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 headquarted 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	19.35	**Max**	209.00	**2.5 Percentile**	0.01
Median	9.32	**Min**	0.00	**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.htmland 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	45.17	**Max**	100	**2.5 Percentile**	0
Median	40	**Min**	0	**97.5 Percentile**	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 habit 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 threatned 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	43.62	**Max**	100	**2.5 Percentile**	0
Median	36.09	**Min**	0	**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 km2 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-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 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, 02041was 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	573.14	**Max**	2247.46	**2.5 Percentile**	22.7
Median	457.1	**Min**	13.62	**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	0.16	**Max**	0.67	**2.5 Percentile**	0.01
Median	0.12	**Min**	0	**97.5 Percentile**	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**	..	**Saudi Arabia**	..
Algeria	..	**Egypt**	..	**Liberia**	..	**Senegal**	..
Angola	..	**El Salvador**	..	**Libya**	..	**Serbia and Mont.**	..
Argentina	4.35	**Estonia**	..	**Lithuania**	..	**Sierra Leone**	..
Armenia	..	**Ethiopia**	..	**Macedonia**	..	**Slovakia**	3.18
Australia	..	**Finland**	1.14	**Madagascar**	..	**Slovenia**	..
Austria	..	**France**	3.24	**Malawi**	..	**South Africa**	..
Azerbaijan	..	**Gabon**	..	**Malaysia**	..	**South Korea**	2.21
Bangladesh	4.08	**Gambia**	..	**Mali**	..	**Spain**	..
Belarus	..	**Georgia**	..	**Mauritania**	..	**Sri Lanka**	..
Belgium	3.42	**Germany**	..	**Mexico**	5.17	**Sudan**	..
Benin	..	**Ghana**	4.55	**Moldova**	..	**Sweden**	..
Bhutan	..	**Greece**	..	**Mongolia**	..	**Switzerland**	4.06
Bolivia	..	**Guatemala**	..	**Morocco**	5.31	**Syria**	..
Bosnia and Herz.	..	**Guinea**	..	**Mozambique**	..	**Taiwan**	5.25
Botswana	..	**Guinea-Bissau**	..	**Myanmar**	..	**Tajikistan**	..
Brazil	..	**Guyana**	..	**Namibia**	..	**Tanzania**	..
Bulgaria	..	**Haiti**	..	**Nepal**	..	**Thailand**	..
Burkina Faso	..	**Honduras**	..	**Netherlands**	3.26	**Togo**	..
Burundi	..	**Hungary**	..	**New Zealand**	..	**Trin. and Tob.**	..
Cambodia	4.03	**Iceland**	..	**Nicaragua**	..	**Tunisia**	..
Cameroon	..	**India**	1.83	**Niger**	..	**Turkey**	2.10
Canada	0.64	**Indonesia**	5.37	**Nigeria**	..	**Turkmenistan**	..
Central Afr. Rep.	..	**Iran**	..	**North Korea**	..	**Uganda**	..
Chad	..	**Iraq**	..	**Norway**	..	**Ukraine**	..
Chile	..	**Ireland**	..	**Oman**	..	**United Arab. Em.**	..
China	7.97	**Israel**	..	**P. N. Guinea**	..	**United Kingdom**	2.26
Colombia	..	**Italy**	..	**Pakistan**	5.54	**United States**	..
Congo	..	**Jamaica**	..	**Panama**	..	**Uruguay**	..
Costa Rica	..	**Japan**	2.30	**Paraguay**	..	**Uzbekistan**	..
Côte d'Ivoire	..	**Jordan**	4.50	**Peru**	..	**Venezuela**	..
Croatia	..	**Kazakhstan**	..	**Philippines**	3.81	**Viet Nam**	4.63
Cuba	..	**Kenya**	..	**Poland**	3.33	**Yemen**	..
Czech Rep.	..	**Kuwait**	..	**Portugal**	..	**Zambia**	..
Dem. Rep. Congo	..	**Kyrgyzstan**	..	**Romania**	..	**Zimbabwe**	..
Denmark	..	**Laos**	4.40	**Russia**	2.86		
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 #: 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 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 10^9 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	2.43	**Max**	189.00	**2.5 Percentile**	0.00
Median	0.00	**Min**	0.00	**97.5 Percentile**	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	-0.11	**Max**	14.9	**2.5 Percentile**	-4.33
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	2.55	**Max**	9.57	**2.5 Percentile**	0.62
Median	1.73	**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	1526.59	**Max**	30285.71	**2.5 Percentile**	0.00
Median	569.13	**Min**	0.00	**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**	15256.
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	3.12	**Max**	47.33	**2.5 Percentile**	0.10
Median	1.10	**Min**	0.10	**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 thousand]. 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	4.18	**Max**	5.8	**2.5 Percentile**	2.73
Median	4.15	**Min**	2.48	**97.5 Percentile**	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, Aricultural 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	11.54	**Max**	291.49	**2.5 Percentile**	0.00
Median	0.58	**Min**	0.00	**97.5 Percentile**	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	39.11	**Max**	3739.60	**2.5 Percentile**	0.00
Median	0.24	**Min**	0.00	**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	0.59	**Max**	2.04	**2.5 Percentile**	0
Median	0.51	**Min**	0	**97.5 Percentile**	1.91

