin. and Tob.	39.10
Cambodia	46.79	Iceland	[78.68]	Nicaragua	90.38	Tunisia	92.31
Cameroon	53.85	India	42.95	Niger	71.79	Turkey	78.85
Canada	28.00	Indonesia	49.36	Nigeria	34.62	Turkmenistan	21.15
Central Afr. Rep.	35.90	Iran	7.69	North Korea	17.95	Uganda	82.69
Chad	50.64	Iraq	[1.75]	Norway	76.00	Ukraine	4.49
Chile	60.26	Ireland	48.00	Oman	14.10	United Arab. Em.	[34.31]
China	76.28	Israel	[63.27]	P. N. Guinea	54.49	United Kingdom	52.00
Colombia	43.59	Italy	8.00	Pakistan	33.33	United States	40.00
Congo	20.51	Jamaica	45.51	Panama	55.13	Uruguay	57.69
Costa Rica	87.82	Japan	100.00	Paraguay	60.90	Uzbekistan	33.97
Côte d'Ivoire	71.15	Jordan	95.51	Peru	87.18	Venezuela	25.64
Croatia	64.74	Kazakhstan	51.28	Philippines	96.15	Viet Nam	84.62
Cuba	53.21	Kenya	61.54	Poland	23.72	Yemen	57.05
Czech Rep.	60.00	Kuwait	[25.09]	Portugal	64.00	Zambia	[64.92]
Dem. Rep. Congo	1.28	Kyrgyzstan	11.54	Romania	[38.15]	Zimbabwe	63.46
Denmark	72.00	Laos	76.92	Russia	17.31		
Dominican Rep.	29.49	Latvia	26.92	Rwanda	32.05		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 72 **Code:** PARTICIP **Reference Year:** 2004

Description: Participation in international environmental agreements

Units: Score between 0 and 1 with 0 corresponding to no participation and 1 to full participation

Source*: United Nations Framework Convention on Climate Change (UNFCCC), Vienna Convention on the Protection of the Ozone Layer, Convention on the Trade in Endangered Species (CITES), Basel Convention on the Transboundary Movement of Hazardous Waste, United Nations Convention to Combat Desertification (UNCCD), United Nations Convention on Biological Diversity, and the Ramsar Convention on Wetlands.

Logic: Participation in international environmental efforts should be measured beyond signatures to treaties. For this reason, this variable combines ratifications of treaties and conventions with the level of active participation in, contribution to, and compliance with the treaties' obligations.

Methodology: For each convention, protocol, and amendment points were allocated as follows: 1 point for signature, accession, and ratification without signature. An additional point for ratification with signature, acceptance, approval, or succession. The maximum number of points achievable is: 2 points for UNCCD, 12 points for Vienna Convention, Montreal Protocol, and its Amendments, 2 points for CITES, 4 points for UNFCCC and the Kyoto Protocol, 2 points for the Basel convention, 4 points for UNCBD, and 4 points for the Ramsar convention and the Cartagena Protocol. Due to the varying allocation of points, the observed value for each convention/protocol was re-scaled from 0-1 by dividing the observed points by the maximum number of points achievable. The re-scaled values were then aggregated using equal weights of 1/7 each. Countries or territories not listed under the list of parties to a convention/protocol/amendment were assigned 0 points for the respective convention/protocol/amendment.

Mean	0.52	Max	1	2.5 Percentile	0		
Median	0.57	Min	0	97.5 Percentile	1		
Albania	0.42	Ecuador	0.89	Lebanon	0.56	Saudi Arabia	0.40
Algeria	0.60	Egypt	0.76	Liberia	0.48	Senegal	0.75
Angola	0.31	El Salvador	0.74	Libya	0.54	Serbia and Mont.	0.35
Argentina	0.93	Estonia	0.64	Lithuania	0.73	Sierra Leone	0.50
Armenia	0.58	Ethiopia	0.52	Macedonia	0.49	Slovakia	0.71
Australia	0.79	Finland	0.92	Madagascar	0.79	Slovenia	0.69
Austria	0.82	France	1.00	Malawi	0.63	South Africa	0.76
Azerbaijan	0.57	Gabon	0.46	Malaysia	0.77	South Korea	0.75
Bangladesh	0.85	Gambia	0.73	Mali	0.75	Spain	0.85
Belarus	0.54	Georgia	0.56	Mauritania	0.52	Sri Lanka	0.61
Belgium	0.88	Germany	1.00	Mexico	0.85	Sudan	0.50
Benin	0.64	Ghana	0.73	Moldova	0.58	Sweden	1.00
Bhutan	0.50	Greece	0.85	Mongolia	0.64	Switzerland	1.00
Bolivia	0.85	Guatemala	0.71	Morocco	0.75	Syria	0.67
Bosnia and Herz.	0.35	Guinea	0.61	Mozambique	0.55	Taiwan	0.00
Botswana	0.65	Guinea-Bissau	0.50	Myanmar	0.39	Tajikistan	0.29
Brazil	0.80	Guyana	0.49	Namibia	0.68	Tanzania	0.75
Bulgaria	0.76	Haiti	0.45	Nepal	0.57	Thailand	0.79
Burkina Faso	0.71	Honduras	0.43	Netherlands	0.95	Togo	0.81
Burundi	0.65	Hungary	0.75	New Zealand	0.82	Trin. and Tob.	0.69
Cambodia	0.63	Iceland	0.64	Nicaragua	0.71	Tunisia	0.79
Cameroon	0.61	India	0.82	Niger	0.76	Turkey	0.76
Canada	0.93	Indonesia	0.70	Nigeria	0.48	Turkmenistan	0.39
Central Afr. Rep.	0.42	Iran	0.81	North Korea	0.36	Uganda	0.73
Chad	0.63	Iraq	0.00	Norway	1.00	Ukraine	0.63
Chile	0.93	Ireland	0.94	Oman	0.37	United Arab. Em.	0.42
China	0.73	Israel	0.92	P. N. Guinea	0.55	United Kingdom	1.00
Colombia	0.82	Italy	0.94	Pakistan	0.67	United States	0.71
Congo	0.56	Jamaica	0.58	Panama	0.90	Uruguay	0.65
Costa Rica	0.79	Japan	0.85	Paraguay	0.87	Uzbekistan	0.58
Côte d'Ivoire	0.57	Jordan	0.83	Peru	0.81	Venezuela	0.82
Croatia	0.69	Kazakhstan	0.50	Philippines	0.83	Viet Nam	0.58
Cuba	0.71	Kenya	0.75	Poland	0.82	Yemen	0.42
Czech Rep.	0.77	Kuwait	0.60	Portugal	0.89	Zambia	0.62
Dem. Rep. Congo	0.58	Kyrgyzstan	0.42	Romania	0.65	Zimbabwe	0.46
Denmark	0.95	Laos	0.38	Russia	0.75		
Dominican Rep.	0.51	Latvia	0.65	Rwanda	0.57		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 73 **Code:** CO2GDP **Reference Year:** 2000

Description: Carbon emissions per million US dollars GDP

Units: Metric tons of carbon emissions per million GDP in constant 1995 US dollars

Source*: Carbon Dioxide Information Analysis Center (CDIAC), plus country data.

Logic: Emissions of carbon dioxide are not immediately harmful to any given country but contribute to global climate change. Every country emits carbon dioxide. However, the amount of emissions per unit economic activity varies widely, with some countries being far more efficient than others.

Methodology: Total annual CO2 emissions in metric tons have been normalized by million GDP in constant 1995 US dollars for each country. For the People's Republic of Korea, World Bank data were not available and GDP at market prices, so current prices, US\$ (UN estimates) for 2000 were used instead.

	Mean		Max		2.5 Percentile		38.72
	Median		Min		97.5 Percentile		1919.04
Albania	224.52	Ecuador	328.00	Lebanon	332.42	Saudi Arabia	631.76
Algeria	499.89	Egypt	498.70	Liberia	182.17	Senegal	196.73
Angola	254.02	El Salvador	164.71	Libya	445.46	Serbia and Mont.	837.50
Argentina	128.71	Estonia	840.85	Lithuania	360.14	Sierra Leone	200.21
Armenia	507.50	Ethiopia	204.44	Macedonia	593.02	Slovakia	419.30
Australia	208.95	Finland	88.87	Madagascar	162.30	Slovenia	171.74
Austria	61.65	France	55.81	Malawi	120.85	South Africa	518.89
Azerbaijan	1845.85	Gabon	177.35	Malaysia	352.28	South Korea	187.84
Bangladesh	163.25	Gambia	153.29	Mali	51.13	Spain	109.51
Belarus	850.78	Georgia	471.12	Mauritania	642.69	Sri Lanka	166.83
Belgium	88.11	Germany	79.76	Mexico	310.61	Sudan	147.60
Benin	169.63	Ghana	201.67	Moldova	1159.3	Sweden	43.94
Bhutan	252.08	Greece	175.77	Mongolia	1992.2	Switzerland	31.71
Bolivia	380.60	Guatemala	151.66	Morocco	253.75	Syria	1152.2
Bosnia and Herz.	828.48	Guinea	77.93	Mozambique	95.24	Taiwan	212.00
Botswana	162.39	Guinea-Bissau	286.28	Myanmar	33.50	Tajikistan	878.60
Brazil	106.65	Guyana	613.14	Namibia	119.58	Tanzania	181.85
Bulgaria	919.37	Haiti	135.63	Nepal	166.61	Thailand	315.73
Burkina Faso	94.45	Honduras	284.26	Netherlands	76.17	Togo	335.49
Burundi	69.75	Hungary	271.77	New Zealand	126.63	Trin. and Tob.	1059.1
Cambodia	31.08	Iceland	67.69	Nicaragua	400.16	Tunisia	212.55
Cameroon	177.77	India	621.43	Niger	149.30	Turkey	294.29
Canada	168.23	Indonesia	351.54	Nigeria	305.31	Turkmenistan	3121.7
Central Afr. Rep.	58.80	Iran	802.44	North Korea	4859.0	Uganda	52.80
Chad	21.15	Iraq	[659.25]	Norway	77.14	Ukraine	2147.4
Chile	201.26	Ireland	108.76	Oman	378.21	United Arab. Em.	300.48
China	731.44	Israel	154.62	P. N. Guinea	135.94	United Kingdom	118.39
Colombia	164.79	Italy	96.74	Pakistan	401.62	United States	170.72
Congo	206.90	Jamaica	548.60	Panama	173.90	Uruguay	68.90
Costa Rica	99.32	Japan	56.88	Paraguay	106.91	Uzbekistan	2007.3
Côte d'Ivoire	219.89	Jordan	540.61	Peru	133.16	Venezuela	539.60
Croatia	240.26	Kazakhstan	1436.89	Philippines	235.39	Viet Nam	540.47
Cuba	262.59	Kenya	258.31	Poland	578.54	Yemen	407.46
Czech Rep.	586.45	Kuwait	474.16	Portugal	125.68	Zambia	124.74
Dem. Rep. Congo	161.57	Kyrgyzstan	580.11	Romania	718.19	Zimbabwe	515.90
Denmark	59.13	Laos	47.50	Russia	913.98		
Dominican Rep.	378.42	Latvia	264.29	Rwanda	75.71		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 74 **Code:** CO2PC **Reference Year:** MRYA 1996-2001

Description: Carbon emissions per capita

Units: Metric tons of carbon emissions per capita

Source*: United Nations Statistics Division, Millennium Indicator Database.

