



2001 Environmental Sustainability Index

An Initiative of the
Global Leaders of Tomorrow Environment Task Force,
World Economic Forum

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In collaboration with:

Yale Center for Environmental Law and Policy (YCELP)

Yale University

Center for International Earth Science Information Network (CIESIN)

Columbia University

Global Leaders for Tomorrow

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TABLE OF CONTENTS

<i>Executive Summary</i>	7
<i>The Need for an Environmental Sustainability Index</i>	8
<i>Key Results</i>	8
<i>Our Approach</i>	8
<i>Main Findings</i>	12
<i>Analysis of Results</i>	13
<i>Relationship to Economic Performance</i>	15
<i>Challenges to Measuring Environmental Sustainability</i>	17
<i>How Should the Index's Inputs be Weighted</i>	23
<i>Conclusions and Next Steps</i>	25

ANNEXES

<i>1. Data Aggregation Methodology</i>	27
<i>2. Relationship to 2000 Pilot ESI</i>	30
<i>3. Frequently Asked Questions</i>	32
<i>4. Component and Indicator Scores</i>	35
<i>5. Country Reports</i>	63

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The Environmental Sustainability Index (ESI) and this report are the result of collaboration among the World Economic Forum's Global Leaders for Tomorrow (GLT) Environment Task Force, the Yale Center for Environmental Law and Policy (YCELP), and the Columbia University Center for International Earth Science Information Network (CIESIN).

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Executive Summary

The Environmental Sustainability Index (ESI) is a measure of overall progress towards environmental sustainability developed for 122 countries. The three highest ranking countries in the 2001 ESI are Finland, Norway, and Canada. The three lowest are Haiti, Saudi Arabia, and Burundi. Examples of countries scoring in the middle include Ghana and Honduras. A high ESI rank indicates that a country has achieved a higher level of environmental sustainability than most other countries; a low ESI rank signals that a country is facing substantial problems in achieving environmental sustainability along multiple dimensions.

The ESI scores are based upon a set of 22 core “indicators,” each of which combines two to six variables for a total of 67 underlying variables. The indicators and variables were chosen through careful review of the environmental literature and available data combined with extensive consultation and analysis.

The ESI permits cross-national comparisons of environmental progress in a systematic and quantitative fashion. It represents a first step towards a more analytically driven approach to environmental decision making. The ESI enables:

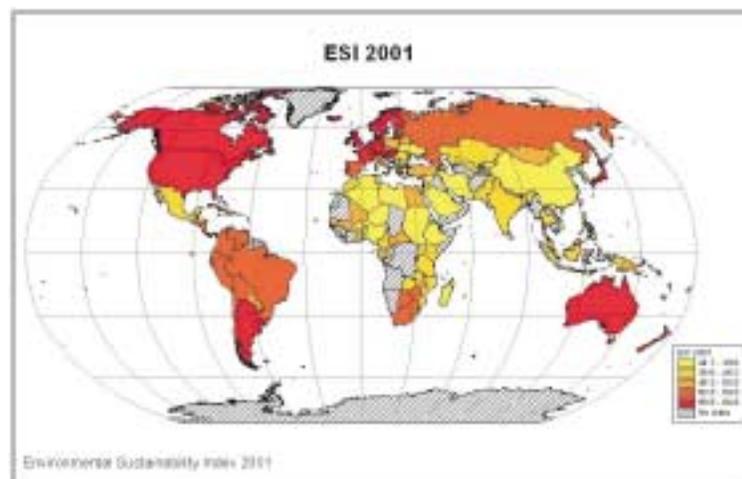
- identification of issues where national environmental results are above or below expectations;
- policy tracking to identify areas of success or failure;
- benchmarking of environmental performance;

- identification of “best practices”; and
- investigation into interactions between environmental and economic performance.

Although in broad terms high income countries scored higher, among countries of similar levels of per-capita income no strong correlation exists between income and overall environmental sustainability.

The ESI has been developed through a transparent and interactive process, drawing on statistical, environmental, and analytic expertise from around the world. The ESI balances a range of dimensions, including both national and global perspectives, different types of environmental threats, and both environmental and socioeconomic aspects of sustainability. Since different individuals may balance these dimensions differently, this report provides detailed information on the ESI’s elements to facilitate understanding of the ESI’s assumptions and alternative analyses.

The ESI demonstrates the potential value of improvements in the world’s capacity for data-driven environmental analysis and decision making. Investments in data creation and gathering mechanisms, development of better techniques to integrate information from different spatial scales, and creation of information systems that provide for long-term stability and flexible analysis are essential to better environmental management and rapid global progress towards a sustainable environment.



The Need for an Environmental Sustainability Index

Environmental sustainability has been increasingly embraced as an important goal. Especially since the 1992 Earth Summit, many environmental policy objectives have been formulated in terms of sustainability. The proliferation of these objectives has even spawned considerable discussion about how to measure sustainability. Yet actual measurements are exceedingly rare. And nowhere are they more rare than at the international level, where political suspicions and data gaps frequently conspire to derail even the most modest efforts to compare country environmental circumstances and performance.

Of course not just any measure will do. To be useful, an Environmental Sustainability Index must be created in a systematic, transparent, and reproducible manner. It should be faithful to the scientific literature as well as relevant to the major policy debates. It should be applicable to a wide range of situations and conditions. And it should make use of what can actually be measured today while leaving room for movement toward what ought to be measured tomorrow.

Key Results

Before elaborating our analytical approach, methods and analysis, let us summarize our key results and findings:

1. Environmental Sustainability can be measured. The Environmental Sustainability Index advanced in this report uses data on 67 variables rolled into 22 core “indicators” to create comprehensive environmental sustainability scores for 122 countries. While no measure of such a complex phenomenon can be perfect, the Index proved to be surprisingly powerful, useful and robust.
2. The Index creates a series of comparative benchmarks of environmental conditions in different countries and the possibility of shifting environmental decision-making onto a

more fact-based and analytically rigorous foundation.

3. Economic conditions affect, but do not determine, environmental conditions. Comparisons of the ESI with measures of economic performance such as the World Economic Forum Current Competitiveness Index and per-capita income suggest that decisions of how vigorously to pursue environmental sustainability and how vigorously to pursue economic growth are in fact two separate choices.
4. Serious gaps in data availability limit the ability to measure environmental sustainability and precluded the analysis of nearly 100 nations. Filling these gaps should be a policy priority at the local, national and international scales.

Our Approach

The first challenge in measuring environmental sustainability is to define the scope in conceptual terms. What are we trying to measure? Unlike many efforts to think about indicators of “sustainable development,” we have focused on environmental sustainability, which is a more narrow formulation. This choice was made deliberately, based on a conclusion that one reason efforts to measure sustainability fail is that they seek to fold too many disparate phenomena under the same conceptual umbrella. While we accept the premise that politics, economics, and social values are important factors worthy of being sustained, we do

not think that there is a sufficient scientific, empirical or political basis for constructing metrics that combine all of them along with the environment. Moreover, the environment often gets overshadowed in “triple bottom line” analyses and other sweeping sustainability efforts.

Even within the confines of a more narrow focus of environmental sustainability, we are still dealing with a complicated, multi-dimensional concept. At the most basic level, we have concluded that environmental sustainability can be presented as a function of five phenomena: (1) the state of

Table 1. Components of Environmental Sustainability

Component	Logic
Environmental Systems	A country is environmentally sustainable to the extent that its vital environmental systems are maintained at healthy levels, and to the extent to which levels are improving rather than deteriorating.
Reducing Environmental Stresses	A country is environmentally sustainable if the levels of anthropogenic stress are low enough to engender no demonstrable harm to its environmental systems.
Reducing Human Vulnerability	A country is environmentally sustainable to the extent that people and social systems are not vulnerable (in the way of basic needs such as health and nutrition) to environmental disturbances; becoming less vulnerable is a sign that a society is on a track to greater sustainability.
Social and Institutional Capacity	A country is environmentally sustainable to the extent that it has in place institutions and underlying social patterns of skills, attitudes and networks that foster effective responses to environmental challenges.
Global Stewardship	A country is environmentally sustainable if it cooperates with other countries to manage common environmental problems, and if it reduces negative extra-territorial environmental impacts on other countries to levels that cause no serious harm.

the environmental *systems*, such as air, soil, ecosystems and water; (2) the *stresses* on those systems, in the form of pollution and exploitation levels; (3) the *human vulnerability* to environmental change in the form of loss of food resources or exposure to environmental diseases; (4) the *social and institutional capacity* to cope with environmental challenges; and finally (5) the ability to respond to the demands of *global stewardship* by cooperating in collective efforts to conserve international environmental resources such as the atmosphere. We define environmental sustainability as the ability to produce high levels of performance on each of these dimensions in a lasting manner. We refer to these five dimensions as the core “components” of environmental sustainability.

Scientific knowledge does not permit us to specify precisely what levels of performance are high enough to be truly sustainable, especially at a worldwide scale. Nor are we able to identify in advance whether any given level of performance is capable of being carried out in a lasting manner. Therefore we have built our index in a way that is primarily comparative. Establishing the thresholds of sustainability remains an important endeavor, albeit one that is complicated by the dynamic nature of such economic factors as changes in technology over time.

The basic unit of comparison is a set of 22 environmental sustainability *indicators* which were identified on the basis of a careful review of the environmental literature and substantiated by statistical analysis (see page 13). These indicators were deemed the most relevant constitutive elements of the five core components, and therefore are the central element of analysis. In turn, each of the indicators has associated with it a number of *variables* that are empirically measured. The relationship between these Index building blocks is specified in Table 2.

The choice of variables was driven by a consideration of the theoretical logic and relevance of the indicator in question, data quality, and country coverage. In general we sought variables with extensive country coverage but chose in some cases to make use of variables with narrow coverage if they measured critical aspects of environmental sustainability that would otherwise be lost. Air quality and water quality, for example, were especially disappointing in their poor country coverage but were included anyway because of their central role in environmental sustainability.

After building up the complete database, we selected countries for inclusion in the index based on the extent of their data coverage. We eliminated all countries for which the data were insufficient to

Table 2. Environmental Sustainability Index Building Blocks

Component	Indicator	Variable	Year	Counts*	
Environmental Systems	Air Quality	Urban SO ₂ concentration	MRYA 1990-96	51	
		Urban NO ₂ concentration	MRYA 1990-96	51	
		Urban TSP concentration	MRYA 1990-96	51	
	Water Quantity	Internal renewable water per capita	1995	122	
		Water inflow from other countries per capita	1995	121	
	Water Quality	Dissolved oxygen concentration	1994-96 or MRYA	35	
		Phosphorus concentration	1994-96 or MRYA	28	
		Suspended solids	1994-96 or MRYA	32	
		Electrical conductivity	1994-96 or MRYA	42	
	Biodiversity	Percentage of mammals threatened	1996	121	
		Percentage of breeding birds threatened	1996	118	
	Terrestrial Systems	Severity of human induced soil degradation	1990	103	
Land area affected by human activities as a % of total land area		1992-95	121		
Reducing Stresses	Reducing Air Pollution	NO _x emissions per populated land area	1990	121	
		SO ₂ emissions per populated land area	1990	121	
		VOCs emissions per populated land area	1990	121	
		Coal consumption per populated land area	1998	100	
		Vehicles per populated land area	MRYA 1996-98	115	
	Reducing Water Stress	Fertilizer consumption per hectare of arable land	1997	122	
		Pesticide use per hectare of crop land	1996	82	
		Industrial organic pollutants per available fresh water	1996	57	
		Percentage of country's territory under severe water stress	1995	121	
	Reducing Ecosystem Stress	Percentage change in forest cover 1990-95	1995	121	
		Percentage of country's territory in acidification exceedence	1990	122	
	Reducing Waste & Consumption Pressures	Consumption pressure per capita	1996	119	
		Radioactive waste	1996	45	
	Reducing Population Pressure	Total fertility rate	2000	122	
		% change in projected population between 2000 & 2050	2000	122	
	Reducing Human Vulnerability	Basic Human Sustenance	Daily per capita calorie supply as a % of total requirements	MRYA 1988-90	100
			% of population with access to improved drinking-water supply	2000	96
Environmental Health		Child death rate from respiratory diseases	MRYA 1990-98	55	
		Death rate from intestinal infectious diseases	MRYA 1990-99	63	
		Under-5 mortality rate	1998	122	

MRYA = Most Recent Year Available.

* Number of of countries for which data are available.

Continued on next page.

generate measures for at least 19 of the 22 indicators. We included all countries for which the data permitted measurements of at least 20 indicators (94 countries). For those countries where the data permitted measurements of no more than 19 indicators (54 countries), we applied an additional criterion. If their overall data coverage included at least as many variables as the lowest number for countries missing two indicators, we included them in the Index (28 countries met this criterion). We ended up with 122 countries in the Index, each of which has data for at least 62% of the variables in our analysis.

The median country in the Index is missing 17 of the 67 variables. A quarter are missing 22-26 variables, and quarter are missing 1-7. Altogether this means that 22 percent of the 8,174 data points in our database are missing.

Where we had a sound analytical basis for doing so, we estimated missing values. In total, we estimated just over 60 percent of the missing variables, using a variety of techniques explained in Annex 1, which also describes the techniques used to standardize and aggregate the variables. The estimation protocol permitted us to generate a full set of 22 indicators for each of the countries in the Index.

Table 2. Environmental Sustainability Index Building Blocks (cont'd)

Component	Indicator	Variable	Year	Count*
Social and Institutional Capacity	Science/Technology	R & D scientists and engineers per million population	MRYA 1980-97	94
		Expenditure for R & D as a percentage of GNP	MRYA 1980-1997	88
		Scientific and technical articles per million population	1995	44
	Capacity for Debate	IUCN member organizations per million population	2000	109
		Civil and political liberties	2000	122
	Regulation and Management	Stringency and consistency of environmental regulations	2000	56
		Degree to which environmental regulations promote innovation	2000	56
		Percentage of land area under protected status	1997	122
		Number of sectoral EIA guidelines	1998	122
	Private Sector Responsiveness	No. of ISO14001 certified companies per million dollars GDP	2000	118
		Dow Jones Sustainability Group Index membership	2000	32
		Average Innovest EcoValue'21 rating of firms	2000	20
		World Business Council for Sustainable Development members	2000	122
		Levels of environmental competitiveness	2000	56
	Environmental Information	Availability of sustainable development info. at the national level	1997	60
		Environmental strategies and action plans	1992-1996	122
		Number of ESI variables missing from selected data sets	2001	122
	Eco-Efficiency	Energy efficiency (total energy consumption per unit GDP)	1998	118
		Renewable energy prod. as a % of total energy consumption	1998	122
	Reducing Public Choice Distortions	Price of premium gasoline	1998	121
Subsidies for energy or materials usage		2000	56	
Reducing corruption		2000	117	
Global Stewardship	International Commitment	No. of memberships in environmental intergovernmental orgs.	1998	121
		Percentage of CITES reporting requirements met	2000	122
		Levels of participation in the Vienna Convention/Montreal Prot.	2000	122
		Compliance with environmental agreements	2000	56
	Global-Scale Funding/Participation	Montreal Protocol Multilateral Fund participation	2000	122
		Global Environmental Facility participation	2000	122
	Protecting International Commons	FSC accredited forest area as a % of total forest area	2000	122
		Ecological footprint "deficit"	1996	118
		CO2 emissions (total times per capita)	1997	122
		Historic cumulative CO2 emissions	1997	122
CFC consumption (total times per capita)		MRYA 1996-98	100	
SO2 exports	1997-1998	51		

MRYA = Most Recent Year Available.

* Number of of countries for which data are available.

Main Findings

To calculate the Environmental Sustainability Index, we averaged the values of the 22 indicators and calculated a standard normal percentile for each country. The results are shown in Table 3. The numerical scores, ranging from 80.5 (Finland) to 24.7 (Haiti), represent the percentage of countries expected to have a lower level of environmental sustainability than that particular country, assuming a distribution of environmental

sustainability scores that is “normal” (i.e., a bell curve).

Additional methodological details are elaborated in Annex 1. Annexes 4-6 provide a variety of more detailed reports, including measures of each of the 5 components and 22 indicators, profiles of each of the 122 countries, and descriptions and original data for each of the 67 variables.

Table 3. 2001 Environmental Sustainability Index

Finland	80.5	Zimbabwe	52.0	Tunisia	43.7
Norway	78.2	Nicaragua	51.9	El Salvador	43.7
Canada	78.1	Ecuador	51.8	Pakistan	43.6
Sweden	77.1	South Africa	51.3	Indonesia	42.6
Switzerland	74.6	Mauritius	51.2	Senegal	42.5
New Zealand	71.3	Venezuela	50.8	Jamaica	42.3
Australia	70.7	Armenia	50.6	Morocco	41.9
Austria	67.8	Gabon	50.5	Uzbekistan	41.6
Iceland	67.3	Mongolia	50.3	Kazakhstan	41.6
Denmark	67.0	Sri Lanka	49.8	Malawi	41.3
United States	66.1	Malaysia	49.7	India	40.9
Netherlands	66.0	Israel	49.5	Tanzania	40.3
France	65.8	Paraguay	48.9	South Korea	40.3
Uruguay	64.6	Fiji	48.1	Jordan	40.1
Germany	64.2	Central African Republic	48.0	Zambia	39.8
United Kingdom	64.1	Belarus	48.0	Kyrgyz Republic	39.6
Ireland	64.0	Poland	47.6	Bangladesh	39.5
Slovak Republic	63.2	Moldova	47.4	Macedonia	39.2
Argentina	62.5	Bulgaria	47.4	Togo	39.1
Portugal	61.4	Guatemala	47.3	Algeria	38.9
Hungary	61.0	Papua New Guinea	47.3	Benin	38.6
Japan	60.6	Ghana	47.0	Burkina Faso	38.6
Lithuania	60.3	Honduras	46.9	Iran	38.4
Slovenia	59.9	Singapore	46.8	Syria	37.9
Spain	59.5	Nepal	46.7	Sudan	37.7
Costa Rica	58.8	Egypt	46.5	China	37.6
Estonia	57.7	Trinidad and Tobago	46.4	Lebanon	37.5
Brazil	57.4	Azerbaijan	46.4	Ukraine	36.8
Czech Republic	57.2	Turkey	46.3	Niger	36.5
Bolivia	56.9	Mali	46.2	Philippines	35.7
Chile	56.6	Dominican Republic	45.4	Madagascar	35.4
Latvia	56.3	Mexico	45.3	Vietnam	34.2
Russian Federation	56.2	Thailand	45.2	Rwanda	33.5
Panama	55.9	Bhutan	45.1	Kuwait	31.9
Cuba	54.9	Cameroon	44.9	Nigeria	31.8
Colombia	54.8	Mozambique	44.2	Libya	31.3
Italy	54.3	Albania	44.2	Ethiopia	31.2
Peru	54.3	Belgium	44.1	Burundi	30.1
Croatia	54.1	Romania	44.1	Saudi Arabia	29.8
Botswana	53.6	Uganda	44.0	Haiti	24.7
Greece	53.1	Kenya	43.9		

Analysis of Results

We first explored the extent to which the analytical categories we utilized were supported by the data we collected. Are the variables that we think are measures of the same phenomena correlated with each other? Are the indicators that we think are distinctly different aspects of environmental sustainability really distinct?