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	0.01	**Max**	2.39	**2.5 Percentile**	-1.35
Median	-0.25	**Min**	-1.89	**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	37.72	**Max**	59.74	**2.5 Percentile**	22.86
Median	35.76	**Min**	15.3	**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 facilititate 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	6.37	**Max**	155.41	**2.5 Percentile**	0.02
Median	0.58	**Min**	0.01	**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	1.63	**Max**	62.50	**2.5 Percentile**	0.00
Median	0.18	**Min**	0.00	**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**	..	**Saudi Arabia**	..
Algeria	..	**Egypt**	..	**Liberia**	..	**Senegal**	28.33
Angola	..	**El Salvador**	46.33	**Libya**	..	**Serbia and Mont.**	..
Argentina	19.33	**Estonia**	55.00	**Lithuania**	59.33	**Sierra Leone**	..
Armenia	46.33	**Ethiopia**	..	**Macedonia**	..	**Slovakia**	48.33
Australia	10.00	**Finland**	23.33	**Madagascar**	17.33	**Slovenia**	42.67
Austria	66.67	**France**	28.33	**Malawi**	..	**South Africa**	..
Azerbaijan	48.00	**Gabon**	..	**Malaysia**	32.33	**South Korea**	65.33
Bangladesh	..	**Gambia**	..	**Mali**	..	**Spain**	64.00
Belarus	47.00	**Georgia**	55.33	**Mauritania**	..	**Sri Lanka**	42.00
Belgium	48.33	**Germany**	71.67	**Mexico**	10.33	**Sudan**	..
Benin	..	**Ghana**	..	**Moldova**	50.33	**Sweden**	12.00
Bhutan	..	**Greece**	42.00	**Mongolia**	..	**Switzerland**	19.33
Bolivia	50.33	**Guatemala**	..	**Morocco**	..	**Syria**	49.67
Bosnia and Herz.	..	**Guinea**	..	**Mozambique**	..	**Taiwan**	54.67
Botswana	..	**Guinea-Bissau**	..	**Myanmar**	..	**Tajikistan**	..
Brazil	14.33	**Guyana**	..	**Namibia**	..	**Tanzania**	..
Bulgaria	58.33	**Haiti**	..	**Nepal**	..	**Thailand**	22.00
Burkina Faso	26.33	**Honduras**	..	**Netherlands**	48.67	**Togo**	..
Burundi	..	**Hungary**	59.67	**New Zealand**	8.00	**Trin. and Tob.**	35.00
Cambodia	..	**Iceland**	42.67	**Nicaragua**	38.67	**Tunisia**	55.67
Cameroon	..	**India**	33.33	**Niger**	..	**Turkey**	59.00
Canada	1.67	**Indonesia**	..	**Nigeria**	..	**Turkmenistan**	..
Central Afr. Rep.	..	**Iran**	..	**North Korea**	..	**Uganda**	43.33
Chad	..	**Iraq**	..	**Norway**	12.67	**Ukraine**	48.33
Chile	18.00	**Ireland**	65.00	**Oman**	..	**United Arab. Em.**	..
China	30.33	**Israel**	32.00	**P. N. Guinea**	..	**United Kingdom**	49.33
Colombia	23.67	**Italy**	15.00	**Pakistan**	..	**United States**	32.67
Congo	..	**Jamaica**	..	**Panama**	25.00	**Uruguay**	45.33
Costa Rica	..	**Japan**	74.67	**Paraguay**	33.67	**Uzbekistan**	..
Côte d'Ivoire	..	**Jordan**	57.00	**Peru**	15.67	**Venezuela**	37.33
Croatia	56.67	**Kazakhstan**	32.33	**Philippines**	..	**Viet Nam**	..
Cuba	44.33	**Kenya**	..	**Poland**	47.33	**Yemen**	..
Czech Rep.	47.00	**Kuwait**	48.67	**Portugal**	52.33	**Zambia**	..
Dem. Rep. Congo	..	**Kyrgyzstan**	40.33	**Romania**	42.67	**Zimbabwe**	..
Denmark	28.33	**Laos**	..	**Russia**	33.00		
Dominican Rep.	..	**Latvia**	49.33	**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 #: 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 10^9 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	8.17	**Max**	47.74	**2.5 Percentile**	1.04
Median	5.91	**Min**	0.24	**97.5 Percentile**	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	12.84	**Max**	124.46	**2.5 Percentile**	0
Median	3.63	**Min**	0	**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	0.28	**Max**	0.89	**2.5 Percentile**	0
Median	0.18	**Min**	0	**97.5 Percentile**	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 headquarted 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 Innnovest 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	**Germany**	0.94	**Mexico**	-0.15	**Sudan**	..
Benin	..	**Ghana**	..	**Moldova**	..	**Sweden**	1.28
Bhutan	..	**Greece**	-0.63	**Mongolia**	..	**Switzerland**	1.59
Bolivia	..	**Guatemala**	..	**Morocco**	..	**Syria**	..
Bosnia and Herz.	..	**Guinea**	..	**Mozambique**	..	**Taiwan**	0.10
Botswana	..	**Guinea-Bissau**	..	**Myanmar**	..	**Tajikistan**	..
Brazil	0.02	**Guyana**	..	**Namibia**	..	**Tanzania**	..
Bulgaria	..	**Haiti**	..	**Nepal**	..	**Thailand**	-0.07
Burkina Faso	..	**Honduras**	..	**Netherlands**	1.54	**Togo**	..
Burundi	..	**Hungary**	-0.31	**New Zealand**	0.04	**Trin. and Tob.**	..
Cambodia	..	**Iceland**	..	**Nicaragua**	..	**Tunisia**	..
Cameroon	..	**India**	..	**Niger**	..	**Turkey**	..
Canada	0.47	**Indonesia**	-0.01	**Nigeria**	..	**Turkmenistan**	..
Central Afr. Rep.	..	**Iran**	..	**North Korea**	..	**Uganda**	..
Chad	..	**Iraq**	..	**Norway**	0.96	**Ukraine**	..
Chile	..	**Ireland**	-0.63	**Oman**	..	**United Arab. Em.**	..
China	-0.68	**Israel**	0.00	**P. N. Guinea**	..	**United Kingdom**	1.34
Colombia	..	**Italy**	-0.60	**Pakistan**	..	**United States**	0.45