Logic: Emissions of carbon dioxide are not immediately harmful to any given country, but contribute to climate change. Every country emits some carbon dioxide, but the amount per person varies widely, with some countries having much lower per capita emissions than others.

Methodology: Total annual carbon dioxide emissions in metric tons of carbon were normalized by total population (de facto) for each country for the same year. For Slovenia the most recent available non-zero figure was for the year 1996, for the Ukraine for the year 1998, and for the Russian Federation for the year 1999.

	Mean		Max		2.5 Percentile		0.06
	Median		Min		97.5 Percentile		20.67
Albania	0.92	Ecuador	2.05	Lebanon	4.36	Saudi Arabia	16.91
Algeria	2.96	Egypt	2.10	Liberia	0.14	Senegal	0.45
Angola	0.52	El Salvador	1.07	Libya	10.92	Serbia and Mont.	3.96
Argentina	3.73	Estonia	12.63	Lithuania	4.40	Sierra Leone	0.13
Armenia	1.13	Ethiopia	0.09	Macedonia	5.53	Slovakia	7.80
Australia	18.32	Finland	13.05	Madagascar	0.14	Slovenia	8.20
Austria	8.53	France	6.91	Malawi	0.07	South Africa	7.44
Azerbaijan	3.56	Gabon	2.78	Malaysia	6.28	South Korea	9.12
Bangladesh	0.21	Gambia	0.21	Mali	0.05	Spain	7.52
Belarus	5.90	Georgia	1.17	Mauritania	1.16	Sri Lanka	0.55
Belgium	12.34	Germany	10.57	Mexico	4.29	Sudan	0.17
Benin	0.26	Ghana	0.30	Moldova	1.54	Sweden	6.24
Bhutan	0.19	Greece	9.67	Mongolia	3.00	Switzerland	6.25
Bolivia	1.33	Guatemala	0.87	Morocco	1.26	Syria	3.27
Bosnia and Herz.	4.84	Guinea	0.16	Mozambique	0.07	Taiwan	2.59
Botswana	2.23	Guinea-Bissau	0.19	Myanmar	0.19	Tajikistan	0.65
Brazil	1.79	Guyana	2.11	Namibia	0.96	Tanzania	0.12
Bulgaria	6.11	Haiti	0.18	Nepal	0.14	Thailand	3.26
Burkina Faso	0.09	Honduras	0.74	Netherlands	11.25	Togo	0.39
Burundi	0.04	Hungary	8.30	New Zealand	8.50	Trin. and Tob.	20.47
Cambodia	0.04	Iceland	7.69	Nicaragua	0.74	Tunisia	1.93
Cameroon	0.43	India	1.05	Niger	0.11	Turkey	3.25
Canada	18.25	Indonesia	1.28	Nigeria	0.32	Turkmenistan	7.45
Central Afr. Rep.	0.07	Iran	4.67	North Korea	8.49	Uganda	0.06
Chad	0.02	Iraq	3.29	Norway	9.26	Ukraine	6.23
Chile	3.91	Ireland	12.02	Oman	7.58	United Arab. Em.	20.91
China	2.19	Israel	10.45	P. N. Guinea	0.46	United Kingdom	9.47
Colombia	1.39	Italy	8.01	Pakistan	0.74	United States	20.12
Congo	0.53	Jamaica	4.18	Panama	2.15	Uruguay	1.62
Costa Rica	1.38	Japan	9.54	Paraguay	0.67	Uzbekistan	[3.17]
Côte d'Ivoire	0.66	Jordan	3.09	Peru	1.14	Venezuela	6.50
Croatia	4.59	Kazakhstan	7.76	Philippines	1.02	Viet Nam	0.74
Cuba	2.76	Kenya	0.31	Poland	8.22	Yemen	0.47
Czech Rep.	12.48	Kuwait	21.33	Portugal	6.47	Zambia	0.18
Dem. Rep. Congo	0.06	Kyrgyzstan	0.94	Romania	4.96	Zimbabwe	1.17
Denmark	10.18	Laos	0.08	Russia	10.32		
Dominican Rep.	3.01	Latvia	3.32	Rwanda	0.07		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 75 **Code:** SO2EXP **Reference Year:** EMEP: 2001, IIASA Europe: 2000, IIASA RAINS-Asia: 1997

Description: SO2 Exports

Units: Gigagrams of SO2 produced in country that is carried across its boundaries to other countries

Source*: Europe Meteorological Synthesizing Centre West and International Institute for Applied Systems Analysis.

Logic: The transport of sulfur emissions across territorial boundaries contributes to poor air quality and acid rain in receiving countries.

Methodology: The data are merged from EMEP, IIASA Europe, and IIASA RAINS-Asia. Kola and the rest of the Russian Federation are aggregated to the Russian Federation (RUS) in the EMEP data.

	Mean		Max		2.5 Percentile		0.56
	Median		Min		97.5 Percentile		1717.12
Albania	58.00	Ecuador	..	Lebanon	..	Saudi Arabia	..
Algeria	..	Egypt	..	Liberia	..	Senegal	..
Angola	..	El Salvador	..	Libya	..	Serbia and Mont.	394.10
Argentina	..	Estonia	91.70	Lithuania	48.77	Sierra Leone	..
Armenia	4.40	Ethiopia	..	Macedonia	136.53	Slovakia	128.57
Australia	..	Finland	85.24	Madagascar	..	Slovenia	96.00
Austria	36.67	France	609.85	Malawi	..	South Africa	..
Azerbaijan	14.70	Gabon	..	Malaysia	40.10	South Korea	43.80
Bangladesh	23.80	Gambia	..	Mali	..	Spain	1394.0
Belarus	150.72	Georgia	9.00	Mauritania	..	Sri Lanka	8.15
Belgium	161.86	Germany	649.91	Mexico	..	Sudan	..
Benin	..	Ghana	..	Moldova	12.00	Sweden	56.77
Bhutan	0.41	Greece	485.00	Mongolia	0.69	Switzerland	21.08
Bolivia	..	Guatemala	..	Morocco	..	Syria	..
Bosnia and Herz.	419.00	Guinea	..	Mozambique	..	Taiwan	..
Botswana	..	Guinea-Bissau	..	Myanmar	2.36	Tajikistan	134.00
Brazil	..	Guyana	..	Namibia	..	Tanzania	..
Bulgaria	845.93	Haiti	..	Nepal	18.80	Thailand	..
Burkina Faso	..	Honduras	..	Netherlands	88.93	Togo	..
Burundi	..	Hungary	400.48	New Zealand	..	Trin. and Tob.	..
Cambodia	0.40	Iceland	27.00	Nicaragua	..	Tunisia	..
Cameroon	..	India	340.00	Niger	..	Turkey	2112.0
Canada	..	Indonesia	132.00	Nigeria	..	Turkmenistan	..
Central Afr. Rep.	..	Iran	..	North Korea	61.70	Uganda	..
Chad	..	Iraq	..	Norway	24.75	Ukraine	1029.0
Chile	..	Ireland	131.00	Oman	..	United Arab. Em.	..
China	1230.00	Israel	..	P. N. Guinea	..	United Kingdom	1125.3
Colombia	..	Italy	758.00	Pakistan	42.00	United States	..
Congo	..	Jamaica	..	Panama	..	Uruguay	..
Costa Rica	..	Japan	142.00	Paraguay	..	Uzbekistan	..
Côte d'Ivoire	..	Jordan	..	Peru	..	Venezuela	..
Croatia	58.00	Kazakhstan	236.99	Philippines	72.30	Viet Nam	20.10
Cuba	..	Kenya	..	Poland	1564.0	Yemen	..
Czech Rep.	251.00	Kuwait	..	Portugal	286.00	Zambia	..
Dem. Rep. Congo	..	Kyrgyzstan	..	Romania	912.00	Zimbabwe	..
Denmark	25.33	Laos	0.82	Russia	1904.2		
Dominican Rep.	..	Latvia	13.37	Rwanda	..		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Variable #: 76 **Code:** POLEXP **Reference Year:** 2002

Description: Import of polluting goods and raw materials as percentage of total imports of goods and services

Units: Import of polluting goods and raw materials as percentage of total imports of goods and services

Source*: United Nations Commodity Trade Statistics database (COMTRADE).

Logic: Countries that import a large volume of commodities that are associated with negative environmental externalities at the point of extraction or processing may not be pursuing an environmentally sustainable path because of the likelihood that their actions are contributing to damage abroad. This measure does not take into account variation in actual environmental externalities within exporting countries, nor does it factor in other relevant imports that are not classified as commodities; as such it should be considered a rough proxy.

Methodology: The following commodities from the Harmonized Commodity Description and Coding System (HS-1996) are used: salt, sulphur, earth, stone, plaster, lime and cement; ores, slag and ash; paper and paperboard, articles of pulp, etc.; stone, plaster, cement, asbestos, mica, etc.; iron and steel; copper, nickle, aluminum, lead, zinc, tin, other base metals, cermet, and articles thereof; nuclear reactors, boilers, machinery, etc.; vehicles other than railway, tramway; ships, boats and other floating structures; and aircraft, spacecraft, and parts thereof. The import data in US dollars for these codes are added up and divided by the value of total imports of goods and services in US dollars. Countries with no recorded imports of goods and raw materials for the selected HS codes were set to missing.