If the variables we used to serve as measures of the indicators were empirically related, then they ought to be more highly correlated with each other than the average pair of variables in the overall data set. This turns out to be true. The average bivariate correlation for variable pairs within the same indicator is 0.36, whereas it is 0.09 for the data set as a whole.

For their part, the 22 indicators had an average bivariate correlation among themselves of only 0.11. Only 36 of the 231 possible pairs of indicators had correlation coefficients greater than 0.5. The highest such correlations are reported in Table 4.

This provides confirmation that we have successfully formulated analytical categories that are capable of measuring distinct aspects of environmental sustainability.

We also determined which individual variables had the highest correlation with the ESI, and report those in Table 5.

Table 4. Most Highly Correlated Indicator Pairs

		Correlation Coefficient
Basic Human Sustenance	Environmental Health	0.85
Environmental Health	Reducing Population Stress	0.82
Basic Human Sustenance	Reducing Population Stress	0.72
Environmental Health	Science/Technology	0.69
Science/Technology	Eco-efficiency	0.68
Science/Technology	Reducing Public Choice Distortions	0.66
Basic Human Sustenance	Science/Technology	0.66
Reducing Population Stress	Science/Technology	0.63
International Commitment	Private Sector Responsiveness	0.63
International Commitment	Eco-efficiency	0.62
Water Quality	Science/Technology	0.61
Regulation and Management	International Commitment	0.60
International Commitment	Regulation and Management	0.60
Reducing Public Choice Distortions	Eco-efficiency	0.60
Basic Human Sustenance	Protecting International Commons	-0.60
Reducing Air Pollution	Science/Technology	-0.63

Table 5. Variables with Highest Correlation to ESI

Variable	Correlation Coefficient	n
Reducing Corruption	0.75	122
Environmental Regulatory Stringency	0.74	56
Scientific and technical articles per million population	0.73	122
Average Innovest EcoValue'21 rating of firms	0.71	20
Urban TSP Concentration	0.70	122

The fact that Reducing Corruption is the variable that has the highest correlation with the ESI supports the view that good governance broadly conceived enhances environmental sustainability. Although the significance of the high correlation coefficient for the Innovest EcoValue'21 rating, which measures the quality of environmental management within firms, is diminished somewhat by the low number of countries for which that variable is available, it is noteworthy that in addition to being highly correlated with the ESI overall the EcoValue rating is the second most highly correlated variable with the Environmental Systems component. Among these 20 countries at least, it appears that good environmental management at the firm level is associated with environmental performance at the broader national level.

We were also eager to explore whether our measure of environmental sustainability was highly correlated with any other phenomena or measures. The results are presented in Table 6.

Although the relationship with GDP per capita is strong, other global indices, such as the Consumption Pressure Index and the Ecological Footprints, show higher correlations with per capita income. The factors that are not strongly correlated are equally interesting. Population density and economic growth rates, in spite of common complaints about their impacts on the environment, are in general not consistently associated with poor environmental performance. These results suggest that countries that are growing quickly need not degrade their environments, nor are densely populated countries doomed to pollution damage and natural resource shortages.

Finally, we wish to point out that the large amount of information contained in the data set that underlies the Environmental Sustainability Index is capable of being utilized for a variety of other purposes. For example, it could serve as the basis for a watch list of countries facing potential environment-driven crises.

Table 6. Correlations Between the ESI and Other Comparative Measures

Measure	Correlation with ESI
WWF Consumption Pressure Index	0.56**
Ecological Footprint	0.60**
Percent of GDP from agriculture	-0.48**
GDP per capita (PPP)	0.76**
1990-1998 GDP per capita growth	0.12
Human Development Index	0.67**
Population Density	-0.06
Percent of territory with population density greater than 5 persons per square km.	-0.19*
WEF Current Competitiveness Index	0.65**

** Correlation is significant at the .01 level,

* Correlation is significant at the .05 level

Relationship to Economic Performance

The precise relationship between economic growth and environmental sustainability deserves more detailed attention because of the significant debate centered on the degree to which environmental and economic values are in conflict. We explored the relationship between environmental and economic performance in a number of ways. We found that although per-capita income is significantly correlated with the Environmental Sustainability Index, measures of economic competitiveness are less strongly correlated and economic growth rates are correlated very weakly.

The relationship between the Environmental Sustainability Index and income is shown in Figure 1.

Clearly levels of per capita income exert a significant effect on environmental sustainability as measured by the ESI. The World Economic Forum's "Current Competitiveness Index" has a similar though slightly weaker correlation with the Environmental Sustainability Index. That relationship is shown in Figure 2.

Figure 1. Relationship Between the ESI and Per Capita Income

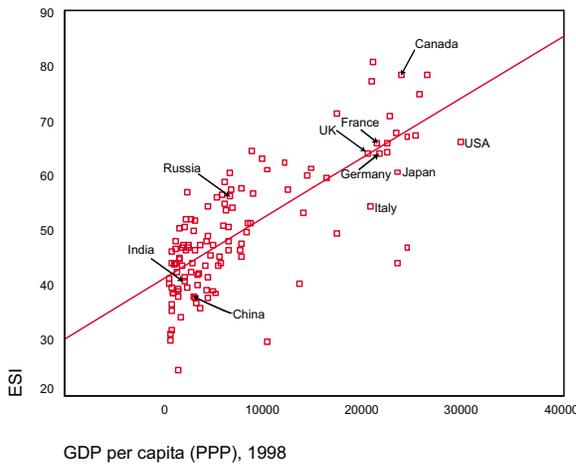


Figure 2. Relationship Between the ESI and WEF's Current Competitiveness Rank

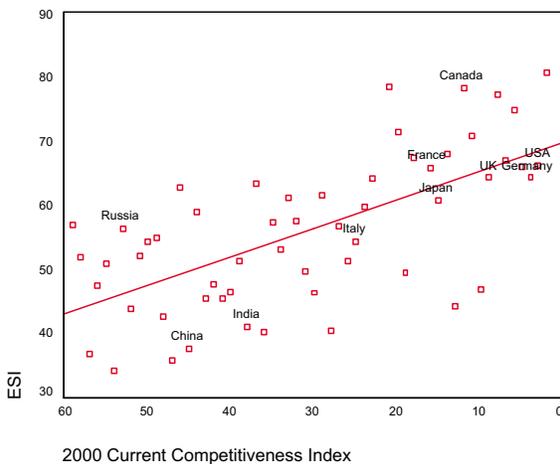


Figure 3. Relationship Between the ESI and Growth in Per Capita Income, 1990-1998

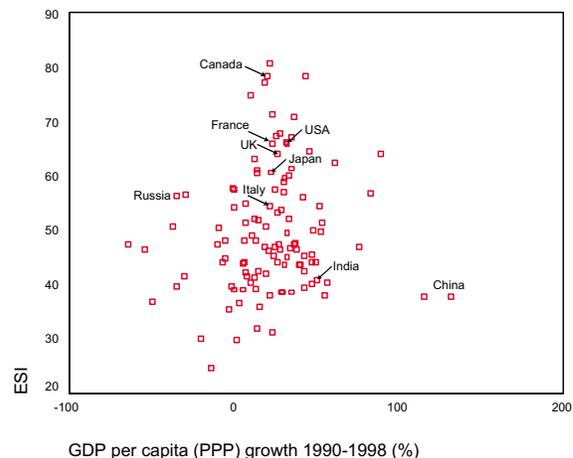


Table 7. Correlation Between ESI and GDP per capita, by Income Quintile

Income quintile	Correlation coefficient with ESI
1	0.21
2	0.07
3	0.58**
4	0.15
5	0.21
All countries	0.76**

** Statistically significant at the .01 level

Table 8. Among Countries with Similar Levels of Income, Environmental Performance Varies

Country	ESI	GDP per capita (US\$, PPP)
Italy	54.3	20,600
Sweden	77.1	20,700
Turkey	46.3	6,400
Lithuania	60.3	6,400
Iran	38.4	5,100
Panama	55.9	5,200
China	37.6	3,100
Ecuador	51.8	3,000
Haiti	24.7	1,400
Cameroon	44.9	1,500

If we compare to growth rates in per-capita income there is practically no relationship at all, as shown in Figure 3.

Given the way we have conceptualized environmental sustainability, it is not terribly surprising that at a broad structural level per capita income appears to exert a strong effect. A large number of the 22 indicators, especially those concerning social capacity, human vulnerability, and environmental stresses are significantly affected by economic development.

However, it is more surprising how weak the relationship between income and environmental sustainability is when we look only within income quintiles. As Table 7 shows, it is only in the middle-income countries that a strong correlation is found, and even this correlation is significantly lower than the global correlation. Among the other income groups the effect is extremely weak.

We draw an important conclusion from this analysis: for countries in similar economic circum-

stances, some manage their environmental challenges well; others do not. Table 8 illustrates this point with data drawn from our analysis. It would not make sense to expect Haiti to achieve levels of environmental performance on a par with Sweden, for example; but there is no economic factor preventing Haiti from achieving a level approaching that of Cameroon, and this difference is significant. Similarly, Belgium (GDP per capita of \$23,200) should be on a par with Sweden (GDP per capita of \$20,700) and yet it ranks 75 slots lower with an ESI score of 44.1 compared with Sweden's fourth-ranking score of 77.1.

This suggests that when it comes to making fundamental policy choices having to do with environmental and economic performance, there is no significant tradeoff. The choices appear to be distinct and separable. This is consistent with the "Porter Hypothesis" that suggests that high levels of environmental protection are compatible with high levels of economic growth, and may even encourage the innovation that supports growth (Porter and van der Linde 1995; Esty and Porter 2000).

Challenges to Measuring Environmental Sustainability

We encountered a number of severe and often discouraging difficulties in the course of seeking measures of the 22 indicators that comprise the Index. In this section of the report we identify these challenges and discuss the strategies we employed to cope with them.

One challenge had to do with issues of **scale**. Environmental sustainability is a phenomenon that rarely unfolds at the level of a nation-state as a whole. More typically it is observed at a smaller scale – a river basin, a forest, an urban center. Yet for the most part environmental data are reported at the level of the nation. This mismatch of scales can lead to systematic errors. If a country's freshwater withdrawals are about equal to its freshwater availability, for example, then using only national level data will lead one to an optimistic assessment. But if withdrawals are highly concentrated in one area and availability is concentrated in a different area, these national figures will be very misleading. We sought wherever feasible to incorporate data that were collected or reported at a more fine-grained resolution, and then to aggregate them up to national levels in a way that took into account the sustainability dynamics at the smallest relevant scale. We did this for measures of acidification damage, water stress, water quality, air quality, land degradation, and private sector responsiveness.

Another challenge had to do with **data gaps**. Many important variables had shockingly poor country coverage. It was extremely frustrating to experience the gulf between statements by global bodies about the high priority of water quality and air quality as critical environmental concerns, and the reality that very little systematic global monitoring of these factors is taking place. We urge a renewed global commitment to developing a worldwide database covering major environmental issues and providing quality information that is comparable across nations and time. Such an initiative would be a worthy focus for the United Nations "Rio+10" World Summit on Sustainable Development to take place in South Africa in 2002.

One strategy we employed to help deal with data gaps was utilization of modeled data. Increasingly global environmental phenomena are the focus of

intensive modeling efforts that take the best available empirical observations as inputs, and add tested methods for generating global estimates either of individual variables or of the interaction among variables. For carefully constructed models the resulting data can be quite useful for the purposes of sustainability measurements. We used model data for water quantity, acidification damage, air pollution emissions, industrial organic pollution emissions, and population stress. We were selective in choosing modeled data; the models we drew from had all been subject to scientific peer review and/or endorsed by international organizations.

In a few select cases we constructed our own data sets. We did this for environmental health, land area affected by human activities, and membership in international environmental organizations. We also arranged with a few data holders to construct custom data sets for us; this was the case with our use of the Innovest EcoValue '21 and Dow Jones Sustainability Group Index variables.

In spite of these efforts, major gaps remain. We were unable to locate useful data, for example, on toxic waste contamination, on lead poisoning or exposure, on wetland loss, on compliance with domestic environmental regulations, on extent of natural resource subsidies, or on the number of dangerous nuclear power plants. All of these issues have important theoretical and practical links to environmental sustainability. Each deserves policymaker attention at the national and global scales.

In the following sections we report in more detail how we dealt with four sets of indicators that are often considered to be of high global priority: freshwater resources, biodiversity loss, terrestrial ecosystems, and environmental health.

Freshwater Resources

Water Availability

One of the problems we encountered with existing data sets on internal renewable water resources by country is that they are compiled from many different sources, and they sometimes include and sometimes exclude water flowing from and to other countries. This quote from the data appendix

to the World Resource Institute's (WRI) *World Resources 2000-2001* report illustrates the dilemma: "When data for annual river flows *from* and *to* other countries are not shown, the internal renewable water resources figure *may* include these flows. When such data are shown, they are *not* included in a country's total internal renewable water resources." Although the WRI report is one of the best compilations of water availability figures, the ambiguity of the data definition, and the fact that the data come from eleven different sources, render them less useful for globally comparative analyses.

To address this problem, we worked with hydrological modelers at the Center for Environmental Systems Research at the University of Kassel in Germany to perform some special runs of their WaterGAP 2.1b model (WaterGAP stands for Water Global Assessment and Prognosis; Alcamo, *et al.*, 2000). WaterGAP belongs to a class of environmental models called "integrated" models that were first developed during the 1980s to study large-scale environmental problems. The advantage of the WaterGAP model is that it is based on a consistent set of methodologies utilizing actual hydrological data on precipitation, evaporation, and river flows from 1961-1990. These data were converted by the modelers to a 0.5° by 0.5° latitude-longitude grid (approximately 50km x 50 km at the equator, and 50km on the north-south side and 25km on the east-west side at a latitude of 60 degrees). The model estimates the impact of evaporation, which greatly affects water availability, as well as consumption in upstream nations. The internal renewable water resources data represent 1961-1990 average annual flow of rivers and recharge of groundwater generated from endogenous precipitation, taking into account evaporation losses from lakes and wetlands. The inflow data represent 1961-90 average annual inflow of rivers flowing from other countries, taking into account the loss due to consumptive water use in those countries.

The disadvantage of using WaterGAP is that, owing to the grid cell size (as described above), the model does not easily accommodate "micro-states" such as small islands or city-states. Where possible, we made use of alternative data for these countries.

Water Quality

We obtained original water quality data sets from the UNEP-Global Environmental Monitoring System/Water group (GEMS/Water). The GEMS system yields a consistent data set for 45 countries for a wide range of water quality indicators. We selected from the GEMS/Water data set a smaller sub-set of variables based on the extent of country coverage for each variable, and the degree to which the variable is recognized as an important measure of water quality. We arrived at the following four indicators:

Dissolved oxygen: This is a "headline" indicator for water. It tracks eutrophication levels, and is positively related with stream flow and inversely related to nitrogen and phosphorous levels. The U.S. National Research Council report (2000) listed dissolved oxygen as one of four indicators that provide crucial measures of ecosystem health.

Suspended solids: This is a measure of turbidity, and would be associated most closely with people's visual assessment of what clean water looks like. In heavily agricultural areas with high erosion levels, suspended solids levels can be quite high (e.g., the Ganges or the Yellow River). There is a fairly high natural component to suspended solids in rivers, and the concentration of suspended solids tends to increase in proportion to discharge levels. However, when aggregated across water bodies at the national level, this measure remains an important means of assessing water quality.

Phosphorus concentration: This is a measure of the level of eutrophication: phosphorous is a limiting nutrient for plant photosynthesis in fresh water environments. There is not much natural component measured by this indicator, so we can be reasonably certain that we are measuring anthropogenic impacts on water bodies.

Electrical conductivity: This is a bulk measure of the concentration of metals or salt in the water. Electrical conductivity is one of the most rapid and inexpensive measurements that can be made to assess water quality, and therefore its measurement is precise and widespread. Conductivity of water is affected by the presence of inorganic dissolved solids such as chloride, nitrate, sulfate and phosphate anions, or sodium,

magnesium, calcium, iron and aluminum cations. It is important to note that geology can have a large impact of electrical conductivity. Streams that run through bedrock areas tend to have a lower conductivity whereas streams that run through soils tend to have a higher conductivity.

One limitation of the GEMS water quality data is that the participating countries provide data from monitoring stations that vary in number and which may be located in quite different locations with respect to water quality stressors (e.g., industry and agriculture) within the same country, and from country to country. This makes it challenging to aggregate station data within countries, and also makes it somewhat difficult to compare the resulting measures across countries. Because there is no alternative, however, the GEMS data are what we used. In the interest of developing a more comprehensive worldwide water database with a carefully constructed analytical protocol, support needs to be provided to the GEMS/Water program in order to expand its country coverage.

Biodiversity Loss

The objective of these variables is to derive a relative measure of how well a country is managing its biodiversity, as measured by percent of known species threatened. Biodiversity describes the complexity of life and includes the number, variety and variability of living organisms. Biological diversity is commonly defined in terms of at least three hierarchies: genes, species and ecosystems (WCMC, 1992). The species level was selected for this ESI variable. The logic behind this decision is that species data are readily available and for certain taxonomic groups (such as birds and mammals) and fairly reliable. This approach is, however, limited by the current state of knowledge of species numbers, differences in taxonomic classifications and the assumption that organisms that differ greatly from each other contribute more to the overall diversity than those which are very similar (WCMC, 1992).

Biodiversity loss occurs both directly and indirectly—directly through such activities as hunting and indirectly through activities such as habitat destruction and modification. At the species level, loss means extinction in the wild.

Two species-level variables were calculated, percentage of breeding birds threatened and percentage of mammals threatened. Bird species are well known (Collar *et al.*, 1994) and mammals species relatively well known. There is less confidence in the reliability of the number of species of vascular plants, reptiles, amphibians and fishes, and so these data were not used in the ESI.

For the purposes of the ESI, it is not useful to compare the number of existing species in each country because countries obviously cannot make additions to their natural species diversity. Countries do, however, have control over how likely the species found in their country are to go extinct.