Congo	..	**Jamaica**	..	**Panama**	..	**Uruguay**	..
Costa Rica	..	**Japan**	1.55	**Paraguay**	..	**Uzbekistan**	..
Côte d'Ivoire	..	**Jordan**	..	**Peru**	..	**Venezuela**	-0.43
Croatia	..	**Kazakhstan**	..	**Philippines**	..	**Viet Nam**	..
Cuba	..	**Kenya**	..	**Poland**	-0.34	**Yemen**	..
Czech Rep.	-0.20	**Kuwait**	..	**Portugal**	-0.55	**Zambia**	..
Dem. Rep. Congo	..	**Kyrgyzstan**	..	**Romania**	..	**Zimbabwe**	..
Denmark	-0.13	**Laos**	..	**Russia**	-1.29		
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 #: 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:** WEFPRI **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	10.78	**Max**	15.09	**2.5 Percentile**	7.87
Median	10.61	**Min**	7.2	**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	0.77	**Max**	4	**2.5 Percentile**	0
Median	0	**Min**	0	**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	25.44	**Max**	77.62	**2.5 Percentile**	0.88
Median	22.22	**Min**	0.57	**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	1629.41	**Max**	7110.45	**2.5 Percentile**	15.85
Median	1258.44	**Min**	1.82	**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	50.96	**Max**	100	**2.5 Percentile**	4.21
Median	50.96	**Min**	0.64	**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	364.03	**Max**	4859.02	**2.5 Percentile**	38.72
Median	187.84	**Min**	21.15	**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	5.14	**Max**	70.06	**2.5 Percentile**	0.06
Median	2.59	**Min**	0.02	**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	305.52	**Max**	2112	**2.5 Percentile**	0.56
Median	85.24	**Min**	0.4	**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	23.85	**Max**	61.76	**2.5 Percentile**	11.75
Median	23.15	**Min**	7.03	**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 Hydrometeorolotical 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.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: 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, CostaRica, 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 Hydrometeorolotical 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: PM10 data, Air Quality QueryWebsite, 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 (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 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, 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), 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 Environment 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 Environment 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.htf?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. Lehane, 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/rocenky/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/aqtb06.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.htf?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. Lehane, 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/rocenky/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/aqtb08.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.htf?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 Quatities 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/aqtb16.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: Automobil 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/I_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=MTYxX3RhYmVsbGVudGVpbF9taXRfaW5oYWx0c3ZlcnplaWNobmlzLnBkZg== (page 38 of 112). Belgium: Institut National de Statistiques - National Institute of Statistics (INS), http://statbel.fgov.be. Ireland: Environmental Protections 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=MTYxX3RhYmVsbGVudGVpbF9taXRfaW5oYWx0c3ZlcnplaWNobmlzLnBkZg== (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_vsebina.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 200http://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/-statistic/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 Dilley, 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: Sitema Nacional de Áreas Protegidas (SINAC) - Ministerio de Ambiente y Energia (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/tablee1.xls, B.2 World Gross Domestic Product at Market Exchange Rates, 1980-2002, http://www.eia.doe.gov/pub/international/iealf/tableb2.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:** DJSGI

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

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

Variable #: 61 **Code:** ECOVAL

Description: **Average Innovest EcoValue rating of firms headquarted 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.dgbasey.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/overview.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.