	Mean		Max		2.5 Percentile		11.75
	Median		Min		97.5 Percentile		39.33
Albania	17.26	Ecuador	31.90	Lebanon	21.30	Saudi Arabia	32.20
Algeria	30.84	Egypt	[24.86]	Liberia	[19.31]	Senegal	14.81
Angola	[24.96]	El Salvador	17.33	Libya	[28.4]	Serbia and Mont.	25.69
Argentina	22.92	Estonia	29.10	Lithuania	[22.03]	Sierra Leone	[19.94]
Armenia	12.10	Ethiopia	24.83	Macedonia	19.99	Slovakia	30.21
Australia	29.72	Finland	26.71	Madagascar	10.09	Slovenia	31.55
Austria	23.53	France	30.17	Malawi	22.11	South Africa	24.85
Azerbaijan	15.19	Gabon	[24.09]	Malaysia	21.32	South Korea	19.60
Bangladesh	[14.1]	Gambia	13.97	Mali	[18.84]	Spain	31.62
Belarus	23.10	Georgia	[22.79]	Mauritania	[23.13]	Sri Lanka	16.78
Belgium	30.11	Germany	25.85	Mexico	31.09	Sudan	49.76
Benin	20.20	Ghana	[20.82]	Moldova	15.94	Sweden	25.93
Bhutan	[19.1]	Greece	30.58	Mongolia	[22.05]	Switzerland	23.18
Bolivia	25.82	Guatemala	28.01	Morocco	22.17	Syria	22.77
Bosnia and Herz.	[23.11]	Guinea	17.26	Mozambique	[23.19]	Taiwan	[25.05]
Botswana	[26.36]	Guinea-Bissau	[22.16]	Myanmar	[21.29]	Tajikistan	[20.91]
Brazil	23.02	Guyana	18.29	Namibia	31.60	Tanzania	26.89
Bulgaria	25.21	Haiti	[21.92]	Nepal	[19.13]	Thailand	[20.23]
Burkina Faso	22.71	Honduras	19.42	Netherlands	23.13	Togo	18.66
Burundi	[18.71]	Hungary	29.52	New Zealand	31.16	Trin. and Tob.	32.05
Cambodia	[17.2]	Iceland	19.62	Nicaragua	23.56	Tunisia	24.54
Cameroon	[26.16]	India	13.03	Niger	14.56	Turkey	29.35
Canada	37.17	Indonesia	18.66	Nigeria	18.23	Turkmenistan	[23.79]
Central Afr. Rep.	12.60	Iran	31.98	North Korea	[26.28]	Uganda	20.68
Chad	[19.31]	Iraq	[25.32]	Norway	27.33	Ukraine	20.19
Chile	23.58	Ireland	20.22	Oman	33.85	United Arab. Em.	[24.04]
China	29.04	Israel	16.38	P. N. Guinea	26.88	United Kingdom	32.59
Colombia	25.68	Italy	27.09	Pakistan	7.03	United States	28.46
Congo	[23.77]	Jamaica	18.39	Panama	[24.3]	Uruguay	16.99
Costa Rica	23.29	Japan	18.12	Paraguay	19.15	Uzbekistan	[22.66]
Côte d'Ivoire	[21.21]	Jordan	21.87	Peru	20.01	Venezuela	28.86
Croatia	30.23	Kazakhstan	[24.16]	Philippines	23.11	Viet Nam	[21.42]
Cuba	[21.59]	Kenya	27.20	Poland	33.32	Yemen	[23.32]
Czech Rep.	31.67	Kuwait	[26.09]	Portugal	28.65	Zambia	23.76
Dem. Rep. Congo	[21.31]	Kyrgyzstan	19.66	Romania	23.84	Zimbabwe	49.50
Denmark	23.33	Laos	[23.52]	Russia	15.47		
Dominican Rep.	[24.24]	Latvia	26.70	Rwanda	15.26		

* Full source information for this variable can be found at the end of this Appendix. Data in “[]” indicate imputed values; “..” means the data point is missing.

Complete Source Information for 2005 ESI

Variable #: 1 **Code:** NO2

Description: **Urban population weighted NO2 concentration**

For ambient air pollutant concentrations: Organisation for Economic Co-operation and Development (OECD), Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); United Nations Human Settlement Programme (UNHABITAT), Global Urban Observatory, Citibase, 1999, http://www.unchs.org/programmes/guo/guo_databases.asp (accessed July 2004); World Health Organization (WHO), Air Monitoring Information System 2.0, 1998; European Environment Agency, AirBase, July 2004, <http://air-climate.eionet.eu.int/databases> (accessed July 2004); World Resources Institute, World Resources 1998-99, Data Table 8.5;

For city population: OECD Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); Center for International Earth Science Information Network (CIESIN), alpha version of the Europe City Population database (version of August 2004).

Additional and updated data as follows: Canada: Air quality data: National Air Pollution Surveillance (NAPS) Network, Annual Data Summary for 2002, http://www.etc-cte.ec.gc.ca/publications/naps/naps2002_annual.pdf, Population data: Statistics Canada, <http://www.statcan.ca/english/Pgdb/demo05a.htm>. Finland: Finnish Meteorological Institute, 2004. Slovak Republic: NO2 data: Slovak Hydrometeorological Institute, Ministry of Environment of the Slovak Republic, "Air pollution in the Slovak Republic in 2001", Bratislava 2003 (http://oko.shmu.sk/rocenky/SHMU_Air_pollution_in_the_SR_2001.pdf), to be published by Statistical Office of the Slovak Republic in "Statistical Yearbook of the Slovak Republic 2004" and "Environment in the Slovak Republic Selected indicators in 1999 - 2003". City population data: Statistical Office of the Slovak Republic, Demography and Social Statistics Section. Taiwan: Environmental Protection Agency, Taiwan, Air Quality Query Website, http://edb.epa.gov.tw/EnvStatistics/AirQlt/airpoll/-Air_pollution_tb3_1.asp. United Arab Emirates: Federal Environment Agency 2004, Environmental Annual Reports collected by respective municipalities.

Variable #: 2 **Code:** SO2

Description: **Urban population weighted SO2 concentration**

For ambient air pollutant concentrations: Organisation for Economic Co-operation and Development (OECD), Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); United Nations Human Settlement Programme (UNHABITAT), Global Urban Observatory, Citibase, 1999, http://www.unchs.org/programmes/guo/guo_databases.asp (accessed July 2004); World Health Organization (WHO), Air Monitoring Information System 2.0, 1998; European Environment Agency, AirBase, July 2004, <http://air-climate.eionet.eu.int/databases> (accessed July 2004); World Resources Institute, World Resources 1998-99, Data Table 8.5.

For city population: OECD Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); Center for International Earth Science Information Network (CIESIN), alpha version of the Europe City Population database (version of August 2004).

Additional and updated country data as follows: Belgium: Interregional Cell for the Environment (IRCEL), Frans Fierens, and Walloon State of the Environment Cell - Directorate-General for Natural Resources and the Environment (CEEW - DGRNE), Vincent Brahy, <http://statbel.fgov.be>. Canada: SO2 data, National Air Pollution Surveillance (NAPS) Network, Annual Data Summary for 2002, http://www.etc-cte.ec.gc.ca/publications/naps/naps2002_annual.pdf. City population data, <http://www.statcan.ca/english/Pgdb/demo05a.htm>. Taiwan: SO2 data, Environmental Protection Administration (EPA), Taiwan, <http://edb.epa.gov.tw/EnvStatistics/AirQlt/airpoll/index.asp>, <http://www.dgbas.gov.tw/dgbas03/bs8/look/looky.htm>. City population data, Directorate General of Budget Accounting and Statistics, The Third Bureau, Socio-Economic Data of Taiwan. Turkey: SO2 data, Ministry of Health, <http://www.die.gov.tr/ENGLISH/SONIST/CEVRE/-e05052004.html>. City population data, State Institute of Statistics., General Population Census 2000. United Arab Emirates: Federal Environment Agency, Environmental Annual Reports collected in respective municipalities.

Variable #: 3 **Code:** TSP

Description: **Urban population weighted TSP concentration**

For ambient air pollutant concentrations: Organisation for Economic Co-operation and Development (OECD), Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); United Nations Human Settlement Programme (UNHABITAT), Global Urban Observatory, Citibase, 1999, http://www.unhcs.org/programmes/guo/guo_databases.asp (accessed July 2004); World Health Organization (WHO), Air Monitoring Information System 2.0, 1998; European Environment Agency, AirBase, July 2004, <http://air-climate.eionet.eu.int/databases> (accessed July 2004); World Resources Institute, World Resources 1998-99, Data Table 8.5.

For city population: OECD Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004); Center for International Earth Science Information Network (CIESIN), alpha version of the Europe City Population database (version of August 2004).

Additional and updated country data as follows: Albania: Ministry of Environment Canada: PM10 data: National Air Pollution Surveillance (NAPS) Network, Annual Data Summary for 2002, http://www.etc-cte.ec.gc.ca/publications/naps/naps2002_annual.pdf, City population data: <http://www.statcan.ca/english/Pgdb/demo05a.htm>. Costa Rica: TSP data: Universidad Nacional, Heredia, Costa Rica, Laboratorio de Contaminantes cited by Indicadores del Desarrollo Sostenible de Costa Rica 2002, Observatorio del Desarrollo (OdD), Universidad de Costa Rica, <http://www.odd.ucr.ac.cr>. Slovak Republic: PM10 data: Slovak Hydrometeorological Institute, Ministry of Environment of the Slovak Republic, "Air pollution in the Slovak Republic in 2001", Bratislava 2003 (http://oko.shmu.sk/rocnky/SHMU_Air_pollution_in_the_SR_2001.pdf), to be published by Statistical Office of the Slovak Republic in "Statistical Yearbook of the Slovak Republic 2004" and "Environment in the Slovak Republic Selected indicators in 1999 - 2003", City population data: Statistical Office of the Slovak Republic, Demography and Social Statistics Section. Taiwan: PM10 data, Air Quality Query Website, EPA, Taiwan, http://edb.epa.gov.tw/EnvStatistics/AirQlt/airpoll/Air_pollution_tb3_2.asp. Directorate General of Budget Accounting and Statistics, Socio-Economic Data of Taiwan, <http://www.dgbas.gov.tw/dgbas03/bs8/look/looky.htm>. United Arab Emirates: Federal Environment Agency, Environmental Annual Reports collected respective municipalities. United States: Environmental Protection Agency, <http://www.epa.gov/air/airtrends/aqtrnd01/pmatter.html>.

Variable #: 4 **Code:** INDOOR

Description: **Indoor air pollution from solid fuel use**

World Health Organization, "Assessing the environmental burden of disease at national and local levels", by Manish A. Desai, Sumi Mehta, Kirk R. Smith, http://www.who.int/quantifying_ehimpacts/publications/9241591358/en/ (accessed December 2004).

Variable #: 5 **Code:** ECORISK

Description: **Percentage of country's territory in threatened ecoregions**

Hoekstra, Jonathan M., Timothy M. Boucher, Taylor H. Ricketts, and Carter Roberts. 2005. Confronting a biome crisis: global disparities of habitat loss and protection. *Ecology Letters*, 8, pp. 23-29, see also <http://www.blackwellpublishing.com/abstract.asp?aid=4&iid=1&ref=1461-023X&vid=8> (accessed January 2005).

Variable #: 6 **Code:** PRTBRD

Description: **Threatened bird species as percentage of known breeding bird species in each country**

IUCN-The World Conservation Union Red List of Threatened Species 2002 and 2003, <http://www.redlist.org/info/tables.html> (accessed September 2004), and World Resources Institute (WRI) 2000-2001 Earthtrends Table BI.2 Globally Threatened Species: Mammals, Birds, and Reptiles, http://earthtrends.wri.org/pdf_library/data_tables/bi2n_2000.pdf (accessed January 2005).