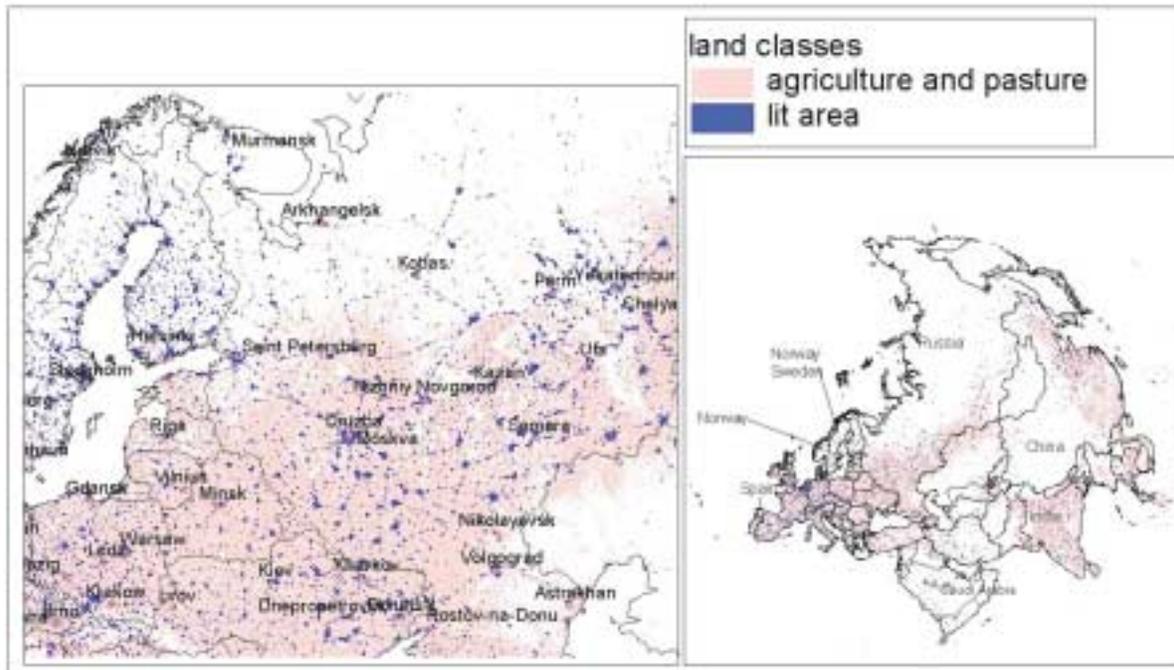
Dividing the number of threatened species in a country by the total number of known species gives an estimate of how well a country is managing different groups of species. Threatened is defined as taxa falling into one of three categories: Critically Endangered, Endangered or Vulnerable, all measures of likelihood of extinction in the wild.

Terrestrial Ecosystems

Anthropogenic Impacts on Land

We created a new variable from selected global datasets that seeks to provide a measure of land affected by human activity within a country. The variable bundles several environmental stresses, including ecological impact of natural vegetation clearing, the environmental impact of specific land use activities and the efficiency of land resource use by a country. At present the variable is experimental and in a developmental stage.

Clearing of natural vegetation results in habitat fragmentation and degradation. If the land is converted to agriculture, there can also be economic and ecological costs from increased soil salinity. If the land is converted to urban area, the change is generally irreversible, resulting in increases in the extent of impermeable surfaces (pavement) and, potentially, pollution-generating activities. There is a direct relationship between cleared natural vegetation and biodiversity loss, including species extinction (Brooks *et al.*, 1999). The anthropogenic impact variable represents an inventory-based approach proxy measure of biodiversity loss to complement the current species based ESI biodiversity variable (see section on biodiversity

Figure 4. Map Depicting the Agricultural, Pasture and Lit Areas in Europe and Asia

loss above). To be useful, it is important to know the area and also type of natural vegetation cleared.

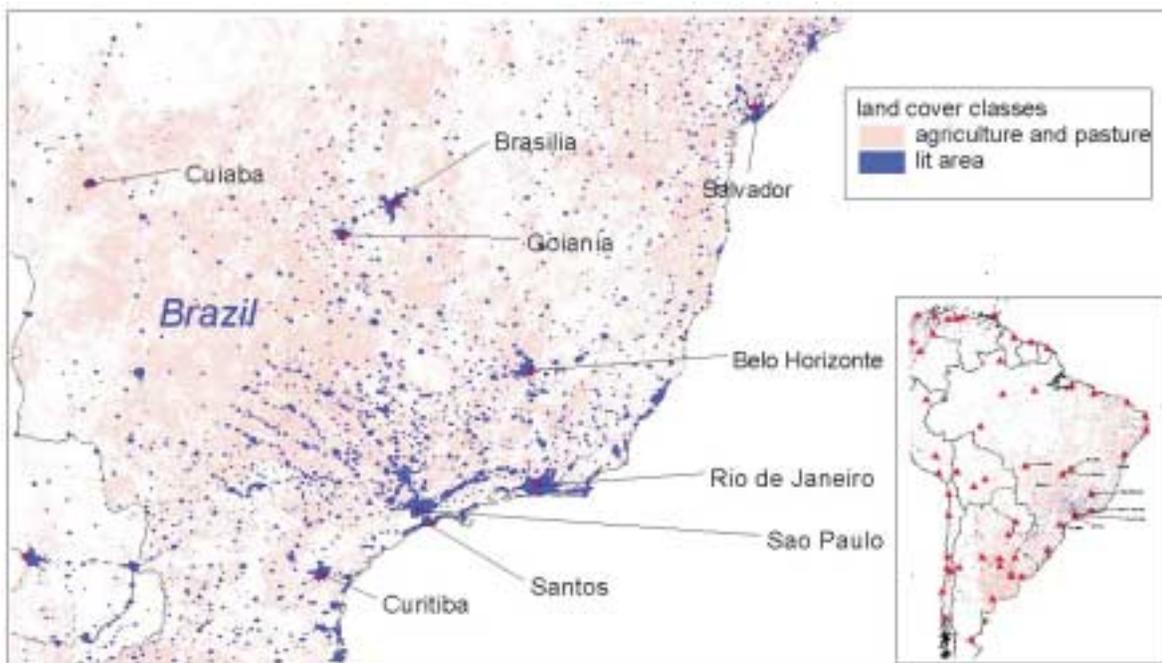
Two types of anthropogenic impacts were identified: the built environment and agricultural (including pasture) land. Two satellite-derived global datasets were combined to estimate the area of land in each country affected by anthropogenic activities. Estimates of built environment were derived from the Nighttime Lights data set and estimates of agricultural land from the Global Land Cover Characteristics (GLCC) database. An estimate of the percent of built environment and agricultural land provides a proxy for the amount of natural vegetation cleared. Two complications are immediately obvious: plantation style forested areas are not included, and some pastureland is natural grassland. Nonetheless, a relative measure of land cleared of its natural vegetation cover is possible.

The methodology was as follows. Version 2.0 of the Global Land Cover Characterization (GLCC) database was obtained for each region (North America, South America, Eurasia, Asia-Pacific and Africa) in Lambert Azimuthal Equal Area projection from an ftp site (edcftp.cr.usgs.gov). Land cover classes over 10% of the earth's surface

were revised for version 2.0 based on user feedback (Brown *et al.*, 1999) and broad lessons learned from validation exercises (Scepan, 1999; Muchoney *et al.*, 1999). This version of the database is still based on the 1992-1993 satellite data, and therefore, represents the land cover patterns for that period. The USGS Land Use/Land Cover System Legend (Modified Level 2) was selected for this application.

Urban areas for the GLCC product were extracted from the Digital Chart of the World (Defense Mapping Agency, 1992). A visual inspection of the urban class indicated that not all built environment areas were represented, so the Lights at Night dataset was used as an alternative. The Lights at Night dataset captures a wider range of human activity including residential, commercial, industrial, public facilities and roadways (Elvidge *et al.*, 1999).

Elvidge *et al.* (1997a, 1997b) have applied the time series data from the Defense Meteorological Satellite Program (DMSP) Operational Linescan System (OLS) as processed by the NOAA National Geophysical Data Center in Colorado to inventory human settlements. The data product selected for the ESI application was the stable lights for city areas. This data product has been fil-

Figure 5. Map Depicting the Agricultural, Pasture and Lit Areas in South America

tered for clouds, gas flares, fishing lights and fires and thresholded based on the frequency a particular grid cell is lit. This global data layer is at a nominal resolution of 1km and represents data for October 1994 to March 1995.

The two datasets were combined in the following fashion. A global binary version of the stable lights for city areas was created resulting in a grid of lit or not lit areas. The global data set was then cut and projected to match the GLCC database regions. The lit areas from the lights at night dataset were then “added” to the GLCC, replacing the previous classification.

To estimate anthropogenically affected areas, the areas for relevant classes in the composite dataset were tabulated by country. The USGS Land Use/Land Cover System Legend has five classes that include cropland and/or pasture. These are: Dryland Cropland and Pasture, Irrigated Cropland and Pasture, Mixed Dryland/Irrigated Cropland and Pasture, Cropland/Grassland Mosaic and Cropland/Woodland Mosaic. Areas for these five classes and the lights at night derived lit area class were combined resulting in the square kilometers of anthropogenic impact. The land area affected by human activity calculated from the composite dataset was divided by the land area of the coun-

try, as reported in the ESRI global country dataset, to calculate the percent of land area affected.

Acidification Exceedance

The objective of this variable was to assess the degree to which terrestrial ecosystems were affected by acidification due to sulfur deposition from industrial air pollution. We calculated the percentage of each country at risk of acidification, based on the “Exceedance of Critical Loads for Terrestrial Ecosystems” map obtained from the Stockholm Environment Institute (SEI) at York, United Kingdom. Critical loads are the maximum amount of deposition a given area can receive before suffering ecological damage. This map was produced as follows (Kuylenstierna *et al.*, 2000):

1. Creation of sulfur deposition map. The Global Emission Inventory Activity (GEIA) sulfur emission inventory for 1990 was used and integrated in the MOGUNTIA model to calculate sulfur deposition. In addition, a model for global emission, transfer and deposition of soil dust (*base cation deposition*) was used. The base cation deposition, and particularly the calcium content, is a measure of the ability of the ecosystem to neutralize the acidifying depositions. Two deposition ranges (10 % of calcium content and 100%) were used in the

model. The acidic deposition derived from sulfur emissions is calculated as sulfur deposition minus the base cation deposition rate.

2. Creation of sensitivity to acidic deposition map. A method that combines three classes of Cation Exchange Capacity with five classes of base saturation to define five classes of sensitivity was implemented and applied to the digital FAO Soil Map of the World.
3. Conversion of sensitivity map to critical loads map. The conversion was made based on the assumption that the critical load is equal to the buffering rate (weathering rate) of the soil.
4. Production of the exceedance of critical loads map. This was obtained by combining the acidic deposition (1) and critical loads (3) maps.

For 1990, Stockholm Environment Institute at York produced two maps of exceedance of critical loads:

- High Risk, obtained by using low critical loads and 10% calcium content of modeled dust
- Low Risk, obtained by using high critical loads and 100% calcium content in dust.

Given the small variability in exceedance values from the Low Risk map, we decided to use only the High Risk map for inclusion in the ESI. The areas at risk have been summed within each country and then the percentage of a country at risk of exceedance was calculated.

Environmental Health _____

The concept of environmentally related diseases has begun to gain currency, but to date nobody has produced indicators of diseases that are attributable to environmental conditions. The Global Burden of Disease (GBD) study was a step in this

direction. It produced some measures of countries' burden of disease for 1990, and among the diseases included were a number that could be directly traced to environmental factors (see <http://www.hsph.harvard.edu/organizations/bdu>). Smith *et al.* (1999) analyzed the Global Burden of Disease numbers, and demonstrated that of all the diseases included in the GBD study, acute respiratory infections (ARI) and diarrheal diseases were most linked to environmental conditions. They conclude that "25-33% of the global burden of disease can be attributed to environmental risk factors. Children under 5 years of age seem to bear the largest environmental burden, and the portion of disease due to environmental risks seems to decrease with economic development."

Utilizing a large data set from the World Health Organization, we extracted age and sex specific deaths by country for the most recent years available (we utilized no data older than 1990) for the two classes of disease mentioned above: ARI and intestinal infectious diseases. In the first case, we produced an indicator called "Child Death Rate from Respiratory Diseases," which measures deaths from respiratory diseases (WHO classes B31 & B320 & B321) per 100,000 population aged 0-14 (utilizing UN population data broken down by age). The diseases in this category included acute tonsillitis, acute laryngitis and tracheitis, other acute upper respiratory infections, deflected nasal septum and nasal polyps, chronic pharyngitis, nasopharyngitis and sinusitis, chronic diseases of tonsils and adenoids, acute bronchitis and bronchiolitis, pneumonia, and other.

For the intestinal infectious diseases, we followed a similar procedure, except we calculated standardized death rates for each country's entire population that were comparable across countries. The diseases in this category included cholera, typhoid fever, shigellosis, food poisoning, amoebiasis, intestinal infections due to other specified organism, ill-defined intestinal infections, and other.

How Should the Index's Inputs be Weighted?

Nominally, all the inputs into the Environmental Sustainability Index receive equal weight. The 22 indicators are calculated by averaging the values of the appropriate variables. The Index score is calculated by averaging the 22 indicators. No variable or indicator gets more weight than any other.

In fact, however, there are implicit weights that derive from the structure we impose on the Environmental Sustainability Index. We identify seven separate indicators of social and institutional capacity, for example, but only two indicators of human vulnerability. Implicitly we are giving capacity measures more than three times the weight of vulnerability measures.

Not everyone will agree with the implicit weights reflected in this Index. Unfortunately, disputes over the appropriateness of our weights cannot be easily resolved. There is no agreed prioritization among competing environmental issues, and there are no independent measures of environmental sustainability to use as an empirical check. We took three separate steps to address the issue of weights.

First, we explored two techniques for assigning weights based on empirical relationships among the variables. Both these techniques proved to be unfruitful.

In the first instance we sought to construct a time series on a subset of the data that spanned the five components, in an effort to identify causal relationships that could be used as the basis for assigning differential weights. Variables with stronger causal impacts would receive stronger weights. In the end this effort failed for the simple reason that robust time series data across a relevant range of indicators were impossible to construct.

The other such technique we employed was “principal components analysis,” in which we sought to identify statistically patterns of variation within the data that would allow us to assign differential weights to variables based on their ability to discriminate efficiently among the observations. This was also unsatisfying. The principal components identified using this technique failed to conform with any analytically or intuitively plausible set of expectations; fifteen components were identified

but these included variables from disparate sets of indicators and, more problematically, assigned negative weights to many variables. The fact that we identified a relatively large number of principal components is confirmation of our assumption that environmental sustainability is a complex, highly heterogeneous phenomenon. But it does not help us determine the appropriate weights for variables.

Second, we conducted a survey of environmental experts and members of the business community to determine their views on the relative importance of the indicators used in the Index. The survey asked respondents to rank, on a scale of 1-5, the relative importance of the indicators that comprise the Index. A total of 254 surveys were received, representing 73 countries. One major set of respondents was identified at the October 2000 meeting of the World Conservation Congress in Amman, Jordan (n=158). The survey was circulated in person at that meeting. The other was the World Economic Forum Global Leaders of Tomorrow (GLT) membership (n=58); GLT members were sent the survey by the WEF. A smaller number of questionnaires (n=36) was circulated at other meetings of environmental experts during the fall of 2000 – each of these meetings was attended by recognized experts from a range of countries.

We drew two conclusions from this survey. First, we noted significantly lower importance scores for an indicator we had been developing on “exposure to environmental disasters.” The opinion that this indicator should be lower in relative importance was observed across regions, across sectors, and across income levels of the respondents’ home countries. In the end we dropped the environmental disasters indicator. In addition to being judged to be of lower importance it had weak variables available to measure it. Second, the other variables were close together – in virtually all cases occupying overlapping 95-percent confidence intervals. Although the Environmental Sustainability Index scores are different if we apply these weights, in the end we decided not to use them because we did not have confidence that they reflected a meaningful set of differences.

A sensitivity analysis suggests further that the weighting methodology developed would not have

changed the rankings in any appreciable fashion. In particular, we calculated an Index score using the survey-generated weights (and applying the average weight for the two indicators that were not part of the survey). The average shift in rank was only 1.7 places out of 122.

Finally, to acknowledge the diversity of views as to the appropriate weights, we have experimented with an interactive version of the Index that operates on a desktop computer and permits users to alter weights and view the results.

Table 9. Results of ESI Indicator Weighting Survey

Indicator	Average Weight
Urban Air Quality	3.8
Water Quantity	3.6
Water Quality	3.9
Biodiversity	3.9
Land	3.7
Air Pollution	3.8
Water pollution and consumption	3.9
Ecosystem Stress	4.0
Waste Production & Consumption Pressure	3.6
Population	3.5
Basic Sustenance	3.5
Public Health	3.5
Disasters Exposure	2.8
Science and Technical Capacity	3.0
Capacity for Policy Debate	3.3
Environmental Regulation & Management	3.5
Tracking Environmental Conditions	3.3
Eco-efficiency	3.3
Public Choice Failures	3.6
Contribution to Int'l Cooperation	3.0
Impact on Global Commons	3.5

Conclusions and Next Steps

Societies are setting ambitious goals concerning sustainability. The Index reported here is intended to contribute to the success of these efforts by making it possible to quantify goals, measure progress and benchmark performance. The ESI will also facilitate more refined investigation into the drivers of environmental sustainability, and help to draw special attention to “best practices” and areas of success as well as lagging performance and potential disasters.

Notably, the ESI:

- provides tangible measures of environmental sustainability, filling a major gap in the environmental policy arena;
- creates a foundation for shifting environmental decision-making onto a more analytically rigorous foundation;
- contains a single measure of environmental sustainability as well as three additional levels of aggregation to meet a wide range of policy and research needs;
- strikes a useful balance between the need for broad country coverage and the need to rely on high-quality data that are often of more limited country coverage.
- builds on an easily understood database using a methodology that is transparent, reproducible, and capable of refinement over time.

The Index is not without its weaknesses. In particular, it:

- assumes a particular set of weights for the Index constituents that imply a set of priorities and values that may not be universally shared;
- relies in some instances on data sources of less than desirable quality;
- suffers substantive gaps attributable to a lack of comparable data on a number of high priority issues;
- lacks time series data, preventing any serious exercise in validation and limiting its

value as a tool for identifying empirically the determinants of good environmental performance.

The ESI remains a “work in progress.” A number of refinements of the analysis need to be undertaken to deepen our understanding of environmental sustainability and how to measure it:

1. A major investment in data gathering and data creation is clearly called for. We recommend a pluralistic approach to filling critical data gaps, making use of existing international organizations where they are capable, but filling in where they are not with strategies that draw upon networks of scientists, local and regional officials, industries, and non-governmental organizations. The world is sufficiently better connected, better skilled, and better equipped that we need not rely on the institutions of a century ago to meet the needs of the present.
2. Because there are a variety of value judgments and significant scientific uncertainties about causality, it is necessary to augment the Environmental Sustainability Index with a flexible information system that permits users to apply their own value judgments or to experiment with alternative causal hypotheses. We have tried to advance this objective by creating an interactive version of the Index that operates on a desktop computer and by making our data and methods as transparent as possible. More could be done along these lines, including tools to facilitate more powerful integration of environmental sustainability data from different sources.
3. We need more sophisticated methods for measuring and analyzing information that comes from different spatial scales. Environmental Sustainability is a function of the interaction of mechanisms that operate at the level of ecosystems, watersheds, firms, households, economic sectors and other phenomena that we are not well equipped to understand as parts of a whole. The modest efforts to integrate information from different spatial scales utilized in this Index need to be evaluated, improved and supplemented.

4. Consistent measurements over time are vital to create the ability to carry out robust investigations into cause-effect relationships. These measurements should evolve as data availability and aggregation techniques improve. But they must remain fully transparent and adequately archived for it to be possible to con-

duct meaningful scientific investigation. In addition to continuing measurements into the future, it is possible that retrospective measurements of certain variables could permit more rigorous causal analysis.

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Annex 1. Data Aggregation Methodology

This annex discusses in detail the data aggregation methodology underlying the construction of the Index.

After collecting data from appropriate sources, we sought to make the observations as comparable as possible across countries. Initially we divided most observed values by total population, income or land area. We quickly discovered, however, that dividing by total land area had the unintended consequence of rewarding countries with large land areas. We therefore constructed a measure of populated land area, by calculating the area within each country with a population density of 5 or more persons per square kilometer. For some densely populated countries this value was equal to the total area, but for others it was far lower. The values are shown in Table A1. The ESI has only a small correlation with total land area (0.14) that is not statistically significant. The correlation with population density is also small (-0.07) and not significant. The correlation with the percentage of area meeting our threshold cutoff of 5 persons per square kilometer is somewhat significant (-0.19, significant at .05 level).

Once we adjusted the data for population, income or land area, we sought to impute values for missing data. We excluded from the imputation process variables that were derived in a manner that deliberately excluded certain countries or otherwise made imputation untenable. We then calculated bivariate correlations among the variables in the data set, including a set of external benchmarks such as the Human Development Index and GDP per capita. Where correlations were high and there was a plausible justification for presuming the variables to be related, we estimated missing values using those variables. We estimated 574 missing values, for 21 variables, using this method. We then calculated predicted values for the remaining missing values using the three variables in the data set that on average had the strongest correlations with the variables – the Human Development Index, GDP per capita, and Graft. We compared these three predicted values and assigned the worst as the imputed value. We chose the worst value so as to avoid rewarding countries for failing to report data. We estimated 586 missing values for 47 variables using this second method. Altogether,

then, we generated imputed values for 62 percent of the missing values in our data set.

Imputation permits us to generate a score for each of the 22 indicators for each country. Had we not imputed missing data some countries would lack values for up to three indicators. After generating the Index scores we explored whether our imputation procedure introduced any bias. We compared our ESI with a version of the ESI with no imputation; the correlation is 0.97. The correlation is lower, obviously, for countries with more missing data. Among the third of countries missing the most data the correlation is 0.85, while it is 0.99 for the third missing the least data. In general countries at lower income levels are missing more data (correlation = 0.68); therefore we looked for bias in the imputation process against low income countries. We found a slight correlation between the imputation effect and per capita income (0.16) that was not statistically significant.

Variables with highly skewed distributions were transformed by taking the base-10 log. This was done for the 14 variables having a skewness measure greater than 5.

We set substantive thresholds for two variables. Caloric intake as a percentage of daily requirements was assigned an upper threshold of 120%, so that countries exceeding this value did not receive additional credit. Projected population growth rates to 2050 were assigned a lower threshold of 0, so that countries whose populations are projected to decline were considered no more sustainable than countries that are projected to remain stable over the next 50 years.

We then truncated the observations to the 95 percent level. That is, for each variable we took values in the bottom 2.5 percentile and forced them to be equal to the 2.5 percentile level; we did the same for the 97.5 percentile. We did this for two reasons. First, we were less confident about the accuracy of data at the extreme tails of the distribution. And second, we intended the Index to be utilized as a primarily comparative measure, and we did not want very extreme outliers to become benchmarks for the entire population; truncation makes the variables more justifiably comparable.

Table A1. Percentage of Country's Territory Populated at 5 persons/Km2 or Higher

Country	%	Country	%	Country	%
Albania	100	Greece	100	Pakistan	100
Algeria	15	Guatemala	87	Panama	77
Argentina	32	Haiti	99	Papua New Guinea	60
Armenia	100	Honduras	83	Paraguay	35
Australia	3	Hungary	100	Peru	45
Austria	100	Iceland	3	Philippines	97
Azerbaijan	99	India	100	Poland	100
Bangladesh	100	Indonesia	86	Portugal	98
Belarus	100	Iran	99	Romania	100
Belgium	93	Ireland	100	Russian Federation	19
Benin	100	Israel	100	Rwanda	100
Bhutan	84	Italy	100	Saudi Arabia	42
Bolivia	24	Jamaica	100	Senegal	86
Botswana	17	Japan	98	Singapore	91
Brazil	40	Jordan	57	Slovak Republic	100
Bulgaria	100	Kazakhstan	22	Slovenia	100
Burkina Faso	95	Kenya	48	South Africa	50
Burundi	100	Kuwait	94	South Korea	98
Cameroon	83	Kyrgyz Republic	85	Spain	86
Canada	4	Latvia	100	Sri Lanka	100
Central African Republic	37	Lebanon	100	Sudan	53
Chile	39	Libya	6	Sweden	53
China	65	Lithuania	100	Switzerland	98
Colombia	50	Macedonia	99	Syria	100
Costa Rica	100	Madagascar	78	Tanzania	98
Croatia	100	Malawi	100	Thailand	99
Cuba	96	Malaysia	67	Togo	100
Czech Republic	100	Mali	31	Trinidad and Tobago	95
Denmark	100	Mauritius	99	Tunisia	72
Dominican Republic	100	Mexico	70	Turkey	100
Ecuador	60	Moldova	100	Uganda	100
Egypt	18	Mongolia	6	Ukraine	100
El Salvador	99	Morocco	76	United Kingdom	94
Estonia	100	Mozambique	71	United States	38
Ethiopia	90	Nepal	93	Uruguay	100
Fiji	99	Netherlands	100	Uzbekistan	53
Finland	54	New Zealand	22	Venezuela	41
France	98	Nicaragua	78	Vietnam	100
Gabon	9	Niger	21	Zambia	54
Germany	100	Nigeria	100	Zimbabwe	93
Ghana	100	Norway	40		

Table A2. Summary of ESI Data Aggregation Methodology

1	Collect data.
2	Make variables comparable where necessary by dividing by population, income or populated land area.
3	Impute missing data where appropriate.
4	Take logs of highly skewed variables.
5	Set substantive thresholds where appropriate.
6	Truncate distributions to 95-percent range.
7	Standardize variables to permit aggregation.
8	Calculate 22 indicators by averaging underlying variables.
9	Calculate ESI averaging 22 indicators and calculating standard normal percentile (5 Components calculated in same way).

We standardized the variables to make aggregation possible. We calculated the Z score (value minus mean, divided by standard deviation) for those variables for which high observed values corresponded to high levels of environmental sustainability. For variables where high observed values corresponded to low levels of environmental sustainability (for example, pollution levels) we standardized by dividing mean minus value by the standard deviation. Annex 4 explains the properties of Z scores.

The 22 indicators were then calculated by taking the average of the constituent variables' Z scores.

The Environmental Sustainability Index was calculated by taking the average of the 22 indicators, and then converting this value to a standard normal percentile. We chose percentile so as to end up with a number with greater intuitive under-

standing than a z score. We use the standard normal percentile because we do not wish to assume that the highest and lowest observed average in our data set corresponds to maximum and minimum levels of environmental sustainability, respectively. Rather, we consider a more reasoned assumption to be that our figures represent a range of estimates of an actual distribution that is in fact wider – wherever minimum and maximum environmental sustainability might be, we are fairly confident that they are outside our measured range.

For the measures of the five components that we report in the country profiles, we also calculate the standard normal percentile of the underlying average scores, based on the same logic.

Table A2 summarizes these steps.

Annex 2. Relationship to 2000 Pilot ESI

The analysis in this report builds on the Pilot Environmental Sustainability Index (World Economic Forum, 2000) released in January 2000. The Pilot ESI represented our first pass at collecting the requisite data and designing an appropriate methodology to rank national environmental sustainability. The Pilot proved to be a valuable learning exercise, and has helped us to refine the ESI methodology applied here.

More than five thousand copies of the 2000 Pilot Index were distributed through web sites and in print versions, and dozens of personal presentations were made over the year in a range of developed and developing countries. This outreach generated a significant set of commentaries on the Index, some published and some communicated directly to us. In addition, we commissioned a set of focused peer reviews on the part of recognized international experts on environmental sustainability indicators. These critiques proved to be especially helpful in focusing the ESI team on the central methodological issues.

Based on the commentaries and criticisms, we made a number of changes in data and methods. Notably, we:

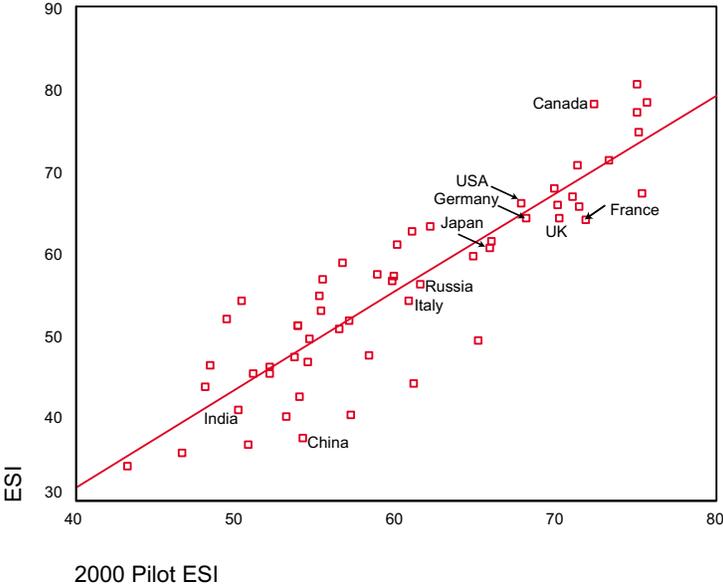
- dropped the indicator on Exposure to Environmental Disasters based on an assessment of its low importance relative to the other indicators, and concerns over the quality of the underlying variables;
- added indicators on Global-Scale Funding/Participation and on Private Sector Responsiveness to take into account the high importance associated with those factors;
- utilized a set of strategies to cope with gaps in data coverage, including reliance on global model data and selective imputation of missing data;

- created three new data sets from scratch to help fill gaps in high priority areas (Child Death Rates from Respiratory Diseases, Death Rate from Intestinal Infectious Diseases Deaths, and Land Area Affected by Human Activities);
- changed the aggregation scheme in important ways. We utilized standardized variable scores as the basic unit of aggregation as opposed to an arithmetic 0-100 scale; we truncated the extreme outliers; and we took the base 10 log of highly skewed variables. These steps all were designed to make the values for the individual variables more robustly comparable prior to the aggregation steps; and
- broadened the coverage from the 56 countries in the 2000 Pilot to the 122 covered here.

Although these differences are significant and, we think, markedly improve the Index, the core approach has not changed. Twenty of the twenty-two indicators remain the same; more than half of the variables remain in the index; and the basic methodological approach remains based on a comparative aggregation strategy. For the 56 countries that appear in both the 2000 Pilot and the current Index, the correlation is 0.89 (see Figure A1).

We did not adopt every change suggested, and some critics will continue to be disappointed with the assumptions and methodological choices we have made. We discuss some of the recurring criticisms and issues in the “Frequently Asked Questions” section of this report, found in Annex 3. Measuring environmental sustainability and performance is not an easy thing to do. We recognize that an such exercise must remain open to criticism and refinement. In this spirit, we see the ESI as a “work in progress” and intend to continue to refine it over time.

Figure A1. Relationship Between the 2001 ESI and the 2000 Pilot ESI



Annex 3. Frequently Asked Questions

Over the past year the 2000 Pilot Environmental Sustainability Index generated a number of criticisms, commentaries and suggestions, and has elicited a number of questions. We provide below some of the most common questions and criticisms, along with our responses.

1. Isn't Russia's score too high?

Russia received a score of 61.5 in the 2000 Pilot ESI (22nd of the 56 countries), which many commentators considered to be anomalously high given what we know about Russian environmental conditions. We agreed with this assessment, and discussed it in the Pilot report. We suspected that a combination of faulty data, inadequate mechanisms to control for countries with large uninhabited land areas, and a mismatch between the particular kinds of environmental problems Russia is suffering and the types of data collected through global efforts all combined to create this situation.

For the current index we sought to improve the quality of the data where possible and to more precisely apply our inhabited land area control. We also thought that the creation of two new environmental health measures would help address the problem, though that was not the primary motivation. Russia's score is lower in the current Index (56.2) but still probably too high. As Feshbach (1995) and others have documented, Russian environmental conditions are catastrophic.

Faulty and missing data are most likely driving this continuing anomaly, we believe. Consider the environmental health measures. Russia is one of the only industrial countries in history ever to experience a decline in life expectancy, and environmental health problems are rampant. Yet Russia reports to the World Health Organization a set of deaths from intestinal infections about equal to the World median (in between the United Kingdom and Norway), and does not report any information on deaths from acute respiratory diseases. Russia's self-reported water quality data are similarly out of sync with its well-documented water quality problems.

We could have adjusted these scores based on the individual studies that have been done on Russia's environmental conditions. We deliberately chose

not to because we thought it would dilute the ability of the Environmental Sustainability Index to measure conditions in a comprehensive, global and consistent manner. For each country-specific change we might implement based on particular knowledge of that country, there would be an unknown number of equally compelling changes that we didn't know enough to make. Over time we are committed to strategies that will reduce anomalies across the board by improving the data and methods for all countries.

2. Isn't Singapore's score too low?

Singapore, widely considered to be a well-managed, prosperous country, received a relatively low score (46.8) in the 2000 Pilot Index. It was a clear outlier in explorations of the relationship between the Pilot Index and GDP per capita. Some commentators suggested that Singapore's unexpectedly low score reflected a flaw in the Index's methodology. They suggested that had we adequately taken into account Singapore's high population density, its existence as a city-state with virtually complete urbanization, and the fact that it occupies a small island, we would have arrived at a higher, more accurate, score for Singapore.

We do not agree with these suggestions. There are compelling analytical reasons to believe that small islands with large populations and considerable economic activity will approach, if not exceed, the limits of environmental sustainability. We do not wish to "control" for such factors; in fact we wish to do precisely the opposite: to illuminate cases where such limits are being approached.

This does not mean that we are critical, either implicitly or explicitly, of the choices Singapore has made. To the contrary, given its limited environmental endowments and many natural resource challenges, Singapore performs remarkably well. In a number of critical areas, especially ones that go to performance such as the eco-efficiency of the economy, Singapore's results are top-notch. In fact, if one estimates ESI as a function of income and population density, Singapore's observed ESI is higher than its estimated score. Singapore's data demonstrate that wise management can dramatically reduce a nation's exposure to environmental threats even where critical sustainability thresh-

olds are close by. The fact remains, however, that any country experiencing the extreme levels of environmental stress (especially in terms of water) that one observes in Singapore is in danger of exceeding fundamental environmental limits. We believe the Environmental Sustainability Index as constructed accurately flags such danger points.

3. Isn't the ESI biased in favor of rich countries?

Environmental Sustainability Index scores correlate positively with per-capita wealth. Some other global sustainability metrics are negatively correlated with wealth, and advocates of those alternatives have suggested that our methods may reflect a rich country bias. The World Wildlife Fund's Consumption Pressure Index, for example, has a correlation of 0.56 with the ESI, and assigns bad scores to a number of countries with high ESI scores. Norway is rated as placing the highest pressure on the environment by the WWF, for example, yet is ranked second best in our Index. The Ecological Footprint has a similar relationship to the ESI.

Our Index does correlate differently with wealth than do these other indexes, but that does not reflect an inherent bias in favor of wealthy countries, any more than these other indexes reflect a bias in favor of poor countries. Rather, these indexes differ because of different emphases they place on competing aspects of environmental sustainability.

The Consumption Pressure Index and the Ecological Footprint place all their emphasis on extraction of natural resources and emissions of greenhouse gases. We share the belief that these are both important features to measure and to which attention should be drawn. In fact, both the Consumption Pressure Index and the Ecological Footprint are inputs into the ESI. But we believe that environmental sustainability is a broader concept. Thus, the

ESI includes data on a much wider set of issues. The ESI, for example, measures environmental threats to human health, and captures local-level environmental dynamics (such as air and water quality). For many of these local-level environmental issues wealthy countries exhibit superior results. Water quality is better in Norway than it is in Bangladesh.

If one examines the graphs on the country profile pages, one can see that there is a distinct pattern among the wealthiest countries in which relatively good scores on most of the dimensions are contrasted with comparably poorer scores on the environmental stresses. We think this is an accurate portrayal of the environmental sustainability conditions in the rich countries of the world. We don't believe that the rich countries' good scores on some measures get them "off the hook" for their poor scores on other measures, any more than the consumption-based indexes imply that low levels of consumption pressure make up for poor sanitation or water quality. The Environmental Sustainability Index permits us to track relevant conditions and actions in an objective and useful manner.

4. Isn't the Index biased in favor of countries with large land areas?

In part because countries with large expanses of relatively uninhabited land areas scored notably high in the 2000 Pilot Index, some observers concluded that there was a systematic bias in favor of such countries. However, this is not the case.

For the countries in the 2001 Environmental Sustainability Index, the relevant correlations are found in Table A3.

These weak correlations are not entirely due to coincidence. As discussed in detail in the methodology section of this report in Annex 1, we were

Table A3. Correlation between 2001 ESI and select density and land area indicators

	Correlation
Population Density	-0.06
Percent of territory with population density greater than 5 persons per square km.	-0.19*
Total Land Area	-0.08
Land Area inhabited at greater than 5 persons per square km	0.14

* Statistically significant at .05 level

careful not to assume that pollution would be spread across total land areas. Instead, precisely because we wished to avoid biasing results toward large countries, we divided environmental stress variables by populated land area, using a specially constructed measure of land area inhabited at greater than 5 persons per square kilometer.

The modest significant correlation with percent of land area populated at greater than 5 persons per square kilometer reflects not a bias, but rather an empirical relationship. The more of a country's territory that is populated at this level, the more likely it is to be stressing the environment in measurable ways.

5. Why don't we assign different weights to the indicators?

A large number of critics have pointed out that it is highly unlikely that our approach of assigning equal weights to the indicators in the Environmental Sustainability Index reflects a defensible conclusion about the actual proportional contributions that these indicators make to environmental sustainability. We agree. But, as we discuss in the main body of this report, no viable strategies for determining robust differential weights currently exist.

If there were an independent, accepted measure of environmental sustainability we could assign weights based on their ability to match that measure efficiently and accurately. But environmental priorities and values vary widely based on development status, existing pollution levels, population density, and other factors. If principle components analysis generated a set of components that both discriminated efficiently among the observations in our data set and comported with accepted understandings of environmental sustainability, we could use such analysis to assign different weights.