Additional and updated country data as follows: Taiwan: The Agricultural Council, Taiwan, Birds, Animal Division, Endemic Species Research Center, http://www.tesri.gov.tw/content/animal/ani_bird.asp, Wild Bird Federation Taiwan, The list of conserved wild animals, http://www.bird.org.tw/ebird/b/webrace/school/10/new_page_4.htm.

Variable #: 7 **Code:** PRTMAM

Description: **Threatened mammal species as percentage of known mammal species in each country**

IUCN-The World Conservation Union Red List of Threatened Species 2002 and 2003, <http://www.redlist.org/info/tables.html> (accessed September 2004), and World Resources Institute (WRI) 2000-2001 Earthtrends Table BI.2 Globally Threatened Species: Mammals, Birds, and Reptiles, http://earthtrends.wri.org/pdf_library/data_tables/bi2n_2000.pdf (accessed January 2005).

Additional and updated country data as follows: Taiwan: The Agricultural Council, Taiwan, Mammal, Animal Division, Endemic Species Research Center, http://www.tesri.gov.tw/content/animal/ani_mamal.asp, Endemic Species Research Center, The list of conserved wild animals, <http://nature.tesri.gov.tw/tesriusr/internet/wildlist.cfm?Kind=0>.

Variable #: 8 **Code:** PRTAMPH

Description: **Threatened amphibian species as percentage of known amphibian species in each country**

IUCN-The World Conservation Union Species Survival Commission, Conservation International-Center for Applied Biodiversity Science, and NatureServe. 2004, IUCN Global Amphibian Assessment, <http://www.globalamphibians.org/> (accessed January 2005).

Variable #: 9 **Code:** NBI

Description: **National Biodiversity Index**

Convention on Biological Diversity, Global Biodiversity Outlook (2001, with second edition to be published in 2004), <http://www.biodiv.org/doc/publications/gbo/gbo-anx-01-en.pdf> (accessed January 2005).

Variable #: 10 **Code:** ANTH10

Description: **Percentage of total land area (including inland waters) having very low anthropogenic impact**

The Human Influence Index (HII) version 2, Center for International Earth Science Information Network (CIESIN) including nine underlying public domain data sets: World Roads (US Department of Defense National Imaging and Mapping Agency (NIMA) Vector MAP (VMAPO)), World Railroads (NIMA, VMAPO), Navigable Rivers (NIMA, VMAPO-hydropoly data set), Coastlines (NIMA, coastline data), GPW3 Population Density Data (CIESIN Gridded Population of the World version 3 Population Density Grid adjusted to match UN figures), GRUMP version 1 Urban Extent Data (CIESIN Gridded Rural-Urban Mapping Project, Urban extent dataset), DMSP Nighttime Stable Lights (US Department of Defense, Defense Meteorological Satellite Program), and Cropland Data (Center for Sustainability and Global Environment (SAGE), Navin Ramankutty), http://www.ciesin.columbia.edu/wild_areas/ (accessed January 2005).

Variable #: 11 **Code:** ANTH40

Description: **Percentage of total land area (including inland waters) having very high anthropogenic impact**

The Human Influence Index version 2 by the Center for International Earth Science Information Network (CIESIN) using 9 underlying public domain data sets. The underlying data sets are: World Roads (US Dept. of Defense National Imaging and Mapping Agency, NIMA, VMAPO), World Railroads (NIMA, VMAPO), Navigable Rivers (NIMA, VMAPO-hydropoly data set), Coastlines (NIMA, coastline data), GPW3 Population Density Data (CIESIN Gridded Population of the World v3 Population Density Grid adjusted to match UN figures), GRUMP v1 Urban Extent Data (CIESIN Gridded Rural Urban Mapping Project, Urban extent data), DMSP Nighttime Stable Lights (US Dept. of Defense, Defense Meteorological Satellite Program), and Cropland Data (SAGE Navin Ramankutty, Center for Sustainability and Global Environment), http://www.ciesin.columbia.edu/wild_areas/ (accessed January 2005).

Variable #: 12 **Code:** WQ_DO

Description: **Dissolved oxygen concentration**

United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System, <http://www.gemswater.org/publications/index-e.html>, Organisation for Economic Co-operation and Development (OECD) Environmental Data Compendium 2002, Inland Water, 3.4A, <http://www.oecd.org/dataoecd/8/19/2958157.pdf> (accessed June 2004), European Environment Agency (EEA) Water Base: QUALITY_LAKES_EN_V4, <http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=661> (accessed June 2004), QUALITY_RIVERS_EN_V4, <http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=660> (accessed June 2004).

Additional and updated country data as follows: Belgium: Vlaamse Milieumaatschappij - Flemish Environment Agency (VMM), Rudy Vannevel, Direction Générale des Ressources Naturelles et de l'Environnement (DGRNE), Dominique Wyllock, data sent to United Nations Environment Programme - Global Environment Monitoring System/Water Division (UNEP-GEMS/Water). Finland: Finnish Environment Institute, Common Procedures for Exchange of Information (Council Decision 77/795/EEC). Japan: Ministry of the Environment, <http://www.env.go.jp/water/suiiki/index.html>. Slovak Republic: Slovak Hydrometeorological Institute, to be published in "Environment in the Slovak Republic (Selected indicators in 1999 - 2003)" by Statistical Office of the Slovak Republic. Taiwan: Environmental Protection Administration, The Statistical Yearbook of EPA, <http://www.epa.gov.tw/english/>.

Variable #: 13 **Code:** WQ_EC

Description: **Electrical conductivity**

United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System, <http://www.gemswater.org/publications/index-e.html> (accessed June 2004), European Environment Agency (EEA) Water Base: QUALITY_LAKES_EN_V4, <http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=661> (accessed June 2004).

Additional and updated country data as follows: Belgium: Vlaamse Milieumaatschappij - Flemish Environment Agency (VMM), Rudy Vannevel, Direction Générale des Ressources Naturelles et de l'Environnement (DGRNE), Dominique Wyllock, data sent to United Nations Environment Programme - Global Environmental Monitoring System/Water Division (UNEP-GEMS/Water). Finland: Finnish Environment Institute, Common Procedures for Exchange of Information (Council Decision 77/795/EEC). Taiwan: Environmental Protection Administration, The Statistical Yearbook of EPA, <http://www.epa.gov.tw/english/>.

Variable #: 14 **Code:** WQ_PH

Description: **Phosphorus concentration**

United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System, <http://www.gemswater.org/publications/index-e.html> (accessed June 2004), European Environment Agency (EEA) Water Base: QUALITY_LAKES_EN_V4, <http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=661> (accessed June 2004), European Environment Agency (EEA) Water Base: QUALITY_RIVERS_EN_V4, <http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=660> 3 (accessed June 2004), Organisation for Economic Co-operation and Development (OECD) Environmental Data Compendium 2002, Inland Water, 3.4D, <http://www.oecd.org/dataoecd/8/19/2958157.pdf> (accessed April 2004).

Additional and updated country data as follows: Finland: Finnish Environment Institute, Common Procedures for Exchange of Information (Council Decision 77/795/EEC). Slovak Republic: Slovak Hydrometeorological Institute, to be published in "Environment in the Slovak Republic (Selected indicators in 1999 - 2003)" by Statistical Office of the Slovak Republic. Taiwan: Environmental Protection Administration (EPA), Reservoir Monitoring Database, http://alphapc.epa.gov.tw/get_river_fixed.html, http://alphapc.epa.gov.tw/get_dam_fixed.html. Zimbabwe: Harare City Health Department, Zimbabwe.

Variable #: 15 **Code:** WQ_SS

Description: **Suspended solids**

United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System, <http://www.gemswater.org/publications/index-e.html> (accessed June 2004).

Additional and updated country data as follows: Belgium: Vlaamse Milieumaatschappij - Flemish Environment Agency (VMM), Rudy Vannevel, Direction Générale des Ressources Naturelles et de l'Environnement (DGRNE), Dominique Wyllock, data sent to United Nations Environment Programme - Global Environmental Monitoring System/Water Division (UNEP-GEMS/Water). Japan: Ministry of the Environment, <http://www.env.go.jp/water/suiiki/index.html>. Slovak Republic: Slovak Hydrometeorological Institute, to be published in "Environment in the Slovak Republic (Selected indicators in 1999 - 2003)" by Statistical Office of the Slovak Republic. Taiwan: Environmental Protection Administration, The Statistical Yearbook of EPA, <http://www.epa.gov.tw/english/>.

Variable #: 16 **Code:** WATAVL

Description: **Freshwater availability per capita**

Center for Environmental System Research, Kassel University, Water GAP 2.1e, 2004 (communication)

Variable #: 17 **Code:** GRDAVL

Description: **Internal groundwater availability per capita**

For groundwater data: Food and Agricultural Organization, United Nations, AQUASTAT database, Groundwater produced internally (cubic km/year); For population data: Population Reference Bureau, 2004 World Population Data Sheet, total mid-year population 2004, <http://www.prb.org/datafind/datafinder5.htm> (accessed December 2004); For the United States of America the substitute used is Internal Renewable Water Resources: Groundwater recharge, volume in cubic kilometers for the period 1977-2001 from FAO AQUASTAT (obtained through WRI EarthTrends portal at http://earthtrends.wri.org/searchable_db/index.cfm?step=countries&cID=190&theme=2-&variable_id=11&action=select_years (accessed December 2004).

Variable #: 18 **Code:** COALKM

Description: Coal consumption per populated land area

For coal data: United States Energy Information Agency, <http://www.eia.doe.gov/emeu/international/contents.html> (accessed January 2005);

For populated land area data: Center for International Earth Science Information Network (CIESIN) Gridded Population of the World version 3 (GPW).

Variable #: 19 **Code:** NOXKM

Description: Anthropogenic NOx emissions per populated land area

For NOx emissions data: United Nations Framework Convention on Climate Change (UNFCCC) Greenhouse Gas (GHG) emissions database, <http://ghg.unfccc.int/default1.htm?time=10%3A43%3A50+PM> (accessed April 2004), OECD Environmental Data Compendium 2002, Air and Climate, Emissions by Source, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004), IPCC Special Report on Emissions Scenarios, Data Version 1.1 B1 Illustrative Marker Model with Model IMAGE with data for reference year 2000.

For Populated land area data: Gridded Population of the World Version 3, 2004, Center for International Earth Science Information Network (CIESIN). <http://sedac.ciesin.columbia.edu/plue/gpw/index.html?main.html&2> (2004).

Additional and updated country data as follows. Austria: United Nations Economic and Social Council Economic Commission for Europe, Convention on Long-Range Transboundary Air Pollution (UNECE-CLRTAP) - Submission 2004, <http://www.unece.org/env/lrtap/welcome.html>. Belgium: Vlaamse Milieu Maatschappij - Flemish Environment Agency, Miet D'heer. Denmark: http://europa.eu.int/comm/eurostat/newcronos/reference/display.do?screen=welcomeref&open=/envir/milieu/air&-language=en&product=EU_environment_energy&root=EU_environment_energy&scrollto=199. Estonia: http://pub.stat.ee/px-web.2001/-I_Databas/Environment/01Environmental_pressure/02Air_pollution/02Air_pollution.asp. Ireland: Environmental Protection Agency. 2002. "Environment in Focus 2002 Key Environmental Indicators for Ireland", Editors M. Lehané, O. Le Bolloch and P. Crawley, County Wexford, Environmental Protection Agency. Jordan: Ministry of Energy and Mineral Resources, Table 8.3 Estimated Quantities of NOx Emission from the Energy Usage in Different Sectors, 1996-2003. Lithuania: Statistics Lithuania, <http://www.std.lt> or Eurostat's website <http://europa.eu.int/comm/eurostat>. Mauritius: Digest of Environment Statistics, 2003, Table 3.6. Slovak Republic: Slovak Hydrometeorological Institute, Slovak Hydrometeorological Institute and Ministry of Environment, "Air quality in the Slovak Republic 2001", http://oko.shmu.sk/rocnky/SHMU_Air_pollution_in_the_SR_2001.pdf, "Statistical yearbook of the Slovak Republic 2004" and "Environment in the Slovak Republic, Selected indicators in 1999 - 2003" to be published by Statistical Office of the Slovak Republic. Taiwan: Environmental Protection Administration (EPA), Air Quality Protection Division, Taiwan, Query results from TEDS 5.1 System, Statistics Office, Environmental Protection Administration, Taipei, Taiwan. United Kingdom: Department of Environment, <http://www.defra.gov.uk/environment/statistics/airqual/download/xls/aqt06.xls>, <http://www.defra.gov.uk/environment/statistics/airqual/aqnitrogen.htm> (for explanation).

Variable #: 20 **Code:** SO2KM

Description: Anthropogenic SO2 emissions per populated land area

For SO2 emissions data: United Nations Framework Convention on Climate Change (UNFCCC) Greenhouse Gas (GHG) emissions database, <http://ghg.unfccc.int/default1.htm?time=10%3A43%3A50+PM> (accessed April 2004), OECD Environmental Data Compendium 2002, Air and Climate, Emissions by Source, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004), IPCC Special Report on Emissions Scenarios, Data Version 1.1 B1 Illustrative Marker Model with Model IMAGE with data for reference year 2000.

For Populated land area data: Gridded Population of the World Version 3, 2004, Center for International Earth Science Information Network (CIESIN). <http://sedac.ciesin.columbia.edu/plue/gpw/index.html?main.html&2> (2004).

Additional and updated country data as follows: Austria: United Nations Economic and Social Council Economic Commission for Europe, Convention on Long-Range Transboundary Air Pollution (UNECE-CLRTAP) - Submission 2004, <http://www.unece.org/env/lrtap/welcome.html>. Belgium: Vlaamse Milieu Maatschappij - Flemish Environment Agency (VMM), Miet D'heer. Ireland: Environmental Protection Agency. 2002. "Environment in Focus 2002 Key Environmental Indicators for Ireland", Editors M. Lehané, O. Le Bolloch and P. Crawley, County Wexford, Environmental Protection Agency. Mauritius: Central Statistics Office, Digest of Environment Statistics, 2003, Table 3.6. Slovak Republic: Slovak Republic: Slovak Hydrometeorological Institute, Slovak Hydrometeorological Institute and Ministry of Environment, "Air quality in the Slovak Republic 2001", http://oko.shmu.sk/rocnky/SHMU_Air_pollution_in_the_SR_2001.pdf, "Statistical yearbook of the Slovak Republic 2004" and "Environment in the Slovak Republic, Selected indicators in 1999 - 2003" to be published by Statistical Office of the Slovak Republic. Slovenia: Agencija Republike Slovenije za okolje (ARSO) - Environmental Agency of the Republic of Slovenia, "Kazalci okolja 2003" (Environmental Indicators), Editors Irena Rejec Brancelj, Urska Kusar Ljubljana, Slovenia, 2004, <http://kazalci.arso.gov.si/>. Taiwan: Query results from TEDS 5.1 System, Ms. Miou-Ru Huang, Statistics Office, Environmental Protection Administration, Taipei, Taiwan. Turkey: State Institution of Statistics, "Environmental Statistics Compendium of Turkey", January, 2003, published with MEDSTAT Programme financed by the European Union. United Kingdom: Department of Environment, <http://www.defra.gov.uk/environment/statistics/airqual/download/xls/aqt08.xls>, <http://www.defra.gov.uk/environment/statistics/airqual/aqsulphurd.htm> (for explanation).

Variable #: 21 **Code:** VOCKM

Description: **Anthropogenic VOC emissions per populated land area**

For VOC emissions data: United Nations Framework Convention on Climate Change (UNFCCC) Greenhouse Gas (GHG) emissions database, <http://ghg.unfccc.int/default1.htm?time=10%3A43%3A50+PM> (accessed April 2004), OECD Environmental Data Compendium 2002, Air and Climate, Emissions by Source, http://www.oecd.org/document/21/0,2340,en_2649_37465_-2516565_1_1_1_37465,00.html. (accessed October 2004), IPCC Special Report on Emissions Scenarios, Data Version 1.1 B1 Illustrative Marker Model with Model IMAGE with data for reference year 2000.

For Populated land area data: Gridded Population of the World Version 3, 2004, Center for International Earth Science Information Network (CIESIN). <http://sedac.ciesin.columbia.edu/plue/gpw/index.html?main.html&2> (2004).

Additional and updated data as follows: Austria: United Nations Economic and Social Council Economic Commission for Europe – Convention on Long-Range Transboundary Air Pollution (UNECE-CLRTAP) - Submission 2004, <http://www.unece.org/env/lrtap/welcome.html>. Belgium: Vlaamse Milieu Maatschappij - Flemish Environment Agency (VMM), Miet D'heer. Ireland: Environmental Protection Agency. 2002. "Environment in Focus 2002 Key Environmental Indicators for Ireland", Editors M. Lehane, O. Le Bolloch and P. Crawley, County Wexford, Environmental Protection Agency. Jordan: Ministry of Energy and Mineral Resources, Table 8.5 Estimated Quantities of Non-Methane Volatile Organic Compound (NMVOC) Emission from the Energy Usage in Different Sectors, 1996-2003. Mauritius: Central Statistics Office, Digest of Environment Statistics, 2003, Table 3.6. Taiwan: Environmental Protection Administration (EPA), Taiwan, 2004, "Regulation operation plans of sectoral VOC pollutants from fixed sources", Mr. C. K. Yeh, Air Quality Protection Division, EPA. Turkey: State Institution of Statistics, "Environmental Statistics Compendium of Turkey", January, 2003, published with MEDSTAT Programme financed by the European Union. United Kingdom: Department of Environment, <http://www.defra.gov.uk/environment/statistics/airqual/download/xls/aqb16.xls>, <http://www.defra.gov.uk/environment/statistics/airqual/aqvoc.htm> (for explanation).

Variable #: 22 **Code:** CARSKM

Description: **Vehicles in use per populated land area**

For vehicles data: United Nations Statistics Division Common Database (UNCDB), http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp (accessed December 2004); For populated land area data: Center for International Earth Science Information Network (CIESIN) Gridded Population of the World version 3 (GPW).

Additional or updated country data as follows: Austria: Statistics Austria, Statistisches Jahrbuch Österreichs 2004 (Austrian Statistical Yearbook 2004), Table 28.04, Vienna 2003. Ireland: Environmental Protection Agency, "Environment in Focus 2002 Key Environmental Indicators for Ireland," Editors M. Lehane, O. Le Bolloch and P. Crawley, County Wexford. Italy: Automobili Club d'Italia, http://www.aci.it/wps/portal/cmd/cs/ce/155/s/1104/_s.155/1104. Jordan: Jordan Traffic Department, Table 7.3 Number of Registered Vehicles by Type of Vehicle and Center of Registration, 2003. Lithuania: Statistics Lithuania, <http://www.std.lt>. Mauritius: Digest of Road Transport & Road Accident Statistics, 2003, Table 1.2. Philippines: Philippine Economic-Environmental and Natural Resources Accounting (PEENRA), <http://www.nscb.gov.ph/peenra>. Taiwan: Ministry of Transportation and Communication, <http://www.motc.gov.tw/hypage.cgi?HYPAGE=stat01.asp>. United Arab Emirates: Ministry of Interior, Annual Statistical Report. Zimbabwe: Central Statistical Office, Motor Vehicle Report.

Variable #: 23 **Code:** FOREST

Description: **Annual average forest cover change rate from 1990 to 2000**

United Nations Food and Agriculture Organization (FAO) Forest resources assessment (FRA) 2000, <http://www.fao.org/forestry/fo/-fra/index.jsp> (accessed December 2004).

Variable #: 24 **Code:** ACEXC

Description: **Acidification exceedance from anthropogenic sulfur deposition**

Stockholm Environment Institute at York, Acidification in Developing Countries: Ecosystem Sensitivity and the Critical Loads Approach at the Global Scale, 2000, available in pdf at <http://www.york.ac.uk/inst/sei/pubs/globalassess.pdf> (accessed January 2005).

Variable #: 25 **Code:** GR2050

Description: **Percentage change in projected population 2004-2050**

Population Reference Bureau (PRB). 2004 World Population Data Sheet. <http://www.prb.org/datafind/datafinder5.htm> (accessed December 2004).

Variable #: 26 **Code:** TFR

Description: **Total Fertility Rate**

Population Reference Bureau (PRB), 2004 World Population Data Sheet, <http://www.prb.org/datafind/datafinder5.htm> (accessed January 2005).

Variable #: 27 **Code:** EFPC

Description: **Ecological Footprint per capita**

Primary source: Redefining Progress Ecological Footprint of Nations 2004, <http://www.redefiningprogress.org/newpubs/index.shtml> (accessed January 2005).

Additional country data as follows: Afghanistan, Niger, Somalia, Togo, Uzbekistan, Yemen: The World Wildlife Fund (WWF), Living Planet Report 2002, <http://www.wwf.org.uk/filelibrary/pdf/livingplanet2002.pdf> (accessed January 2005). Taiwan: Lee, Y.J. and A.C. Chen. 1998. Examining sustainable development of Taiwan in terms of ecological footprints. Review in Economic and Social Institutions, 22, pp. 437-458, published in Chinese by the Council for Economic Planning.

Variable #: 28 **Code:** RECYCLE

Description: **Waste recycling rates**

Organisation for Economic Co-operation and Development (OECD) Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_1_1_1_37465,00.html (accessed October 2004), and United Nations Human Settlement Programme (UNHABITAT) Global Urban Indicators Database 1998, http://www.unhabitat.org/programmes/guo/guo_indicators.asp (accessed December 2003).