But the data do not generate principle components with these characteristics. If there were reliable time series data for a meaningful cross-section of our data, we could use causal analysis to assign differential weights based on an assessment of differences in predictive power. But there are no adequate time series data on most environmental variables.

Under the circumstances we think we have taken a sensible approach. We have arrived at five broad categories of indicators based on analytical judgments that are defensible. Within these broad categories we have identified a set of 22 indicators based on a combination of analytical judgments about their causal role in environmental sustainability dynamics, on their overall substantive importance to environmental sustainability, and on the viability of available measurements. Lacking any other basis, we assign these 22 indicators equal weight.

To help make this approach more rigorous we conducted a survey of environmental experts and activists, which is described in more detail in the main body of this report. We dropped the indicator that was considered to be of lowest importance; the others revealed roughly comparable levels of importance as measured by the survey.

We have been very open and transparent in identifying the weighting issue as an ongoing question. In fact, we have developed an interactive version of the ESI (available at <http://www.ciesin.columbia.edu/indicators/ESI>) to permit users to apply their own weights.

Annex 4. Component & Indicator Scores

This section provides tables summarizing the country scores for each of the ESI components and indicators, sorted in order from highest to lowest scores. Note that the component scores are presented as standardized normal distributions ranging from a theoretical low of 0 to a high of 100. The indicator scores are presented as averages of the constituent variable values. These variable values, as described in Annex 1, are in the form of Z scores, with zero indicating the mean for the 122

countries, +1 and -1 respectively representing one standard deviation above and below the mean, +2 and -2 respectively representing two standard deviations above and below the mean, and so on. In a “normal,” bell-shaped distribution, 68 percent of the scores will fall between +1 and -1, 95 percent between +2 and -2, and 99.7 percent between +3 and -3. The actual distributions vary from variable to variable.

Component: Environmental Systems

This component includes the following indicators:

- Air Quality
- Water Quantity
- Water Quality
- Biodiversity
- Terrestrial Systems

High numbers represent higher sustainability.

Canada	91.2
Norway	87.4
Finland	85.3
Sweden	79.3
Iceland	79.1
Gabon	78.0
Venezuela	72.6
Argentina	71.2
Colombia	70.5
Bolivia	70.1
Ireland	69.7
Uruguay	69.7
Central African Republic	67.7
Botswana	66.3
Nicaragua	66.2
Peru	66.1
Austria	65.8
Australia	65.7
Paraguay	65.6
Russian Federation	65.4
Mali	64.6
Papua New Guinea	64.4
Slovenia	63.8
United States	63.1
Ecuador	62.6
Mongolia	61.3
Slovak Republic	60.9
Switzerland	60.3
Estonia	59.1
France	58.8
Portugal	58.8
Latvia	58.3
Ghana	58.2
Zimbabwe	58.1
United Kingdom	58.1
Brazil	58.0
Netherlands	58.0
Lithuania	57.9
New Zealand	57.6
Croatia	57.0
Denmark	57.0

Trinidad and Tobago	56.6
Cameroon	56.5
Bhutan	55.8
Benin	55.0
Honduras	54.5
Zambia	53.7
Belarus	53.6
Chile	53.3
Czech Republic	53.3
Malaysia	52.9
Germany	51.6
Costa Rica	51.2
El Salvador	51.0
Panama	50.8
Guatemala	50.7
Togo	50.6
Hungary	50.4
Mozambique	50.4
Japan	50.3
Armenia	50.3
Malawi	50.2
Kenya	49.9
Moldova	49.4
Kazakhstan	48.8
Sudan	48.0
Libya	47.7
Senegal	47.1
Uzbekistan	46.9
Spain	46.8
Israel	46.1
Nepal	46.0
Cuba	45.8
Egypt	45.6
Niger	45.0
Singapore	44.6
Albania	44.6
Greece	44.2
Tanzania	44.2
Syria	43.9
Pakistan	43.4
South Africa	43.4

Kyrgyz Republic	42.8
Uganda	42.7
Nigeria	41.6
Algeria	40.7
Bangladesh	40.1
Fiji	40.1
Tunisia	39.9
Kuwait	39.8
Saudi Arabia	39.0
Azerbaijan	38.8
Lebanon	38.8
Macedonia	38.7
Mauritius	38.3
Turkey	38.1
Burkina Faso	37.4
Jordan	37.1
Romania	36.8
Italy	36.8
Thailand	36.3
South Korea	35.1
Iran	34.9
Rwanda	34.8
Poland	34.2
Jamaica	33.8
Indonesia	33.5
Vietnam	33.2
Ukraine	32.8
Dominican Republic	32.2
Burundi	31.5
Ethiopia	31.5
Sri Lanka	29.5
Morocco	29.5
Bulgaria	25.7
Belgium	25.5
Mexico	25.0
India	24.0
Madagascar	23.4
Philippines	22.0
China	20.8
Haiti	12.2

Component: Reducing Stresses

This component includes the following indicators:

- Reducing Air Pollution
- Reducing Water Stress
- Reducing Ecosystem Stress
- Reducing Waste and Consumption Pressures
- Reducing Population Pressure

High numbers represent higher sustainability.

Kazakhstan	76.8
Armenia	74.2
Mongolia	73.8
Mozambique	71.2
Russian Federation	69.8
Cuba	68.9
Zimbabwe	68.8
Moldova	68.7
Kyrgyz Republic	67.8
Argentina	67.5
Estonia	66.5
Belarus	66.0
Central African Republic	65.6
Albania	65.4
Azerbaijan	65.2
Uzbekistan	64.8
Peru	64.5
Lithuania	64.4
Hungary	64.1
Bolivia	64.0
Bhutan	62.9
Brazil	62.6
Romania	62.1
Uruguay	62.0
Kenya	60.9
Rwanda	60.4
Colombia	60.4
Panama	60.1
Morocco	59.9
Bulgaria	59.2
Botswana	59.1
Croatia	59.1
Venezuela	58.9
Cameroon	58.9
Chile	58.6
Madagascar	58.4
Turkey	58.1
Finland	58.0
Dominican Republic	57.8
Indonesia	57.8
South Africa	57.7

Niger	57.5
Mexico	57.2
India	57.0
Sri Lanka	57.0
Sudan	56.4
Iran	56.4
New Zealand	56.3
Bangladesh	56.3
Ethiopia	55.5
Greece	55.3
Latvia	55.2
Gabon	55.2
Malawi	54.9
Ecuador	54.2
Mali	54.1
Fiji	54.1
Nicaragua	54.0
Sweden	53.9
Algeria	53.6
Ghana	53.5
Burkina Faso	52.6
Spain	52.6
China	52.6
Norway	52.3
Portugal	52.2
Papua New Guinea	52.2
Tunisia	52.1
Tanzania	51.9
Togo	51.9
Uganda	51.8
Senegal	51.5
Canada	51.2
Thailand	50.8
Australia	50.4
Nepal	50.3
Slovak Republic	49.5
Honduras	49.5
Haiti	49.3
Nigeria	49.3
Zambia	48.5
Egypt	48.3

Pakistan	47.9
Vietnam	45.8
Ukraine	45.7
Poland	45.5
Trinidad and Tobago	44.8
Switzerland	44.8
Jamaica	44.5
Syria	44.3
Burundi	44.3
Ireland	44.2
Slovenia	43.4
El Salvador	43.3
Guatemala	42.8
Benin	42.4
Libya	41.6
Mauritius	41.3
France	40.9
Italy	40.7
Paraguay	40.0
Macedonia	37.8
Austria	37.1
United States	37.0
Philippines	36.8
Germany	35.2
Saudi Arabia	35.0
Costa Rica	34.5
Malaysia	31.9
Jordan	31.8
Czech Republic	31.0
Denmark	30.6
Iceland	27.9
Japan	25.4
Netherlands	23.7
United Kingdom	23.7
Lebanon	21.3
Kuwait	20.0
Israel	17.8
Singapore	16.8
South Korea	14.2
Belgium	10.0

Component: Reducing Human Vulnerability

This component includes the following indicators:

- Basic Human Sustenance
- Environmental Health

High numbers represent higher sustainability.

Japan	83.0
Denmark	82.9
Switzerland	82.9
Germany	82.8
France	82.8
Iceland	82.7
Canada	82.6
Slovenia	82.6
Italy	82.6
Ireland	82.4
Norway	82.4
United Kingdom	82.3
New Zealand	82.3
Spain	82.3
United States	82.3
Singapore	82.1
Israel	81.7
Hungary	81.6
Greece	81.5
Slovak Republic	81.5
Australia	81.3
Belgium	81.2
Portugal	81.0
Mauritius	80.5
Austria	80.5
Czech Republic	80.3
Bulgaria	80.0
Kuwait	79.5
Netherlands	79.4
Poland	79.0
Finland	78.5
South Korea	78.4
Croatia	78.4
Sweden	77.6
Estonia	77.5
Lithuania	77.2
Costa Rica	77.2
Cuba	76.4
Russian Federation	76.0
Belarus	75.4
Moldova	73.4
Latvia	72.4
Lebanon	72.2
Malaysia	70.7
Saudi Arabia	70.4
Trinidad and Tobago	69.1
Kazakhstan	68.4
Ukraine	68.0
Iran	67.9
Argentina	66.3
Macedonia	65.9
Uruguay	65.6
Chile	65.2
Colombia	63.3
Mexico	62.7
Armenia	62.4
Turkey	62.4
Paraguay	61.8
Jordan	61.8
Brazil	61.1
Tunisia	59.5
Azerbaijan	58.7
Syria	56.5
Libya	56.2
South Africa	56.1
Uzbekistan	55.8
Jamaica	53.7
Kyrgyz Republic	53.0
Indonesia	52.7
Egypt	51.1
Romania	50.6
Panama	50.0
Philippines	49.5
Sri Lanka	49.4
China	49.1
Morocco	49.1
Thailand	48.5
Albania	48.3
Algeria	46.2
Venezuela	45.9
Guatemala	45.0
Fiji	44.8
Dominican Republic	43.9
Ecuador	43.1
Honduras	43.0
Botswana	40.5
Nicaragua	37.9
Vietnam	36.0
Zimbabwe	33.8
El Salvador	33.6
India	32.7
Peru	32.3
Pakistan	26.3
Gabon	24.5
Nepal	23.5
Papua New Guinea	18.0
Senegal	16.8
Ghana	16.4
Bhutan	16.2
Mongolia	15.5
Bangladesh	13.8
Sudan	13.5
Bolivia	13.1
Cameroon	13.0
Togo	10.6
Kenya	8.1
Tanzania	7.7
Benin	7.7
Madagascar	7.5
Nigeria	6.9
Uganda	6.4
Mali	6.4
Zambia	5.8
Haiti	5.5
Burkina Faso	4.3
Burundi	4.1
Malawi	4.1
Central African Republic	4.0
Niger	3.1
Mozambique	3.0
Rwanda	2.3
Ethiopia	1.7

Component: Social and Institutional Capacity

This component includes the following indicators:

- Science/Technology
- Capacity for Debate
- Regulation and Management
- Private Sector Responsiveness
- Environmental Information
- Eco-Efficiency
- Reducing Public Choice Distortions

High numbers represent higher sustainability.

Switzerland	92.3
Finland	91.2
Denmark	87.4
Netherlands	87.1
United Kingdom	86.6
Sweden	86.3
Norway	85.3
Iceland	84.1
United States	83.4
New Zealand	83.3
Austria	83.2
Australia	82.8
Japan	82.8
Germany	82.5
Canada	82.5
France	80.7
Israel	72.9
Ireland	72.5
Costa Rica	68.8
Belgium	68.2
Spain	66.9
Italy	66.7
Portugal	66.5
Slovenia	66.2
Singapore	65.2
Chile	60.6
South Korea	60.2
Slovak Republic	60.0
Czech Republic	60.0
Uruguay	59.9
Fiji	57.1
Hungary	56.6
Argentina	56.2
Estonia	54.0
Sri Lanka	53.9
Panama	53.7
Brazil	53.1
Bolivia	51.7
Latvia	50.7
Nepal	49.7
South Africa	49.7

Botswana	49.5
Croatia	49.3
Lithuania	49.1
Mauritius	48.0
Thailand	47.6
Malaysia	47.1
Greece	46.6
Uganda	46.2
Cuba	46.2
Ecuador	45.8
Poland	45.8
Dominican Republic	45.6
Guatemala	45.1
Mexico	44.6
El Salvador	44.5
Paraguay	43.8
India	43.7
Peru	43.7
Honduras	43.1
Russian Federation	42.5
Turkey	42.4
Pakistan	42.1
Egypt	41.7
Tanzania	41.1
Colombia	41.0
Zimbabwe	40.8
China	40.4
Nicaragua	40.4
Jordan	40.4
Malawi	39.9
Ghana	39.8
Albania	39.6
Armenia	39.3
Burkina Faso	38.7
Macedonia	38.4
Jamaica	38.4
Romania	38.4
Bhutan	38.3
Morocco	37.9
Kenya	37.8
Philippines	37.8

Zambia	37.8
Lebanon	37.6
Mali	37.5
Central African Republic	36.2
Moldova	36.0
Rwanda	35.4
Senegal	34.4
Indonesia	34.3
Mongolia	34.3
Madagascar	34.2
Gabon	34.1
Mozambique	34.0
Trinidad and Tobago	34.0
Bulgaria	33.5
Bangladesh	33.2
Papua New Guinea	33.1
Venezuela	32.8
Burundi	32.7
Togo	32.1
Tunisia	31.6
Cameroon	31.4
Benin	30.6
Ethiopia	29.6
Kuwait	29.4
Belarus	28.6
Haiti	28.5
Ukraine	28.2
Nigeria	28.2
Azerbaijan	27.8
Iran	27.2
Kyrgyz Republic	26.8
Algeria	25.5
Sudan	25.4
Niger	25.2
Syria	24.9
Vietnam	23.9
Kazakhstan	21.5
Uzbekistan	20.5
Saudi Arabia	18.1
Libya	18.1

Component: Global Stewardship

This component includes the following indicators:

- International Commitment
- Global Scale Funding/Participation
- Protecting International Commons

High numbers represent higher sustainability.

Czech Republic	80.6
Sweden	80.5
Slovak Republic	80.0
Netherlands	75.6
Switzerland	75.3
New Zealand	74.9
Bulgaria	74.3
Norway	73.9
Mauritius	73.8
Costa Rica	72.7
Canada	72.1
Finland	69.9
Uruguay	69.8
Lithuania	69.8
Australia	69.5
Denmark	68.4
Austria	67.6
Belgium	67.4
Bolivia	67.3
Hungary	67.3
Malaysia	66.3
Papua New Guinea	66.1
Panama	66.0
Germany	66.0
Azerbaijan	64.7
Uganda	64.2
Sri Lanka	63.9
France	63.7
United Kingdom	61.8
Cameroon	61.5
Nicaragua	60.6
Mali	60.1
Senegal	59.9
Ghana	58.3
Japan	58.3
Mozambique	57.9
Central African Republic	57.6
Greece	57.6
Latvia	56.5
United States	56.4
Peru	56.3
Niger	56.1
Spain	55.9
Guatemala	55.9
Tunisia	55.5
Mongolia	55.4
Jamaica	55.4
Poland	55.3
Brazil	55.2
Benin	54.9
Italy	54.8
South Africa	54.6
Burkina Faso	54.2
Kenya	53.0
Egypt	52.9
Portugal	52.9
Pakistan	52.5
Mexico	52.2
Nepal	51.6
Zimbabwe	51.3
Madagascar	50.4
Gabon	50.1
Argentina	50.1
Cuba	50.0
Ireland	49.8
Ecuador	49.5
Iceland	48.3
Dominican Republic	48.1
Malawi	47.4
Bangladesh	47.4
Slovenia	47.3
Trinidad and Tobago	46.6
Indonesia	46.4
Philippines	45.6
Venezuela	45.2
Jordan	44.9
India	44.3
Colombia	44.1
Tanzania	43.7
Thailand	43.3
Chile	43.2
Lebanon	42.6
Vietnam	42.4
Sudan	42.2
Honduras	41.6
Togo	41.5
Zambia	41.4
Algeria	41.3
Botswana	41.0
Uzbekistan	40.9
Turkey	39.2
Morocco	39.0
Singapore	39.0
Paraguay	38.6
Syria	38.1
El Salvador	37.4
Bhutan	36.7
Ethiopia	36.4
Belarus	36.3
Romania	35.9
Croatia	34.4
Israel	34.1
Estonia	33.8
Russian Federation	33.8
Fiji	33.1
China	31.0
South Korea	30.7
Ukraine	30.2
Armenia	28.6
Burundi	27.9
Macedonia	27.5
Haiti	25.8
Iran	24.9
Rwanda	23.5
Nigeria	22.7
Moldova	20.1
Albania	19.3
Kuwait	18.4
Saudi Arabia	15.8
Kyrgyz Republic	15.7
Libya	13.7
Kazakhstan	11.4

Indicator: Air Quality

This indicator includes the following variables:

- Urban Sulfur Dioxide (SO₂) Concentration
- Urban Nitrogen Dioxide (NO₂) Concentration
- Urban Total Suspended Particulates (TSP) Concentration

High numbers represent higher sustainability; zero represents the mean.

New Zealand	1.62
Cuba	1.58
Sweden	1.45
Australia	1.45
Malaysia	1.36
Finland	1.28
Iceland	1.13
Lithuania	1.10
Spain	1.03
Norway	1.02
Slovak Republic	1.00
Switzerland	0.99
Canada	0.98
Germany	0.95
Austria	0.94
Belarus	0.93
Singapore	0.91
Czech Republic	0.88
Portugal	0.78
Argentina	0.76
France	0.70
Denmark	0.69
Netherlands	0.63
United States	0.61
Thailand	0.60
Ireland	0.58
Belgium	0.52
Slovenia	0.52
Israel	0.48
Turkey	0.41
United Kingdom	0.41
Bangladesh	0.40
Kuwait	0.36
Latvia	0.35
Hungary	0.32
Estonia	0.32
South Africa	0.29
Croatia	0.28
Japan	0.28
Macedonia	0.22
Sri Lanka	0.21
Ecuador	0.20
Venezuela	0.19
Romania	0.18
Mongolia	0.17
Kenya	0.17
Moldova	0.16
Vietnam	0.15
Armenia	0.14
Uruguay	0.12
Nicaragua	0.11
Mauritius	0.11
Trinidad and Tobago	0.07
Albania	0.06
Panama	0.05
Morocco	0.02
Bhutan	0.00
Jordan	0.00
Colombia	0.00
Nepal	-0.03
Russian Federation	-0.03
Tunisia	-0.03
India	-0.06
Ghana	-0.06
Fiji	-0.08
Peru	-0.10
Jamaica	-0.13
Lebanon	-0.14
Pakistan	-0.14
Mali	-0.14
Botswana	-0.16
South Korea	-0.19
Saudi Arabia	-0.20
Bolivia	-0.21
Ukraine	-0.27
Philippines	-0.28
Zimbabwe	-0.29
Kyrgyz Republic	-0.29
Dominican Republic	-0.29
Syria	-0.30
Poland	-0.32
Honduras	-0.33
Kazakhstan	-0.34
Algeria	-0.34
Libya	-0.34
Paraguay	-0.38
Uzbekistan	-0.38
Azerbaijan	-0.40
Indonesia	-0.40
Gabon	-0.41
Papua New Guinea	-0.42
Madagascar	-0.44
Togo	-0.45
Costa Rica	-0.47
Rwanda	-0.49
Greece	-0.49
Cameroon	-0.50
Sudan	-0.53
Haiti	-0.53
El Salvador	-0.55
Senegal	-0.56
Zambia	-0.58
Uganda	-0.59
Nigeria	-0.60
Benin	-0.61
Malawi	-0.63
Tanzania	-0.63
Central African Republic	-0.64
Brazil	-0.67
Chile	-0.69
Mozambique	-0.74
Italy	-0.74
Burundi	-0.75
Egypt	-0.79
Ethiopia	-0.80
Burkina Faso	-0.81
Niger	-0.98
Guatemala	-1.08
Iran	-1.65
Bulgaria	-1.87
China	-2.24
Mexico	-2.58

Indicator: Water Quantity

This indicator includes the following variables:

- Internal Renewable Water Per Capita
- Water Inflow from Other Countries Per Capita

High numbers represent higher sustainability; zero represents the mean.