Additional and updated country data as follows. Taiwan: Environmental Protection Administration (EPA), Taiwan, <http://210.69.101.88/WEBSTATIS/webindex.htm>.

Variable #: 29 **Code:** HAZWST

Description: **Generation of hazardous waste**

United Nations Environment Program, Secretariat of the Basel Convention for 1992-2000 data, "Global Trends in Generation and Transboundary Movements of Hazardous Wastes and Other wastes", Appendix 4, <http://www.basel.int/natreporting/trends2.pdf> (accessed November 2004), Secretariat of the Basel Convention, Data as Reported by Parties, <http://geodata.grid.unep.ch> for 2001 (accessed November 2004), Organisation for Economic Co-operation and Development (OECD) Environmental Data Compendium 2002, http://www.oecd.org/document/21/0,2340,en_2649_37465_2516565_119656_1_1_37465,00.html (accessed July 2004).

Additional and updated country data as follows: Austria: Umweltbundesamt (Federal Environment Agency), <http://www.umweltbundesamt.at>. Estonia: Statistical Office of Estonia, http://pub.stat.ee/px-web.2001/1_Databas/Environment/-01Environmental_pressure/06Generation_of_waste/06Generation_of_waste.asp. Lithuania: Ministry of Environment of the Republic of Lithuania, "State of Environment 2002", <http://www.am.lt>. Poland: National Fund for Environmental Protection and Water Management by order of the Polish Minister of Environment, "Environmental Statistics in Poland 2004", Environmental Inspection Data. Slovenia: Agencija Republike Slovenije za okolje (ARSO) - Environmental Agency of the Republic of Slovenia, "Kazalci okolja 2003" (Environmental Indicators), Editors Irena Rejec Brancelj, Urška Kušar Ljubljana, Slovenia, 2004, <http://kazalci.arso.gov.si/>. Taiwan: Industrial Waste Management Center, Environmental Protection Agency, Taiwan, http://waste.epa.gov.tw/prog/statistics_file/country_wide_waste/waste_wallchart-_0412_s.files/sheet002.htm, Declaration Website for Hazardous and Non-hazardous Wastes, <http://waste.epa.gov.tw/prog/unit5.htm>. Turkey: Turkey State Institute of Statistics, sent to EUROSTAT by OECD/EUROSTAT joint questionnaires, 2004. United Arab Emirates: Federal Environment Agency, Annual Report 2003, Abu Dhabi National Oil Company (ADNOC), Environmental Research and Wildlife Development Agency (ERWDA), "Hazardous Waste Generation".

Variable #: 30 **Code:** BODWAT

Description: **Industrial organic water pollutant (BOD) emissions per available**

For BOD emissions data: World Bank Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/>; For water availability data: Center for Environmental Systems Research, University of Kassel, WATERGAP version 2.1 (communication).

For population data: World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed December 2004). Additional or updated country data as follows: Taiwan: Environmental Protection Administration (EPA), Taiwan, Statistical Manual for Environmental Protection, Table 3-6, September 2004.

Variable #: 31 **Code:** FERTHA

Description: **Fertilizer consumption per hectare of arable land**

World Bank World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed December 2004). Additional or updated country data as follows. Austria: Federal Ministry of Agriculture, Forestry, Environment and Water Management, "Grüner Bericht 2004" (Green Report 2004, report on the situation of the Austrian agriculture and forestry in 2003), page 198, table 4.8; http://www.gruener-bericht.at/2004/components/com_docman/dl2.php?archive=0&file=MTYxX3RhYmVsbGVudGVpbF9taXRfaW5oYX0c3ZlcnplaWNobmlzLnBkZg== (page 38 of 112). Belgium: Institut National de Statistiques - National Institute of Statistics (INS), <http://statbel.fgov.be>. Ireland: Environmental Protection Agency, "Environment in Focus 2002: Key Environmental Indicators for Ireland, Editors M Lehane, O Le Bolloch and P Crawley, County Wexford, Ireland, www.epa.ie. Mauritius: Central Statistics Office, data on consumption of fertilizers and utilization of agricultural area, Digest of Environment Statistics, 2003, Table 5.6 and 5.2 respectively. Slovak Republic: For Fertilizer data, Statistical Office of Slovak Republic, For Land Use data, Office of Geodesy, Cartography and Land register of the Slovak Republic. Published in "Statistical yearbook of the Slovak Republic 2003" and "Environment in the Slovak Republic (Selected indicators in 1998 - 2002)" by Statistical Office of the Slovak Republic. Taiwan: The Agricultural Council, Taiwan, Fertilizer consumption, <http://www.coa.gov.tw/file/10/195/207/1162/328.xls>, Farming area, <http://www.coa.gov.tw/file/10/195/207/1162/285.xls>. United Arab Emirates: Ministry of Agriculture and Fisheries, Annual Reports 2002 and 2003.

Variable #: 32 **Code:** PESTHA

Description: **Pesticide consumption per hectare of arable land**

Food and Agricultural Organisation (FAO), United Nations, FAOSTAT online database accessed from World Resources Institute (WRI) Earthtrends 2004, Agriculture and Food - Agricultural Inputs, http://earthtrends.wri.org/searchable_db/index.cfm?theme=8 (accessed December 2004).

Additional and updated country data as follows Albania: Ministry of Environment, Albania. Austria: Federal Ministry of Agriculture, Forestry, Environment and Water Management, "Grüner Bericht 2004" (Green Report 2004, report on the situation of the Austrian agriculture and forestry in 2003, page 198, table 4.6, Vienna 2004, http://www.gruener-bericht.at/2004/components/com_docman/dl2.php?archive=0&file=MTYxX3RhYmVsbGVudGVpbF9taXRfaW5oYX0c3ZlcnplaWNobmlzLnBkZg== (page 37 of 112). Belgium: CEEW - DGRNE (Cellule Etat de l'environnement wallon - Direction générale des ressources naturelles et de l'environnement, Walloon State of the Environment Cell - Directorate-General for Natural Resources and the Environment), V. Brahy, Report by the Ministère des classes moyennes et de l'agriculture (Ministry of Small Enterprises, Traders and Agriculture), "Use of phytopharmaceutical products in the main crops in Belgium during the decade 1991 - 2000". <http://statbel.fgov.be>. Italy: Istituto Nazionale di Statistica (Istat, National Institute of Statistics), Statistiche dell'agricoltura, vari anni, and Istat, Statistiche Ambientali, Annuario n. 7, 2002, <http://istat.it/>, http://catalogo.istat.it/20031029_01/. Republic of Korea: Food and Agriculture Organization of the United Nations (FAO), 2004, FAOSTAT on-line statistical service, Rome, <http://apps.fao.org>. Mauritius: Central Statistics Office, Digest of Environment Statistics, 2003 (Table 5.5). Poland: Polish Ministry of the Environment, "Environmental Statistics in Poland 2004", pg 30. Slovak Republic: Pesticide usage data: Ministry of Agriculture of the Slovak Republic, Central Control and Testing Institute of the Slovak Republic, Land Use data: Office of Geodesy, Cartography and Land register of the Slovak Republic. To be published in "Statistical yearbook of the Slovak Republic 2004" and "Environment in the Slovak Republic, Selected indicators in 1999 - 2003" by Statistical Office of the Slovak Republic. Slovenia: Statistical Office of the Republic of Slovenia, Statistical Yearbook, http://www.stat.si/letopis/index_vsebinska.asp?poglavje=16&leto=2003&jezik=en. Taiwan: The Agricultural Council, Taiwan, Pesticide consumption data, <http://www.coa.gov.tw/program/pesticides/statistic/statistic.htm>, Farming area data, <http://www.coa.gov.tw/8/195/202/894/894.html>. United Arab Emirates: Ministry of Agriculture and Fisheries, Annual Reports 2002 and 2003.

Variable #: 33 **Code:** WATSTR

Description: **Percentage of country under severe water stress**

Center for Environmental Systems Research, University of Kassel, WaterGap 2.1, 2000 (communication).

Variable #: 34 **Code:** OVRFSH

Description: **Productivity overfishing**

South Pacific Applied Geoscience Commission (SOPAC), Environmental Vulnerability Index, Indicator 34 -- Productivity overfishing.

For Fisheries data: Food and Agriculture Organization (FAO), United Nations, 1993-1998.

For Productivity data: University of British Columbia.

Variable #: 35 **Code:** FORCERT

Description: **Percentage of total forest area that is certified for sustainable management**

For certifications: The Forest Stewardship Council, URL: http://www.fsc.org/fsc/whats_new/documents/Docs_cent/4 (accessed December 2004) for FSC certified forest area and the Pan-European Forest Certification Council, <http://www.pefc.cz/register/statistics.asp> (accessed December 2004);

For Total forest area: World Resources Institute for Total Forest Area, URL: http://earthtrends.wri.org/searchable_db/index.cfm?theme=9&variable_ID=296&action=select_countries (accessed January 2005).

Variable #: 36 **Code:** WEFSUB

Description: **World Economic Forum Survey on subsidies**

World Economic Forum (WEF) Survey, The Global Competitiveness Report 2003-2004, Porter, Michael E. et al, Oxford University Press, 2003-2004, <http://www.weforum.org/site/knowledgenavigator.nsf/Content/KB+Country+Profiles> (accessed January 2005).

Variable #: 37 **Code:** IRRSAL

Description: **Salinized area due to irrigation as percentage of total arable land**

United Nations Food and Agricultural Organization (FAO), <http://www.fao.org/> and also http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y4263E/y4263e04.htm (accessed January 2005).

Variable #: 38 **Code:** AGSUB

Description: **Agricultural subsidies**

For producer support estimates (PSE) data: Organisation for Economic Co-operation and Development (OECD); OECD Producer Support Estimates for 2001 as a percentage of agricultural GDP and data for China and India were provided by John Finn (World Trade Organization);

For share of agricultural production of EU15 of total EU agricultural production: European Commission, Directorate General Agriculture, Agricultural Situation in the EU 2003; For currency exchange rates data: World Bank, World Development Indicators (WDI) 2004, <http://www.worldbank.org/data/wdi2004/> (accessed December 2004); For conversion of ECU into USD: <http://www.x-rates.com/d/USD/EUR/hist1999> (accessed December 2004).

Variable #: 39 **Code:** DISINT

Description: **Death rate from intestinal infectious diseases**

World Health Organization (WHO), Mortality databases for International Classification of Deaths (ICD) revisions 9 and 10, July 2000 <http://www3.who.int/whosis/menu.cfm?path=mort> (accessed January 2005).

Variable #: 40 **Code:** DISRES

Description: **Child death rate from respiratory diseases**

World Health Organization (WHO), Mortality databases for International Classification of Deaths (ICD) revisions 9 and 10, July 2004, <http://www3.who.int/whosis/menu.cfm?path=mort> (accessed January 2005).