Gabon	2.37
Bolivia	1.75
Colombia	1.74
Papua New Guinea	1.73
Canada	1.70
Peru	1.62
Central African Republic	1.50
Venezuela	1.49
Brazil	1.45
Uruguay	1.38
Norway	1.33
Paraguay	0.99
Nicaragua	0.94
Iceland	0.86
Ecuador	0.81
Costa Rica	0.79
Bhutan	0.73
Argentina	0.72
Croatia	0.72
Honduras	0.69
Russian Federation	0.69
Cameroon	0.68
Finland	0.66
Mongolia	0.62
Zambia	0.58
Chile	0.56
Slovenia	0.52
Mozambique	0.48
Latvia	0.46
Estonia	0.46
New Zealand	0.45
Guatemala	0.44
Bulgaria	0.42
Sweden	0.41
Malaysia	0.41
Ireland	0.39
Austria	0.38
Slovak Republic	0.33
Botswana	0.25
Thailand	0.23
Vietnam	0.22
Lithuania	0.22
Hungary	0.21
Benin	0.21
Kazakhstan	0.21
Romania	0.17
Zimbabwe	0.17
United States	0.16
Albania	0.15
Bangladesh	0.14
Nepal	0.08
Portugal	0.06
Moldova	0.05
Netherlands	0.04
Indonesia	0.04
Mali	0.03
Belarus	0.00
Niger	-0.03
Tanzania	-0.05
Greece	-0.09
Sudan	-0.10
Panama	-0.12
Azerbaijan	-0.13
El Salvador	-0.13
Uzbekistan	-0.15
Togo	-0.15
France	-0.16
Senegal	-0.17
Australia	-0.17
Mexico	-0.18
Ghana	-0.20
Germany	-0.21
Syria	-0.21
Fiji	-0.21
Nigeria	-0.22
Uganda	-0.24
Kenya	-0.28
Madagascar	-0.29
Rwanda	-0.29
Burundi	-0.31
Egypt	-0.34
Czech Republic	-0.35
Belgium	-0.36
Ukraine	-0.37
Armenia	-0.38
Malawi	-0.41
India	-0.42
Pakistan	-0.42
Iran	-0.48
Turkey	-0.50
Poland	-0.53
Dominican Republic	-0.62
Libya	-0.63
China	-0.64
Tunisia	-0.64
Haiti	-0.69
South Africa	-0.70
Jordan	-0.71
South Korea	-0.75
Burkina Faso	-0.76
Spain	-0.77
Italy	-0.79
United Kingdom	-0.80
Ethiopia	-0.85
Switzerland	-0.86
Singapore	-0.87
Kyrgyz Republic	-0.87
Philippines	-0.97
Algeria	-1.00
Jamaica	-1.00
Japan	-1.05
Macedonia	-1.05
Denmark	-1.05
Cuba	-1.09
Sri Lanka	-1.12
Trinidad and Tobago	-1.12
Lebanon	-1.19
Mauritius	-1.21
Morocco	-1.21
Israel	-1.22
Saudi Arabia	-1.23
Kuwait	-1.27

Indicator: Water Quality

This indicator includes the following variables:

- Dissolved Oxygen Concentration
- Phosphorus Concentration
- Suspended Solids
- Electrical Conductivity

High numbers represent higher sustainability; zero represents the mean.

Finland	1.85
Canada	1.54
New Zealand	1.53
United Kingdom	1.42
Japan	1.32
Norway	1.31
Russian Federation	1.30
South Korea	1.27
Sweden	1.19
France	1.13
Portugal	1.09
United States	1.04
Argentina	1.03
Hungary	0.93
Philippines	0.91
Switzerland	0.87
Ireland	0.86
Austria	0.85
Iceland	0.74
Australia	0.73
Netherlands	0.70
Mali	0.66
Brazil	0.64
Slovenia	0.63
Singapore	0.62
Greece	0.61
Cuba	0.60
Spain	0.58
Denmark	0.55
Iran	0.52
Italy	0.47
Uruguay	0.39
Kuwait	0.39
Poland	0.37
Colombia	0.27
Czech Republic	0.27
Ghana	0.23
Costa Rica	0.23
Chile	0.19
Bangladesh	0.18
Latvia	0.15
Estonia	0.11
Panama	0.11
Slovak Republic	0.10
Turkey	0.10
Trinidad and Tobago	0.10
South Africa	0.09
Croatia	0.09
El Salvador	0.08
Fiji	0.06
Bulgaria	0.04
Botswana	0.04
Venezuela	-0.01
Lithuania	-0.02
Jamaica	-0.04
Ecuador	-0.06
Germany	-0.06
Zimbabwe	-0.08
Peru	-0.08
Lebanon	-0.11
Romania	-0.13
Albania	-0.14
Egypt	-0.15
Sri Lanka	-0.16
Saudi Arabia	-0.18
Armenia	-0.19
Bolivia	-0.20
Cameroon	-0.20
Moldova	-0.22
Tanzania	-0.22
Belarus	-0.22
Macedonia	-0.23
Vietnam	-0.23
Mongolia	-0.24
Kenya	-0.26
Dominican Republic	-0.28
Kyrgyz Republic	-0.28
Nepal	-0.28
Syria	-0.29
Pakistan	-0.30
Guatemala	-0.30
Nicaragua	-0.32
Kazakhstan	-0.33
China	-0.33
Libya	-0.33
Papua New Guinea	-0.35
Malaysia	-0.35
Israel	-0.35
Honduras	-0.36
Paraguay	-0.37
Uzbekistan	-0.37
Azerbaijan	-0.39
Gabon	-0.40
Senegal	-0.42
Ukraine	-0.47
Bhutan	-0.49
Madagascar	-0.49
Togo	-0.53
Tunisia	-0.54
Thailand	-0.59
Haiti	-0.61
Nigeria	-0.62
Mozambique	-0.64
Algeria	-0.64
Zambia	-0.67
Mexico	-0.69
Benin	-0.70
Uganda	-0.70
Ethiopia	-0.74
Indonesia	-0.77
Malawi	-0.77
Mauritius	-0.77
Rwanda	-0.78
Central African Republic	-0.81
Burundi	-0.95
Burkina Faso	-1.00
Niger	-1.04
Sudan	-1.06
Jordan	-1.26
India	-1.31
Morocco	-1.36
Belgium	-2.25

Indicator: Biodiversity

This indicator includes the following variables:

- Percentage of Mammals Threatened
- Percentage of Breeding Birds Threatened

High numbers represent higher sustainability; zero represents the mean.

El Salvador	1.65
Nicaragua	1.60
Trinidad and Tobago	1.53
Guatemala	1.25
Togo	1.16
Botswana	1.15
Burkina Faso	1.15
Canada	1.12
Zimbabwe	1.11
Honduras	1.07
Malawi	1.05
Benin	1.03
Albania	1.01
Central African Republic	0.96
Burundi	0.91
Moldova	0.89
Zambia	0.86
Uganda	0.83
Armenia	0.80
Estonia	0.76
Gabon	0.76
Rwanda	0.76
Belarus	0.74
Paraguay	0.71
Latvia	0.69
Ghana	0.67
Denmark	0.66
Finland	0.61
Senegal	0.61
Ireland	0.61
Norway	0.59
United Kingdom	0.58
Niger	0.58
Iceland	0.58
Panama	0.53
Sudan	0.53
Venezuela	0.53
Costa Rica	0.52
Lithuania	0.49
Sweden	0.45
Cameroon	0.44
Switzerland	0.42
Syria	0.40
Nigeria	0.40
Mozambique	0.39
Mali	0.37
Uzbekistan	0.35
Kyrgyz Republic	0.35
Austria	0.34
Slovak Republic	0.32
Bolivia	0.30
Belgium	0.29
Netherlands	0.26
Uruguay	0.26
Czech Republic	0.23
Germany	0.22
Lebanon	0.19
Mongolia	0.17
Macedonia	0.17
Jordan	0.16
Kazakhstan	0.15
Slovenia	0.13
Croatia	0.10
Ecuador	0.07
Italy	0.06
Poland	0.05
Colombia	0.04
Argentina	0.04
Azerbaijan	0.02
Kenya	0.02
Tanzania	0.01
South Africa	-0.01
Peru	-0.03
Libya	-0.03
France	-0.06
Hungary	-0.10
Ethiopia	-0.13
Israel	-0.15
Tunisia	-0.18
Ukraine	-0.22
Greece	-0.23
Singapore	-0.25
Pakistan	-0.26
Turkey	-0.28
Mauritius	-0.29
Mexico	-0.29
Iran	-0.31
United States	-0.36
Nepal	-0.38
Algeria	-0.38
Russian Federation	-0.39
Bhutan	-0.40
Sri Lanka	-0.40
Portugal	-0.45
Bulgaria	-0.49
Romania	-0.53
Saudi Arabia	-0.54
Spain	-0.56
Morocco	-0.57
Malaysia	-0.62
Thailand	-0.64
Jamaica	-0.68
Chile	-0.70
Egypt	-0.75
Brazil	-0.78
Papua New Guinea	-0.79
Kuwait	-0.97
Australia	-0.99
China	-1.03
Dominican Republic	-1.07
Vietnam	-1.08
Indonesia	-1.14
India	-1.16
Bangladesh	-1.21
Cuba	-1.53
Japan	-1.58
South Korea	-1.91
Madagascar	-2.21
Philippines	-2.58
Fiji	-2.73
Haiti	-3.07
New Zealand	-3.37

Indicator: Terrestrial Systems

This indicator includes the following variables:

- Severity of Human Induced Soil Degradation
- Land Area Affected by Human Activities as a Percentage of Total Land Area

High numbers represent higher sustainability; zero represents the mean.

Fiji	1.70
Papua New Guinea	1.67
Gabon	1.54
Egypt	1.48
Norway	1.47
Canada	1.45
Central African Republic	1.29
Algeria	1.19
Japan	1.07
Chile	1.06
Paraguay	1.06
Libya	1.04
Australia	1.00
Bolivia	0.98
Mali	0.95
Sudan	0.90
Bhutan	0.88
Niger	0.85
Finland	0.84
Botswana	0.82
Venezuela	0.81
Malawi	0.78
Saudi Arabia	0.77
Israel	0.76
Iceland	0.75
New Zealand	0.72
Mongolia	0.71
Benin	0.69
Mauritius	0.67
Peru	0.67
Colombia	0.65
Ecuador	0.59
Sweden	0.59
Mozambique	0.56
Morocco	0.43
Uruguay	0.42
Russian Federation	0.41
Cameroon	0.41
Ghana	0.40
Brazil	0.39
Mexico	0.36
Kenya	0.33
Pakistan	0.29
Zambia	0.27
Trinidad and Tobago	0.26
Argentina	0.25
United States	0.22
Kuwait	0.20
Kyrgyz Republic	0.19
Senegal	0.18
China	0.18
Tanzania	0.16
Uzbekistan	0.16
Jordan	0.15
Kazakhstan	0.15
Ireland	0.15
Indonesia	0.14
Tunisia	0.12
Nepal	0.11
Zimbabwe	0.11
Ethiopia	0.10
Togo	0.04
Denmark	0.04
Iran	-0.02
Nigeria	-0.02
Slovenia	-0.04
Dominican Republic	-0.05
Cuba	-0.09
Switzerland	-0.12
Lebanon	-0.18
Burkina Faso	-0.20
Madagascar	-0.20
Uganda	-0.22
Guatemala	-0.22
Jamaica	-0.23
Nicaragua	-0.25
Croatia	-0.30
Armenia	-0.33
South Korea	-0.33
Syria	-0.37
Slovak Republic	-0.37
Portugal	-0.37
Malaysia	-0.44
Panama	-0.47
Austria	-0.48
Estonia	-0.50
South Africa	-0.50
Honduras	-0.50
France	-0.50
Greece	-0.52
Azerbaijan	-0.52
Macedonia	-0.55
India	-0.58
United Kingdom	-0.60
Latvia	-0.60
Czech Republic	-0.62
Netherlands	-0.62
Spain	-0.67
Italy	-0.68
Germany	-0.70
Bangladesh	-0.77
Lithuania	-0.79
Ukraine	-0.90
El Salvador	-0.91
Costa Rica	-0.92
Haiti	-0.93
Philippines	-0.94
Moldova	-0.96
Belarus	-0.99
Singapore	-1.08
Rwanda	-1.16
Sri Lanka	-1.23
Vietnam	-1.23
Turkey	-1.25
Burundi	-1.31
Hungary	-1.32
Thailand	-1.36
Bulgaria	-1.37
Romania	-1.39
Belgium	-1.48
Poland	-1.60
Albania	-1.75

Indicator: Reducing Air Pollution

This indicator includes the following variables:

- Nitrogen Oxide (NOx) Emissions Per Populated Land Area
- Sulfur Dioxide (SO₂) Emissions Per Populated Land Area
- Volatile Organic Compound (VOCs) Emissions Per Populated Land Area
- Coal Consumption Per Populated Land Area
- Vehicles Per Populated Land Area

High numbers represent higher sustainability; zero represents the mean.

Bhutan	1.36
Madagascar	1.29
Papua New Guinea	1.25
Mali	1.20
Mozambique	1.11
Niger	1.11
Peru	1.08
Ethiopia	1.06
Burkina Faso	0.99
Sudan	0.95
Fiji	0.92
Argentina	0.86
Tanzania	0.86
Bolivia	0.82
Mongolia	0.82
Nicaragua	0.80
Gabon	0.80
Morocco	0.79
Iran	0.79
Kazakhstan	0.78
Cameroon	0.77
Zimbabwe	0.75
Honduras	0.64
Panama	0.63
Central African Republic	0.60
Uruguay	0.60
Senegal	0.59
Zambia	0.57
Cuba	0.57
Pakistan	0.57
Ghana	0.55
Kyrgyz Republic	0.55
Chile	0.54
Costa Rica	0.52
Uganda	0.52
Kenya	0.52
Algeria	0.49
Tunisia	0.48
Colombia	0.48
Brazil	0.48
Paraguay	0.46
Dominican Republic	0.42
Malawi	0.39
Benin	0.38
Syria	0.36
Guatemala	0.34
New Zealand	0.34
Haiti	0.33
Nigeria	0.32
Saudi Arabia	0.32
Ecuador	0.27
Mexico	0.24
Sri Lanka	0.23
Indonesia	0.23
Togo	0.22
Russian Federation	0.22
Turkey	0.20
Belarus	0.19
Venezuela	0.19
Estonia	0.18
Sweden	0.18
Nepal	0.17
Uzbekistan	0.17
Latvia	0.15
China	0.09
Jordan	0.08
Thailand	0.08
Norway	0.08
India	0.07
Finland	0.06
El Salvador	0.04
Ireland	0.03
Malaysia	0.02
Albania	-0.06
Azerbaijan	-0.09
Vietnam	-0.09
Spain	-0.09
Philippines	-0.10
Lithuania	-0.13
South Africa	-0.13
Romania	-0.17
Botswana	-0.20
Singapore	-0.24
Portugal	-0.26
Ukraine	-0.28
Jamaica	-0.29
Armenia	-0.31
Egypt	-0.35
Macedonia	-0.36
Bangladesh	-0.41
Rwanda	-0.44
Mauritius	-0.45
Libya	-0.49
Moldova	-0.51
Canada	-0.51
France	-0.51
Hungary	-0.59
Iceland	-0.60
Bulgaria	-0.61
Italy	-0.61
United States	-0.64
Greece	-0.66
Burundi	-0.66
Switzerland	-0.69
Austria	-0.70
Croatia	-0.76
Poland	-0.76
Trinidad and Tobago	-0.81
Lebanon	-0.90
Slovenia	-0.99
Australia	-1.02
Kuwait	-1.06
Slovak Republic	-1.19
Germany	-1.44
United Kingdom	-1.45
Japan	-1.49
Denmark	-1.54
Israel	-1.72
Czech Republic	-2.42
South Korea	-2.48
Belgium	-2.88
Netherlands	-2.92

Indicator: Reducing Water Stresses

This indicator includes the following variables:

- Fertilizer Consumption Per Hectare of Arable Land
- Pesticide Use Per Hectare of Crop Land
- Industrial Organic Pollutants Per Available Fresh Water
- Percentage of Country's Territory Under Severe Water Stress

High numbers represent higher sustainability; zero represents the mean.