Variable #: 41 **Code:** U5MORT

Description: **Children under five mortality rate per 1,000 live births**

United Nations Statistics Division (UNSD), Demographic Yearbook Database, primary data source: UNICEF, <http://unstats.un.org/unsd/demographic/default.htm> (accessed January 2005).

Additional and updated data as follows: Australia: Australian Bureau of Statistics, Births, Australia 2002 (cat. No. 3301.0), Deaths, Australia (cat. No. 3302.0). Austria: Statistics Austria. Costa Rica: Instituto Nacional de Estadística y Censos 2004, "Estadísticas Vitales del 2003", based on CIE-10 (Clasificación Internacional de Enfermedades y Problemas Relacionados con la Salud, X revisión, volumen I, Organización Panamericana de la Salud y Organización Mundial de la Salud, <http://www.inec.go.cr>). Lithuania: Statistics Lithuania, Eurostat. Mauritius: Ministry of Public Utilities, Statistics Unit. New Zealand: Statistics New Zealand, <http://www.stats.govt.nz/datasets/a-z-list.htm>. Poland: Central Statistical Office Dissemination information, Polish Census 2002. Taiwan: Department of Health, <http://www.doh.gov.tw/EN/Webpage/index.aspx>, Table 10.Number of deaths classified according to the basic tabulation list of death by sex and age, Taiwan Area, 2002, Age Composition of Population, Taiwan Area, <http://www.doh.gov.tw/-static/data/生命統計/91/02.XLS>. United Arab Emirates: Ministry of Health, Annual Statistical Report, 2003 and Annual Report of Preventive Medicine, 2003.

Variable #: 42 **Code:** UND_NO

Description: **Percentage of undernourished in total population**

United Nations Food and Agriculture Organization (FAO), The State of Food Insecurity in the World 2003 Report, <http://www.fao.org/docrep/006/j0083e/j0083e00.htm> (accessed January 2005).

Variable #: 43 **Code:** WATSUP

Description: **Percentage of population with access to improved drinking water source**

World Health Organization, United Nations Children's Fund, WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation (JMP), http://www.who.int/water_sanitation_health/monitoring/jmp2004/en/ (accessed January 2005).

Additional and updated data as follows: Belgium: Institut National de Statistiques - National Institute of Statistics (INS), <http://statbel.fgov.be>, officially reported to Eurostat in 2003. Ireland: Central Statistics Office, Social Statistics Integration, Dublin. Italy: Istituto Nazionale di Statistica (Istat - National Institute of Statistics), "13° Censimento Generale della Popolazione, 1991". Taiwan: United Nations Statistical Division, http://unstats.un.org/unsd/mi/mi_goals.asp. United Arab Emirates: Ministry of Electricity

Variable #: 44 **Code:** DISCAS

Description: **Average number of deaths per million inhabitants from floods, tropical cyclones, and droughts**

United Nations Development Programme (UNDP) Bureau for Crisis Prevention and Recovery, A Global Report on Reducing Disaster Risk - A Challenge for Development, UNDP 2004, available at <http://www.undp.org/bcpr/disred/rdr.htm> (accessed January 2005).

Variable #: 45 **Code:** DISEXP

Description: **Environmental Hazard Exposure Index**

The World Bank, Natural Disaster Hotspots: A Global Risk Analysis, Maxx Dille, Robert Chen, Uwe Deichmann, Arthur L. Lerner-Lam and Margaret Arnold with Jonathan Agwe, Piet Buys, Oddvar Kjekstad, Bradfield Lyon and Greg Yetman, 2005, Washington DC, see also <http://iri.columbia.edu/impact/project/RiskHotspot/> (accessed January 2005).

Variable #: 46 **Code:** GASPR

Description: **Ratio of gasoline price to world average**

World Bank, World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/>.

Additional and updated country data as follows: Mauritius: Digest of Road Transport & Road Accident Statistics, 2003, Table 3.1. Taiwan: US Energy Information Administration (EIA), <http://www.eia.doe.gov/emeu/international/petroleu.html#GasolinePrices>.

Variable #: 47 **Code:** GRAFT

Description: **Corruption measure**

World Bank, Governance Indicators: 1996-2002, <http://www.worldbank.org/wbi/governance/govdata2002/index.html> (accessed December 2004).

Variable #: 48 **Code:** GOVEFF

Description: **Government effectiveness**

World Bank, <http://www.worldbank.org/wbi/governance/govdata2002/index.html> (accessed January 2005).

Variable #: 49 **Code:** PRAREA

Description: **Percentage of total land area under protected status**

United Nations Environment Program - World Conservation Monitoring Centre (UNEP-WCMC), World Database on Protected Areas (WDPA) Version 6, World Database on Protected Areas Consortium, Cambridge, U.K., August, 2003, accessed through the World Resources Institute (WRI) <http://earthtrends.wri.org/> (accessed December 2003).

Additional and updated country data as follows: Belgium: Royal Belgian Institute of Natural Sciences (RBINS), Marianne Schlesser, <http://bch-cbd.naturalsciences.be/>. Costa Rica: Sistema Nacional de Áreas Protegidas (SINAC) - Ministerio de Ambiente y Energía (MINAE), <http://www.sinac.go.cr/asp/index.html>. United Arab Emirates: Federal Environment Agency Ministry of Economy and Planning, "Survey of Protected Areas in United Arab Emirates".

Variable #: 50 **Code:** WEFGOV

Description: **World Economic Forum Survey on environmental governance**

World Economic Forum (WEF) Survey, The Global Competitiveness Report 2003-2004, Porter, Michael E. et al, Oxford University Press, 2003-2004, <http://www.weforum.org/site/knowledgenavigator.nsf/Content/KB+Country+Profiles> (accessed January 2005).

Variable #: 51 **Code:** LAW

Description: **Rule of law**

World Bank, <http://www.worldbank.org/wbi/governance/govdata2002/index.html> (accessed January 2005).

Variable #: 52 **Code:** AGENDA21

Description: **Local Agenda 21 initiatives per million people**

For initiatives data: International Council for Local Environmental Initiatives (ICLEI), 2001, Second Local Agenda 21 Survey, Background Paper Number 15, New York, United Nations Department of Economic and Social Affairs (UNDESA), available at <http://www.johannesburgsummit.org/html/documents/backgrounddocs/icleisurvey2.pdf> (accessed January 2005).

For population data: World Bank, World Development Indicators (WDI) 2004, <http://www.worldbank.org/data/wdi2004/>.

Variable #: 53 **Code:** CIVLIB

Description: **Civil and Political Liberties**

Freedom House, Freedom in the World, available in pdf at <http://www.freedomhouse.org/research/freeworld/2003/averages.pdf> (accessed January 2005).

Variable #: 54 **Code:** CSDMIS

Description: **Percentage of variables missing from the CGSDI "Rio to Joburg Dashboard"**

Consultative Group on Sustainable Development Indicators, Dashboard of Sustainability, "Rio to Joburg Dashboard," 2002, <http://www.iisd.org/cgsdi/dashboard.asp> (accessed January 2005), and Jochen Jesinghaus, personal communication, 9 January 2002.

Variable #: 55 **Code:** IUCN

Description: **IUCN member organizations per million population**

For membership data: IUCN-The World Conservation Union, <http://www.iucn.org/members/Mem%20Statistics.htm> (accessed January 2005);

For population data: World Bank, World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed

Variable #: 56 **Code:** KNWLDG

Description: **Knowledge creation in environmental science, technology, and policy**

Index based on data from Yale Center for Environmental Law and Policy, Knowledge Divide Project (Dr. Sylvia Karlsson, Tanja Srebotnjak, Patricia Gonzalez).

For covariates data: Research and Development (R&D) spending as % of GDP, Researchers per million people: World Bank, World Development Indicators 2003, <http://www.worldbank.org/data/wdi2003/> (accessed January 2005), United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute of Statistics for selected R&D indicators, May 2004, http://www.uis.unesco.org/ev.php?ID=5180_201&ID2=DO_TOPIC (accessed January 2005); For GDP data: United Nations Statistics Division, Common Database, 2001 current GDP in USD, http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp (accessed January 2005); For Population data: World Bank, World Development Indicators 2003, <http://www.worldbank.org/data/wdi2003/> (accessed January 2005).

Additional or updated country data as follows: Taiwan: Researchers per million inhabitants are based on figures from National Statistics Taiwan, the Republic of China, at <http://www.dgbas.gov.tw/census-n/four/e4423.htm> (accessed December 2004) using a rough factor of 1 in 10 professionals, scientific and technical services personnel is a researcher, R&D spending as percent of GDP, Taiwan Headlines citing data from the Directorate-General of Budget, Accounting & Statistics (DGBAS), <http://www.taiwanheadlines.gov.tw/20030402/20030402b3.html> (accessed December 2004).

Variable #: 57 **Code:** POLITY

Description: **Democracy measure**

Polity IV Project "Political Regime Characteristics and Transitions", 1800-2002, Monty Marshall, University of Maryland, 2004, <http://www.cidcm.umd.edu/inscr/polity/> (accessed January 2005).

Variable #: 58 **Code:** ENEFF

Description: **Energy efficiency**

For energy consumption data: US Energy Information Agency (EIA), <http://www.eia.doe.gov/emeu/iea/wecbtu.html> (accessed January 2005).

For GDP data: World Bank, World Development Indicators 2004, GDP in PPP, <http://www.worldbank.org/data/wdi2004/> (accessed December 2004).

Additional country data as follows: Taiwan: US Energy Information Administration (EIA), E.1g World Energy Intensity (Total Primary Energy Consumption, Per Dollar of Gross Domestic Product), 1980-2002, <http://www.eia.doe.gov/pub/international/iealf/table1.xls>, B.2 World Gross Domestic Product at Market Exchange Rates, 1980-2002, <http://www.eia.doe.gov/pub/international/iealf/table2.xls>.

Variable #: 59 **Code:** RENPC

Description: **Hydropower and renewable energy production as a percentage of total energy consumption**

US Energy Information Agency, <http://www.eia.doe.gov/emeu/iea/wecbtu.html> (accessed January 2005).

Additional and updated country data as follows: Austria: Statistics Austria, for renewable energy, http://www.statistik.at/fachbereich_energie-neue_tab.shtml, for gross inland consumption, http://www.statistik.at/fachbereich_energie/gesamt_tab.shtml. Ireland: Sustainable Energy Ireland, National Energy Balances, www.sei.ie. Lithuania: Statistics Lithuania, Statistical Yearbook of Lithuania 2003. Mauritius: Central Statistics Office, Digest of Energy and Water Statistics, 2003, Table 4.1 and Table 3.3.