Central African Republic	1.06
Rwanda	1.05
Uganda	1.05
Gabon	0.98
Bhutan	0.96
Mozambique	0.93
Cameroon	0.90
Mongolia	0.79
Senegal	0.74
Madagascar	0.74
Russian Federation	0.71
Botswana	0.70
Burundi	0.68
Albania	0.67
Mali	0.66
Latvia	0.66
Togo	0.66
Ethiopia	0.60
Burkina Faso	0.57
Zambia	0.57
Nigeria	0.55
Lithuania	0.53
Haiti	0.52
Niger	0.52
Canada	0.52
Ghana	0.50
Nicaragua	0.48
Tanzania	0.47
Bolivia	0.47
Estonia	0.46
Paraguay	0.44
Panama	0.44
Indonesia	0.42
Uruguay	0.41
Argentina	0.41
Benin	0.41
Sweden	0.41
Zimbabwe	0.40
Venezuela	0.37
Brazil	0.37
Ecuador	0.37
Finland	0.36
Kenya	0.35
Malawi	0.35
Cuba	0.31
Romania	0.31
Norway	0.30
Hungary	0.26
Kazakhstan	0.25
Croatia	0.20
El Salvador	0.20
Bulgaria	0.20
Austria	0.20
Moldova	0.19
Czech Republic	0.17
Guatemala	0.17
Jamaica	0.13
New Zealand	0.13
Australia	0.13
Fiji	0.12
Peru	0.12
Thailand	0.11
Dominican Republic	0.10
Philippines	0.09
United States	0.07
Belarus	0.07
Bangladesh	0.05
Papua New Guinea	0.05
Poland	0.05
Ukraine	0.03
Slovak Republic	0.03
Turkey	-0.04
Colombia	-0.04
Armenia	-0.05
Nepal	-0.08
Mexico	-0.10
Honduras	-0.10
Germany	-0.12
Chile	-0.13
Switzerland	-0.13
Slovenia	-0.15
South Africa	-0.17
India	-0.17
Azerbaijan	-0.18
Malaysia	-0.19
Denmark	-0.19
Portugal	-0.25
Vietnam	-0.26
Libya	-0.26
Kyrgyz Republic	-0.31
Pakistan	-0.32
France	-0.32
Greece	-0.34
United Kingdom	-0.38
Algeria	-0.38
Ireland	-0.40
Iran	-0.43
Saudi Arabia	-0.51
Spain	-0.53
Syria	-0.54
Sri Lanka	-0.54
Morocco	-0.56
Japan	-0.57
Uzbekistan	-0.57
Sudan	-0.57
China	-0.58
Egypt	-0.64
Kuwait	-0.82
Netherlands	-0.84
Tunisia	-0.87
Lebanon	-0.93
Macedonia	-0.94
Costa Rica	-1.00
Trinidad and Tobago	-1.25
Jordan	-1.27
Italy	-1.28
Iceland	-1.30
South Korea	-1.39
Mauritius	-1.39
Singapore	-1.98
Israel	-2.13
Belgium	-2.20

Indicator: Reducing Ecosystem Stresses

This indicator includes the following variables:

- Percentage Change in Forest Cover 1990-1995
- Percentage of Country's Territory with Acidification Exceedence

High numbers represent higher sustainability; zero represents the mean.

Armenia	1.33
Uzbekistan	1.33
Greece	1.16
Kazakhstan	1.12
Hungary	0.83
Portugal	0.68
Lithuania	0.67
New Zealand	0.67
Belarus	0.67
Estonia	0.63
Australia	0.48
India	0.47
Azerbaijan	0.46
Egypt	0.46
Iceland	0.46
Israel	0.46
Kuwait	0.46
Kyrgyz Republic	0.46
Libya	0.46
Mauritius	0.46
Moldova	0.46
Mongolia	0.46
Niger	0.46
Singapore	0.46
Turkey	0.46
Russian Federation	0.46
Uruguay	0.45
Latvia	0.41
Rwanda	0.40
Finland	0.40
South Africa	0.40
Albania	0.39
Ukraine	0.37
Kenya	0.37
Argentina	0.37
Spain	0.36
Morocco	0.35
Peru	0.34
Canada	0.34
Croatia	0.34
Bhutan	0.34
Papua New Guinea	0.33
Chile	0.33
France	0.32
Central African Republic	0.30
Fiji	0.30
Burundi	0.30
Ethiopia	0.29
Brazil	0.29
Colombia	0.28
Botswana	0.27
Gabon	0.27
Tunisia	0.26
Zimbabwe	0.25
Cameroon	0.21
Senegal	0.21
Mozambique	0.20
United States	0.18
Burkina Faso	0.18
Saudi Arabia	0.16
Sudan	0.14
Norway	0.14
Madagascar	0.14
Japan	0.14
Bangladesh	0.13
Nigeria	0.13
Mexico	0.10
Uganda	0.09
Mali	0.09
Tanzania	0.09
Bulgaria	0.08
Sri Lanka	0.03
Nepal	0.03
Venezuela	0.03
Bolivia	0.00
China	0.00
Zambia	0.00
Italy	-0.01
Algeria	-0.02
Cuba	-0.03
Benin	-0.03
Ghana	-0.04
Romania	-0.08
Togo	-0.12
Indonesia	-0.14
Trinidad and Tobago	-0.16
Malawi	-0.17
Dominican Republic	-0.19
Ireland	-0.19
Ecuador	-0.20
Slovak Republic	-0.25
Iran	-0.26
Guatemala	-0.39
Panama	-0.44
Syria	-0.49
Sweden	-0.50
Honduras	-0.53
Switzerland	-0.57
Malaysia	-0.58
Jordan	-0.61
United Kingdom	-0.62
Nicaragua	-0.64
Slovenia	-0.66
Paraguay	-0.69
Thailand	-0.70
Netherlands	-0.76
Pakistan	-0.83
Costa Rica	-0.92
Austria	-0.96
Poland	-0.98
Germany	-0.99
Vietnam	-1.01
El Salvador	-1.06
Denmark	-1.07
Haiti	-1.16
Jamaica	-1.19
Lebanon	-1.19
Philippines	-1.19
South Korea	-1.25
Czech Republic	-1.36
Belgium	-1.52
Macedonia	-1.63

Indicator: Reducing Waste and Consumption Pressures

This indicator includes the following variables:

- Consumption Pressure Per Capita
- Radioactive Waste

High numbers represent higher sustainability; the mean is 0.07.

Azerbaijan	1.31
Moldova	1.31
Pakistan	1.31
Armenia	1.25
Kyrgyz Republic	1.23
Bangladesh	1.12
Sudan	1.08
Bolivia	1.08
Mongolia	1.05
Niger	1.02
Rwanda	0.98
Ethiopia	0.97
Mozambique	0.94
Madagascar	0.92
Haiti	0.92
Syria	0.91
Burundi	0.90
Nicaragua	0.85
Uganda	0.82
Dominican Republic	0.81
Central African Republic	0.81
Trinidad and Tobago	0.81
Burkina Faso	0.80
Zimbabwe	0.80
Algeria	0.79
Colombia	0.79
Nepal	0.78
Malawi	0.71
Uzbekistan	0.71
Morocco	0.69
Mali	0.68
Togo	0.66
Albania	0.64
Sri Lanka	0.64
Vietnam	0.64
Cuba	0.64
El Salvador	0.63
Venezuela	0.62
India	0.62
Iran	0.60
Kazakhstan	0.58
Peru	0.57
Macedonia	0.56
Nigeria	0.53
Jordan	0.50
Egypt	0.49
Honduras	0.49
Mexico	0.49
Romania	0.45
Cameroon	0.43
Panama	0.43
Bulgaria	0.42
Argentina	0.40
Jamaica	0.40
Guatemala	0.37
Croatia	0.37
Tanzania	0.37
Bhutan	0.36
Slovak Republic	0.34
Kenya	0.34
Benin	0.31
South Africa	0.30
Tunisia	0.29
Indonesia	0.28
Hungary	0.27
Ecuador	0.23
Turkey	0.18
Senegal	0.15
Botswana	0.14
Russian Federation	0.13
Brazil	0.13
Poland	0.12
Belarus	0.09
Netherlands	0.07
Chile	0.05
Czech Republic	0.05
Zambia	0.00
China	-0.01
Libya	-0.03
Slovenia	-0.08
Saudi Arabia	-0.12
Thailand	-0.12
Ghana	-0.13
Philippines	-0.18
Australia	-0.20
Gabon	-0.20
Estonia	-0.21
Switzerland	-0.22
Costa Rica	-0.24
Lithuania	-0.25
Mauritius	-0.35
Italy	-0.35
Germany	-0.39
Uruguay	-0.44
Spain	-0.50
Papua New Guinea	-0.50
Paraguay	-0.51
Denmark	-0.51
Greece	-0.54
Sweden	-0.54
Finland	-0.73
Fiji	-0.75
Belgium	-0.79
Ireland	-0.86
Portugal	-0.88
Canada	-0.92
Norway	-1.01
New Zealand	-1.03
Malaysia	-1.14
South Korea	-1.15
Lebanon	-1.21
Austria	-1.22
Israel	-1.34
France	-1.47
Latvia	-1.64
United States	-1.68
Ukraine	-1.70
United Kingdom	-1.99
Iceland	-2.14
Kuwait	-2.39
Japan	-2.42
Singapore	-2.63

Indicator: Reducing Population Pressure

This indicator includes the following variables:

- Total Fertility Rate
- Percentage Change in Projected Population Between 2000 and 2050

High numbers represent higher sustainability; zero represents the mean.

Bulgaria	1.08	Ireland	0.69	Mozambique	-0.39
Czech Republic	1.08	Australia	0.66	Kuwait	-0.40
Spain	1.08	Iceland	0.65	Singapore	-0.42
Latvia	1.08	Mauritius	0.62	Algeria	-0.43
Russian Federation	1.07	South Africa	0.58	Ghana	-0.44
Italy	1.07	Uruguay	0.52	Malaysia	-0.46
Estonia	1.07	Sri Lanka	0.51	Honduras	-0.56
Slovenia	1.06	Azerbaijan	0.44	Bolivia	-0.57
Belarus	1.05	United States	0.40	El Salvador	-0.66
Ukraine	1.05	Kyrgyz Republic	0.38	Malawi	-0.66
Greece	1.04	Albania	0.33	Rwanda	-0.67
Armenia	1.04	Brazil	0.32	Haiti	-0.70
Hungary	1.04	Chile	0.30	Libya	-0.74
Germany	1.03	Uzbekistan	0.27	Central African Republic	-0.77
Romania	1.03	Zimbabwe	0.26	Sudan	-0.80
Austria	1.03	Lebanon	0.25	Papua New Guinea	-0.85
Lithuania	1.03	Jamaica	0.25	Nepal	-0.86
Japan	1.03	Argentina	0.24	Syria	-0.95
Slovak Republic	1.02	Botswana	0.23	Paraguay	-0.96
Poland	1.01	Panama	0.23	Pakistan	-1.00
Croatia	1.00	Turkey	0.22	Nicaragua	-1.00
Portugal	0.99	Indonesia	0.20	Jordan	-1.06
Moldova	0.98	Vietnam	0.19	Togo	-1.19
Cuba	0.97	Mexico	0.18	Cameroon	-1.19
Switzerland	0.97	Israel	0.11	Gabon	-1.20
Belgium	0.96	Iran	0.10	Zambia	-1.33
Sweden	0.95	Tunisia	0.10	Bhutan	-1.37
Kazakhstan	0.92	Mongolia	0.06	Guatemala	-1.40
Finland	0.92	Morocco	-0.01	Senegal	-1.51
South Korea	0.92	Venezuela	-0.08	Tanzania	-1.54
Netherlands	0.88	Fiji	-0.08	Nigeria	-1.61
United Kingdom	0.86	Bangladesh	-0.10	Saudi Arabia	-1.77
Macedonia	0.83	India	-0.10	Burundi	-1.93
China	0.82	Ecuador	-0.14	Madagascar	-2.02
France	0.82	Dominican Republic	-0.16	Benin	-2.03
Denmark	0.78	Egypt	-0.17	Mali	-2.11
Norway	0.78	Kenya	-0.19	Niger	-2.17
Trinidad and Tobago	0.76	Colombia	-0.19	Burkina Faso	-2.21
Thailand	0.73	Peru	-0.25	Ethiopia	-2.23
Canada	0.72	Philippines	-0.31	Uganda	-2.26
New Zealand	0.70	Costa Rica	-0.36		

Indicator: Basic Human Sustenance

This indicator includes the following variables:

- Daily Per Capita Calorie Supply as a Percentage of Total Requirements
- Percentage of Population with Access to Improved Drinking-Water Supply

High numbers represent higher sustainability; zero represents the mean.

Belgium	0.97
Iceland	0.97
Japan	0.97
France	0.95
Germany	0.94
Ireland	0.93
Australia	0.92
Austria	0.92
Belarus	0.92
Bulgaria	0.92
Canada	0.92
Denmark	0.92
Lebanon	0.92
Mauritius	0.92
Norway	0.92
Singapore	0.92
Slovak Republic	0.92
Slovenia	0.92
Switzerland	0.92
United Kingdom	0.92
United States	0.92
Italy	0.92
New Zealand	0.92
Spain	0.91
Hungary	0.89
Russian Federation	0.87
Israel	0.87
Costa Rica	0.87
Greece	0.85
Portugal	0.82
Cuba	0.78
Egypt	0.78
Iran	0.78
Saudi Arabia	0.78
Czech Republic	0.77
Kuwait	0.75
Algeria	0.75
Poland	0.69
South Korea	0.69
Moldova	0.68
Netherlands	0.68
Estonia	0.66
Croatia	0.65
Finland	0.64
Lithuania	0.63
Malaysia	0.59
Kazakhstan	0.58
Latvia	0.56
Sweden	0.56
Macedonia	0.52
Mexico	0.51
South Africa	0.51
Turkey	0.42
Ukraine	0.41
Jordan	0.40
Morocco	0.39
Paraguay	0.34
Syria	0.33
Tunisia	0.33
Argentina	0.30
Brazil	0.30
Azerbaijan	0.29
Armenia	0.28
Trinidad and Tobago	0.27
Indonesia	0.21
Uzbekistan	0.20
Libya	0.10
Uruguay	0.09
Colombia	0.09
Kyrgyz Republic	0.02
Chile	0.02
Guatemala	0.00
Albania	-0.09
Philippines	-0.11
China	-0.14
Botswana	-0.16
Jamaica	-0.18
Bhutan	-0.20
India	-0.20
Honduras	-0.26
Pakistan	-0.28
Sri Lanka	-0.35
Panama	-0.35
Thailand	-0.36
Venezuela	-0.40
Dominican Republic	-0.43
Nepal	-0.45
Bangladesh	-0.46
Romania	-0.48
Ecuador	-0.54
Nicaragua	-0.55
Zimbabwe	-0.57
El Salvador	-0.58
Gabon	-0.61
Senegal	-0.62
Fiji	-0.68
Vietnam	-0.70
Benin	-0.82
Papua New Guinea	-1.03
Mali	-1.09
Peru	-1.10
Sudan	-1.15
Bolivia	-1.16
Mongolia	-1.19
Cameroon	-1.21
Ghana	-1.24
Togo	-1.29
Niger	-1.30
Nigeria	-1.44
Tanzania	-1.45
Zambia	-1.48
Burkina Faso	-1.52
Burundi	-1.57
Malawi	-1.65
Uganda	-1.65
Madagascar	-1.66
Central African Republic	-1.80
Mozambique	-1.80
Kenya	-1.84
Haiti	-1.93
Ethiopia	-2.33
Rwanda	-2.33

Indicator: Environmental Health

This indicator includes the following variables:

- Child Death Rate from Respiratory Diseases
- Death Rate from Intestinal Infectious Diseases
- Under-5 Mortality Rate

High numbers represent higher sustainability; zero represents the mean.

Denmark	0.97
Switzerland	0.97
Italy	0.96
Germany	0.96
Netherlands	0.96
Sweden	0.96
Canada	0.95
Slovenia	0.95
Greece	0.95
Spain	0.95
Israel	0.94
Finland	0.94
Japan	0.94
New Zealand	0.94
France	0.94
Czech Republic	0.94
Norway	0.94
Ireland	0.94
Portugal	0.93
United Kingdom	0.93
United States	0.93
Croatia	0.92
Poland	0.92
Iceland	0.92
Singapore	0.91
Hungary	0.91
Kuwait	0.90
South Korea	0.88
Slovak Republic	0.87
Australia	0.86
Lithuania	0.86
Estonia	0.85
Belgium	0.80
Mauritius	0.80
Austria	0.79
Chile	0.77
Bulgaria	0.76
Trinidad and Tobago	0.73
Uruguay	0.71
Cuba	0.66
Latvia	0.63
Costa Rica	0.62
Colombia	0.59
Moldova	0.57
Russian Federation	0.54
Argentina	0.54
Ukraine	0.52
Romania	0.51
Malaysia	0.50
Belarus	0.45
Fiji	0.41
Kazakhstan	0.38
Jamaica	0.36
Panama	0.35
Armenia	0.35
Sri Lanka	0.32
Macedonia	0.30
Saudi Arabia	0.29
Thailand	0.28
Brazil	0.27
Paraguay	0.26
Lebanon	0.25
Libya	0.22
Turkey	0.21
Jordan	0.20
Venezuela	0.20
Ecuador	0.19
Peru	0.17
Iran	0.15
Tunisia	0.15
Azerbaijan	0.15
Mexico	0.14
Kyrgyz Republic	0.13
Dominican Republic	0.12
China	0.09
Uzbekistan	0.09
Philippines	0.09
Albania	0.00
Syria	-0.01
Vietnam	-0.01
Nicaragua	-0.07
Indonesia	-0.08
Honduras	-0.09
South Africa	-0.20
Guatemala	-0.25
Zimbabwe	-0.26
El Salvador	-0.27
Botswana	-0.32
Morocco	-0.44
India	-0.69
Ghana	-0.72
Egypt	-0.72
Gabon	-0.77
Papua New Guinea	-0.80
Mongolia	-0.84
Algeria	-0.94
Kenya	-0.95
Pakistan	-0.98
Nepal	-1.00
Cameroon	-1.04
Sudan	-1.05
Bolivia	-1.09
Togo	-1.21
Madagascar	-1.22
Haiti	-1.26
Senegal	-1.30
Uganda	-1.39
Tanzania	-1.40
Nigeria	-1.52
Rwanda	-1.65
Zambia	-1.66
Central African Republic	-1.70
Bangladesh	-1.71
Bhutan	-1.77
Malawi	-1.84
Burundi	-1.90
Burkina Faso	-1.90
Ethiopia	-1.93
Mali	-1.96
Mozambique	-1.96
Benin	-2.04
Niger	-2.42

Indicator: Science/Technology

This indicator includes the following variables:

- Research & Development Scientists and Engineers Per Million Population
- Expenditure for Research and Development as a Percentage of GNP
- Scientific and Technical Articles Per Million Population

High numbers represent higher sustainability; zero represents the mean.