Variable #: 60 **Code:** DJSJI

Description: **Dow Jones Sustainability Group Index (DJSJI)**

Dow Jones SAM Sustainability Group, http://www.sustainability-index.com/html/djsi_world/members.html (accessed January 2005) and communication.

Variable #: 61 **Code:** ECOVAL

Description: **Average InnoVest EcoValue rating of firms headquartered in a country**

InnoVest Strategic Value Advisors, <http://www.innovestgroup.com> (communication).

Variable #: 62 **Code:** ISO14

Description: **Number of ISO 14001 certified companies per billion dollars GDP (PPP)**

For ISO14000/EMAS registered companies: Reinhard Peglau, c/o Federal Environmental Agency, Germany, <http://www.ecology.or.jp/isoworld/english/analy14k.htm> (accessed December 2004).

For GDP (PPP) data: World Bank World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed November 2004), UNSD Common Database, GDP at market prices, current prices, US\$ (UN Estimates) for Andorra, Brunei Darussalam, Liechtenstein, Monaco, Myanmar, Puerto Rico, and Qatar, http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp (accessed January 2005).

Variable #: 63 **Code:** WEFPRI

Description: **World Economic Forum Survey on private sector environmental**

World Economic Forum (WEF) Survey, The Global Competitiveness Report 2003-2004, Porter, Michael E. et al, Oxford University Press, 2003-2004, <http://www.weforum.org/site/knowledgenavigator.nsf/Content/KB+Country+Profiles> (accessed January 2005).

Variable #: 64 **Code:** RESCARE

Description: **Participation in the Responsible Care Program of the Chemical Manufacturer's Association**

International Council of Chemical Associations (ICCA), Responsible Care Status Report 2002, Appendix 4, <http://www.icca-chem.org/pdf/icca004.pdf> (accessed January 2005).

Variable #: 65 **Code:** INNOV

Description: **Innovation Index**

World Economic Forum, 2003-2004 Global Competitiveness Report, <http://www.weforum.org/site/homepublic.nsf/Content/-Global+Competitiveness+Programme%5CGlobal+Competitiveness+Report> (accessed January 2005).

Variable #: 66 **Code:** DAI

Description: **Digital Access Index**

Digital Access Index (DAI) of the International Telecommunication Union (ITU), <http://www.itu.int/ITU-D/ict/dai/> (accessed December 2004)

Variable #: 67 **Code:** PECR

Description: **Female primary education completion rate**

United Nations Educational, Scientific and Cultural Organization (UNESCO), Institute for Statistics. Global Education Digest 2004 - Comparing Education Statistics Across the World. Montreal, 2004 accessed from the UNSD Millennium Indicator Database, http://millenniumindicators.un.org/unsd/mi/mi_series_xrxx.asp?row_id=745 (accessed January 2005), and the World Bank World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed January 2005).

Additional and updated country data as follows: Albania: Albanian Institute of Statistics, Annual Statistical Report of Education 2002-2003. Austria: Statistics Austria. Italy: Ministero dell'Istruzione, dell'Università e della Ricerca, <http://www.miur.it/>; and Istat Rapporto Annuale, 2003, <http://www.istat.it/>. Lithuania: Statistics Lithuania, <http://www.std.lt> or Eurostat's website <http://europa.eu.int/comm/eurostat>. Mauritius: Digest of Educational Statistics, 2003, Table 3.22, <http://statsmauritius.gov.mu/hs/edu/hs.htm>. Nepal: Central Bureau of Statistics, Nepal, Population Census 2001. Taiwan: Directorate General of Budget Accounting and Statistics, Socio-Economic Data of Taiwan, <http://www.dgbase.gov.tw/dgbas03/bs2/gender/n9111.htm>. United Arab Emirates: Ministry of Education & Youth, Annual Statistical Report 2003. Zimbabwe: Central Statistical Office, Education Statistics in Zimbabwe.

Variable #: 68 **Code:** ENROL

Description: **Gross tertiary enrollment rate**

United Nations Educational, Scientific and Cultural Organization Institute for Statistics (UNESCO-UIS), http://www.uis.unesco.org/ev.php?URL_ID=5187&URL_DO=DO_TOPIC&URL_SECTION=201 (accessed January 2004).

Additional or updated country data as follows: Albania: Albanian Institute of Statistics, Annual Statistical report of Education 2002-2003. Austria: Statistics Austria, EU data collection (common data collection of UNESCO, OECD and EUROSTAT), school and university statistics. Finland: Statistics Finland, Statistical Yearbook 2003. Italy: Ministero dell'Istruzione, dell'Università e della Ricerca, <http://www.miur.it/> and Istat "Università e Lavoro," <http://www.istat.it/DATI/unilav2004/index.html>. Lithuania: Statistics Lithuania, various publications at <http://www.std.lt> or <http://europa.eu.int/comm/eurostat>. Mauritius: Central Statistics Office, "Participation tertiary education/ Tertiary Education Commission, 2003". Taiwan: Ministry of Education, Taiwan, The international comparative indices for education, http://www.edu.tw/EDU_WEB/EDU_MGT/STATISTICS/EDU7220001/temp1/oview.view.files/frame.htm?open. United Arab Emirates: Ministry of Education & Youth, Annual Statistical Report 2003. Zimbabwe: Central Statistical Office 2003, Zimbabwe.

Variable #: 69 **Code:** RESEARCH

Description: **Number of researchers per million inhabitants**

United Nations Economic, Scientific and Cultural Organization (UNESCO), Institute for Statistics, http://www.uis.unesco.org/ev.php?ID=5180_201&ID2=DO_TOPIC (accessed January 2005). Data on Researchers per million inhabitants for Taiwan are based on figures from National Statistics Taiwan, the Republic of China, at <http://www.dgbas.gov.tw/census-n/four/e4423.htm> (accessed 30 December 2004) using a rough factor of 1 in 10 professionals, scientific and technical services personnel is a researcher.

Variable #: 70 **Code:** EIONUM

Description: **Number of memberships in environmental intergovernmental organizations**

Yearbook of International Organizations 2003/04. Electronic access by subscription through Union of International Associations, <http://db.uia.org/scripts/sweb.dll/a?DD=OR> (accessed January 2005). List of environmental intergovernmental organizations available at <http://www.yale.edu/envirocenter/esifaq.htm>.

Additional or updated country data as follows: Republic of Korea: Ministry of the Environment, Policy Coordination Division.

Variable #: 71 **Code:** FUNDING

Description: **Contribution to international and bilateral funding of environmental projects and development aid**

For aid data: Global Environmental Facility (GEF) contributions and receipts and Organisation for Economic Co-operation and Development (OECD) bilateral environmental aid;

For ancillary economic data (GNI, PPP, USD current income): World Bank, World Development Indicators 2004, <http://www.worldbank.org/data/wdi2004/> (accessed November 2004);

For population data: CIA World Factbook, <http://www.cia.gov/cia/publications/factbook/> (accessed November 2004).

Variable #: 72 **Code:** PARTICIP

Description: **Participation in international environmental agreements**

Membership information, national communications, and initiatives related to the following conventions: United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, <http://www.unfccc.org> (accessed October 2004), Vienna Convention on the Protection of the Ozone Layer and Montreal Protocol with amendments, http://www.unep.org/ozone/Treaties_and_Ratification/-2A_vienna%20convention.asp (accessed October 2004), Convention on the Trade in Endangered Species (CITES), <http://www.cites.org> (accessed October 2004), Basel Convention on the Transboundary Movement of Hazardous Waste, <http://www.basel.int> (accessed October 2004), United Nations Convention to Combat Desertification (UNCCD), <http://www.unccd.int> (accessed October 2004), United Nations Convention on Biological Diversity, <http://www.biodiv.org> (accessed October 2004), and The Ramsar Convention on Wetlands and the Cartagena Protocol <http://www.ramsar.org/> (accessed October 2004).

Variable #: 73 **Code:** CO2GDP

Description: **Carbon emissions per million US dollars GDP**

For CO2 emission data: Carbon Dioxide Information Analysis Center (CDIAC), http://cdiac.esd.ornl.gov/trends/emis/tre_coun.htm (accessed January 2005);

For GDP data: World Bank World Development Indicators 2004, GDP in constant 1995 US dollars, <http://www.worldbank.org/data/wdi2004/> (accessed December 2004). Alternative GDP data as follows: Peoples Republic of Korea: from United Nations Statistics Division Common Database (UNCDB), GDP at market prices, current prices, USD for 2000 (UN Estimates), http://unstats.un.org/unsd/cdb/cdb_help/cdb_quick_start.asp (accessed December 2004), Cuba, Libya, and Myanmar: CIA World Fact Book 2004 GDP USD (PPP), <http://www.cia.gov/cia/publications/factbook/> (accessed December 2004).

Additional or updated country data as follows: Taiwan: CO2 data from CDIAC, <http://cdiac.esd.ornl.gov/ftp/ndp030/nation00.ems>, GDP data from US Energy Information Administration (EIA), B.2 World Gross Domestic Product at Market Exchange Rates, 1980-2002, <http://www.eia.doe.gov/pub/international/iealf/tableb2.xls> (in constant 1995 USD).

Variable #: 74 **Code:** CO2PC

Description: **Carbon emissions per capita**

Carbon emissions per capita: United Nations Statistics Division, Millennium Indicator Database, based on data from United Nations Framework Convention on Climate Change-United Nations Department of Economic and Social Affairs (UNFCCC-UNDESA), http://unstats.un.org/unsd/mi/mi_goals.asp (accessed January 2005).

Additional or updated country data as follows: Taiwan: CO2 data from Carbon Dioxide Information Analysis Center (CDIAC), <http://cdiac.esd.ornl.gov/ftp/ndp030/nation00.ems>, Population data from Ministry of the Interior, Taiwan Population Database, <http://www.ris.gov.tw/ch4/static/st20-1.xls>. Slovenia: CO2 and Population data from, UNFCCC, National Inventory Report.

Variable #: 75 **Code:** SO2EXP

Description: **SO2 Exports**

The Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe Meteorological Synthesizing Centre West Status Report (EMEP_MSC-W) 2003, ISSN 0804-2446, <http://webdab.emep.int/> (accessed January 2005), and US Committee for the International Institute for Applied Systems Analysis (IIASA) Regional Air Pollution Information and Simulation Europe (IIASA_RAINS_Europe), <http://www.iiasa.ac.at/rains/Rains-online.html?sb=8> (accessed January 2005) and IIASA RAINS-Asia data from the 2002 ESI.

Variable #: 76 **Code:** POLEXP

Description: **Import of polluting goods and raw materials as percentage of total imports of goods and services**

United Nations Commodity Trade Statistics database (COMTRADE), Department of Economic and Social Affairs/ Statistics Division, available online at <http://unstats.un.org/unsd/comtrade/> (accessed December 2004), World Bank World Development Indicators 2004 for Total Imports of Goods and Services in current 2002 USD.