Sweden	2.61	Trinidad and Tobago	0.05	Tunisia	-0.59
Israel	2.50	Macedonia	0.05	Ghana	-0.59
Switzerland	2.30	Bolivia	0.03	Zimbabwe	-0.59
United States	2.27	Mongolia	0.01	Kuwait	-0.59
Japan	2.17	Portugal	-0.03	Sri Lanka	-0.60
Finland	2.04	Greece	-0.03	Albania	-0.60
Denmark	1.92	Latvia	-0.05	Philippines	-0.60
Australia	1.92	South Africa	-0.12	Jordan	-0.62
Canada	1.80	Uruguay	-0.17	Malaysia	-0.63
Germany	1.79	Moldova	-0.22	Burundi	-0.63
France	1.72	Lebanon	-0.25	Central African Republic	-0.64
Iceland	1.72	Fiji	-0.26	Papua New Guinea	-0.64
Norway	1.68	Iran	-0.28	Panama	-0.64
Netherlands	1.63	Chile	-0.30	Gabon	-0.65
United Kingdom	1.62	Saudi Arabia	-0.32	Indonesia	-0.66
South Korea	1.20	Pakistan	-0.34	Guatemala	-0.66
Belgium	1.18	Argentina	-0.36	Thailand	-0.67
New Zealand	1.09	Kazakhstan	-0.36	Syria	-0.68
Singapore	0.97	Brazil	-0.37	Burkina Faso	-0.69
Italy	0.97	China	-0.38	Ecuador	-0.70
Ireland	0.92	Benin	-0.39	Madagascar	-0.70
Russian Federation	0.91	Kyrgyz Republic	-0.39	Colombia	-0.71
Slovenia	0.90	Costa Rica	-0.41	Cameroon	-0.73
Austria	0.85	Vietnam	-0.42	Bangladesh	-0.74
Belarus	0.85	India	-0.42	Rwanda	-0.74
Azerbaijan	0.76	Botswana	-0.43	Kenya	-0.75
Uzbekistan	0.64	Morocco	-0.45	Nigeria	-0.75
Lithuania	0.58	Dominican Republic	-0.45	Jamaica	-0.76
Slovak Republic	0.56	Mauritius	-0.45	Senegal	-0.77
Ukraine	0.55	Venezuela	-0.46	Bhutan	-0.89
Estonia	0.51	Turkey	-0.49	Sudan	-0.91
Czech Republic	0.45	Libya	-0.50	Nepal	-0.92
Armenia	0.43	Nicaragua	-0.52	Haiti	-1.06
Spain	0.42	Togo	-0.52	Zambia	-1.15
Cuba	0.42	Uganda	-0.52	Tanzania	-1.17
Croatia	0.41	Algeria	-0.53	Malawi	-1.29
Romania	0.25	Egypt	-0.53	Mali	-1.31
Poland	0.20	Peru	-0.55	Ethiopia	-1.46
Bulgaria	0.19	Mexico	-0.57	Mozambique	-1.46
El Salvador	0.18	Honduras	-0.57	Niger	-1.46
Hungary	0.14	Paraguay	-0.58		

Indicator: Capacity for Debate

This indicator includes the following variables:

- IUCN Member Organizations Per Million Population
- Civil and Political Liberties

High numbers represent higher sustainability; zero represents the mean.

Iceland	2.41
Panama	2.27
Botswana	2.14
Costa Rica	1.82
Australia	1.66
Fiji	1.63
New Zealand	1.59
Mauritius	1.32
Norway	1.13
Uruguay	1.13
Denmark	1.10
Netherlands	1.08
Jordan	0.97
Switzerland	0.97
Canada	0.90
Estonia	0.90
Finland	0.85
Trinidad and Tobago	0.82
Lebanon	0.80
Jamaica	0.76
Ecuador	0.75
Ireland	0.75
Sweden	0.73
Bolivia	0.72
Austria	0.70
El Salvador	0.69
Israel	0.62
United Kingdom	0.55
Spain	0.52
Belgium	0.51
South Africa	0.47
Slovak Republic	0.42
France	0.42
Lithuania	0.40
Slovenia	0.39
Portugal	0.38
Czech Republic	0.36
Guatemala	0.34
Honduras	0.32
Zimbabwe	0.32
United States	0.31
Hungary	0.30
Greece	0.30
Latvia	0.29
Italy	0.26
Argentina	0.22
Germany	0.18
Poland	0.18
Kuwait	0.16
Japan	0.15
Paraguay	0.13
Benin	0.10
Mali	0.08
Mongolia	0.07
Chile	0.05
Dominican Republic	0.05
South Korea	-0.01
Romania	-0.02
Macedonia	-0.02
Nicaragua	-0.02
Singapore	-0.02
Sri Lanka	-0.03
Papua New Guinea	-0.06
Moldova	-0.07
Bulgaria	-0.08
Zambia	-0.13
Malawi	-0.16
Nepal	-0.19
Croatia	-0.20
Thailand	-0.20
Central African Republic	-0.20
Philippines	-0.21
India	-0.23
Ghana	-0.24
Senegal	-0.28
Madagascar	-0.32
Armenia	-0.32
Mozambique	-0.37
Venezuela	-0.41
Colombia	-0.42
Burkina Faso	-0.43
Bangladesh	-0.43
Mexico	-0.44
Brazil	-0.44
Ukraine	-0.47
Nigeria	-0.49
Haiti	-0.50
Albania	-0.52
Gabon	-0.53
Peru	-0.54
Tanzania	-0.57
Morocco	-0.62
Indonesia	-0.64
Tunisia	-0.64
Azerbaijan	-0.66
Malaysia	-0.70
Uganda	-0.72
Togo	-0.73
Turkey	-0.74
Niger	-0.75
Russian Federation	-0.75
Cuba	-0.76
Kyrgyz Republic	-0.77
Bhutan	-0.81
Belarus	-0.81
Kenya	-0.86
Kazakhstan	-0.90
Ethiopia	-0.91
Algeria	-0.98
Burundi	-0.98
Rwanda	-1.00
Egypt	-1.02
Pakistan	-1.07
Iran	-1.19
Cameroon	-1.28
Uzbekistan	-1.30
Libya	-1.32
China	-1.32
Saudi Arabia	-1.34
Syria	-1.42
Vietnam	-1.44
Sudan	-1.44

Indicator: Regulation and Management

This indicator includes the following variables:

- Stringency and Consistency of Environmental Regulations
- Degree to which Environmental Regulations Promote Innovation
- Percentage of Land Area Under Protected Status
- Number of Sectoral Environmental Impact Assessment Guidelines

High numbers represent higher sustainability; zero represents the mean.

United Kingdom	1.54
Denmark	1.54
Switzerland	1.46
Germany	1.34
United States	1.30
Austria	1.26
Dominican Republic	1.24
Finland	1.21
Canada	1.21
New Zealand	1.10
Slovak Republic	0.89
Sweden	0.84
France	0.82
Pakistan	0.78
Netherlands	0.75
Belgium	0.72
Singapore	0.68
Chile	0.66
Nepal	0.65
Bhutan	0.55
Costa Rica	0.53
Malaysia	0.43
Spain	0.43
Norway	0.42
Australia	0.40
Panama	0.40
Botswana	0.36
South Africa	0.36
Portugal	0.35
Japan	0.35
Sri Lanka	0.35
Tanzania	0.34
Cuba	0.29
Venezuela	0.28
Guatemala	0.25
Malawi	0.21
Iceland	0.19
Czech Republic	0.17
Thailand	0.12
Zimbabwe	0.12
Egypt	0.11
Rwanda	0.10
Italy	0.08
Ireland	0.07
Israel	0.05
Paraguay	0.03
India	0.01
Latvia	-0.04
Bolivia	-0.05
Ecuador	-0.06
Estonia	-0.08
Senegal	-0.12
Burkina Faso	-0.18
Mongolia	-0.19
Niger	-0.20
Lithuania	-0.21
Honduras	-0.21
Indonesia	-0.23
Uganda	-0.24
South Korea	-0.28
Brazil	-0.29
Kenya	-0.30
Colombia	-0.30
Mozambique	-0.31
Peru	-0.31
Zambia	-0.31
Bangladesh	-0.33
Central African Republic	-0.33
Togo	-0.35
Hungary	-0.36
Argentina	-0.36
Armenia	-0.37
Nicaragua	-0.38
Ghana	-0.39
Russian Federation	-0.39
Jordan	-0.40
Macedonia	-0.41
Benin	-0.41
Croatia	-0.43
Poland	-0.44
Kuwait	-0.45
Mexico	-0.45
Greece	-0.45
Nigeria	-0.49
Slovenia	-0.50
Burundi	-0.51
Turkey	-0.51
China	-0.51
Ethiopia	-0.51
Azerbaijan	-0.51
Iran	-0.54
Romania	-0.57
Cameroon	-0.58
Belarus	-0.60
Mali	-0.63
Sudan	-0.64
Mauritius	-0.64
Kyrgyz Republic	-0.64
Trinidad and Tobago	-0.68
Gabon	-0.69
Albania	-0.70
Kazakhstan	-0.70
Bulgaria	-0.71
Algeria	-0.72
Philippines	-0.72
Saudi Arabia	-0.73
Uzbekistan	-0.75
Madagascar	-0.75
Moldova	-0.80
Vietnam	-0.81
Fiji	-0.81
Morocco	-0.84
Haiti	-0.86
Lebanon	-0.86
Tunisia	-0.86
Uruguay	-0.87
Jamaica	-0.87
Libya	-0.88
Papua New Guinea	-0.88
Syria	-0.88
Ukraine	-0.93
El Salvador	-1.32

Indicator: Private Sector Responsiveness

This indicator includes the following variables:

- Number of ISO 14001 Certified Companies Per Million Dollars GDP
- Dow Jones Sustainability Group Index
- Average Innovest EcoValue'21 Rating of Firms
- World Business Council for Sustainable Development Members
- Levels of Environmental Competitiveness

High numbers represent higher sustainability; mean is -0.13.

Switzerland	2.12
Japan	1.83
Germany	1.09
United Kingdom	1.02
New Zealand	0.93
Finland	0.89
Czech Republic	0.86
United States	0.84
Hungary	0.83
Costa Rica	0.82
Australia	0.78
Denmark	0.72
Canada	0.71
Brazil	0.68
Slovenia	0.68
Sweden	0.67
South Korea	0.62
Russian Federation	0.61
Singapore	0.58
Thailand	0.46
Austria	0.42
China	0.40
Croatia	0.38
Paraguay	0.38
Netherlands	0.37
Slovak Republic	0.25
Algeria	0.22
Mexico	0.20
Lebanon	0.15
France	0.14
Israel	0.05
Zambia	0.05
Uruguay	0.04
Norway	0.03
Jordan	0.03
Belgium	0.02
Ireland	0.00
Estonia	-0.02
Egypt	-0.03
Fiji	-0.03
Iceland	-0.03
South Africa	-0.07
Malaysia	-0.10
Spain	-0.12
Portugal	-0.18
Chile	-0.20
Honduras	-0.24
Argentina	-0.26
Turkey	-0.28
Trinidad and Tobago	-0.33
Italy	-0.35
Mauritius	-0.37
Latvia	-0.39
Morocco	-0.39
Zimbabwe	-0.39
Syria	-0.40
Iran	-0.41
Ecuador	-0.42
Lithuania	-0.42
Sri Lanka	-0.42
Cuba	-0.43
Kuwait	-0.43
Libya	-0.43
Rwanda	-0.43
Guatemala	-0.43
Saudi Arabia	-0.43
Dominican Republic	-0.43
Peru	-0.44
India	-0.44
Tunisia	-0.45
Nigeria	-0.46
Poland	-0.46
Pakistan	-0.46
Romania	-0.47
Albania	-0.48
Armenia	-0.48
Azerbaijan	-0.48
Bangladesh	-0.48
Belarus	-0.48
Benin	-0.48
Bhutan	-0.48
Botswana	-0.48
Burkina Faso	-0.48
Burundi	-0.48
Cameroon	-0.48
Central African Republic	-0.48
Ethiopia	-0.48
Gabon	-0.48
Ghana	-0.48
Haiti	-0.48
Jamaica	-0.48
Kazakhstan	-0.48
Kenya	-0.48
Kyrgyz Republic	-0.48
Macedonia	-0.48
Madagascar	-0.48
Malawi	-0.48
Mali	-0.48
Moldova	-0.48
Mongolia	-0.48
Mozambique	-0.48
Nepal	-0.48
Nicaragua	-0.48
Niger	-0.48
Panama	-0.48
Papua New Guinea	-0.48
Senegal	-0.48
Sudan	-0.48
Tanzania	-0.48
Togo	-0.48
Uganda	-0.48
Uzbekistan	-0.48
Philippines	-0.49
Colombia	-0.50
Greece	-0.50
Vietnam	-0.70
Indonesia	-0.73
Bulgaria	-0.73
Bolivia	-0.77
Venezuela	-0.79
El Salvador	-0.87
Ukraine	-0.89

Indicator: Environmental Information

This indicator includes the following variables:

- Availability of Sustainable Development Information at the National Level
- Environmental Strategies and Action Plans
- Number of ESI Variables Missing from Selected Data Sets

High numbers represent higher sustainability; zero represents the mean.

Netherlands	2.25
Norway	1.88
United States	1.57
Finland	1.54
United Kingdom	1.31
Austria	1.30
France	1.12
China	1.12
Slovak Republic	1.04
Indonesia	1.01
Portugal	0.97
Switzerland	0.89
Malaysia	0.84
Hungary	0.83
India	0.83
Ecuador	0.81
Japan	0.79
Germany	0.79
Poland	0.79
Australia	0.79
Egypt	0.77
Ireland	0.73
Czech Republic	0.70
Argentina	0.69
Canada	0.68
Chile	0.66
Mexico	0.64
Denmark	0.63
Colombia	0.62
Spain	0.61
Italy	0.58
Thailand	0.56
Israel	0.56
Lithuania	0.56
Sweden	0.51
Nepal	0.46
Singapore	0.39
Sri Lanka	0.38
Ukraine	0.36
Pakistan	0.30
Iceland	0.30
Nicaragua	0.29
Estonia	0.27
Slovenia	0.26
Cuba	0.24
Russian Federation	0.23
Latvia	0.23
South Korea	0.23
Moldova	0.21
South Africa	0.20
Mongolia	0.20
El Salvador	0.19
Albania	0.16
Costa Rica	0.12
Jamaica	0.12
Uganda	0.08
Turkey	-0.01
Uruguay	-0.02
Tanzania	-0.04
Philippines	-0.05
Belgium	-0.07
Brazil	-0.08
Bulgaria	-0.12
New Zealand	-0.18
Macedonia	-0.18
Benin	-0.18
Vietnam	-0.18
Bolivia	-0.19
Fiji	-0.21
Guatemala	-0.22
Romania	-0.23
Iran	-0.23
Kenya	-0.26
Ghana	-0.27
Croatia	-0.29
Zimbabwe	-0.30
Tunisia	-0.30
Peru	-0.34
Venezuela	-0.35
Greece	-0.35
Senegal	-0.46
Jordan	-0.51
Trinidad and Tobago	-0.52
Nigeria	-0.56
Honduras	-0.58
Gabon	-0.59
Belarus	-0.60
Botswana	-0.62
Mozambique	-0.62
Morocco	-0.63
Mauritius	-0.64
Togo	-0.65
Malawi	-0.67
Ethiopia	-0.67
Kuwait	-0.68
Kazakhstan	-0.70
Cameroon	-0.71
Zambia	-0.72
Algeria	-0.75
Dominican Republic	-0.75
Niger	-0.76
Papua New Guinea	-0.76
Bangladesh	-0.77
Mali	-0.78
Azerbaijan	-0.80
Panama	-0.81
Burkina Faso	-0.82
Sudan	-0.85
Central African Republic	-0.86
Uzbekistan	-0.87
Kyrgyz Republic	-0.89
Rwanda	-0.90
Bhutan	-0.91
Libya	-0.91
Madagascar	-0.91
Burundi	-0.92
Syria	-0.95
Lebanon	-0.95
Armenia	-0.96
Saudi Arabia	-0.98
Paraguay	-1.15
Haiti	-1.44

Indicator: Eco-Efficiency

This indicator includes the following variables:

- Energy Efficiency (Total Energy Consumption Per Unit GDP)
- Renewable Energy Production as a Percentage of Total Energy Consumption

High numbers represent higher sustainability; zero represents the mean.

Uganda	0.95
Ethiopia	0.93
Cameroon	0.88
Switzerland	0.86
Norway	0.85
Malawi	0.84
Uruguay	0.83
Bhutan	0.83
Paraguay	0.83
Nepal	0.82
Austria	0.82
Sweden	0.80
Mali	0.80
Iceland	0.80
Ghana	0.80
Madagascar	0.77
Tanzania	0.77
Honduras	0.74
Burundi	0.72
Sudan	0.71
Mozambique	0.71
Peru	0.70
Brazil	0.70
Costa Rica	0.69
Finland	0.69
Rwanda	0.67
New Zealand	0.66
Fiji	0.64
Haiti	0.63
Guatemala	0.61
Sri Lanka	0.60
El Salvador	0.60
Kenya	0.60
Burkina Faso	0.60
Portugal	0.56
Canada	0.55
Papua New Guinea	0.55
Gabon	0.54
Argentina	0.52
Italy	0.51
Slovenia	0.51
Turkey	0.50
Zambia	0.50
Spain	0.49
France	0.49
Denmark	0.48
Panama	0.48
Japan	0.48
Chile	0.47
Philippines	0.40
Armenia	0.40
Colombia	0.36
Bolivia	0.35
Dominican Republic	0.34
Morocco	0.32
Australia	0.31
Albania	0.31
Latvia	0.29
Ireland	0.28
Mauritius	0.27
United States	0.26
Syria	0.25
Germany	0.24
Mexico	0.22
Ecuador	0.22
Central African Republic	0.20
Greece	0.19
Zimbabwe	0.13
Croatia	0.10
United Kingdom	0.10
Nigeria	0.07
Nicaragua	0.07
Bangladesh	0.06
Pakistan	0.05
Thailand	0.04
Netherlands	0.02
India	-0.03
Indonesia	-0.05
Togo	-0.09
Egypt	-0.09
Belgium	-0.15
Malaysia	-0.17
Venezuela	-0.18
South Korea	-0.27
Iran	-0.29
China	-0.31
Jamaica	-0.37
Cuba	-0.41
Lebanon	-0.45
Kyrgyz Republic	-0.54
Tunisia	-0.56
Israel	-0.61
Vietnam	-0.65
Romania	-0.69
Moldova	-0.70
Niger	-0.77
Poland	-0.77
Senegal	-0.81
Botswana	-0.84
Algeria	-0.88
South Africa	-0.88
Hungary	-0.93
Lithuania	-0.94
Estonia	-0.95
Macedonia	-0.96
Slovak Republic	-0.97
Bulgaria	-0.98
Jordan	-0.99
Czech Republic	-1.04
Singapore	-1.12
Russian Federation	-1.19
Libya	-1.20
Kuwait	-1.38
Kazakhstan	-1.39
Benin	-1.42
Saudi Arabia	-1.48
Belarus	-1.51
Uzbekistan	-1.64
Azerbaijan	-1.67
Mongolia	-1.71
Ukraine	-1.77
Trinidad and Tobago	-2.16

Indicator: Reducing Public Choice Failures

This indicator includes the following variables:

- Price of Premium Gasoline
- Subsidies for Energy or Materials Usage
- Reducing Corruption

High numbers represent higher sustainability; the mean is -0.07.

Finland	2.25
Netherlands	1.80
Denmark	1.62
Iceland	1.61
United Kingdom	1.60
New Zealand	1.57
Sweden	1.48
Ireland	1.44
Austria	1.38
Switzerland	1.38
France	1.36
Norway	1.35
Singapore	1.25
Germany	1.11
Belgium	1.10
Israel	1.09
Italy	0.98
Portugal	0.95
Japan	0.86
Uruguay	0.82
Australia	0.76
Spain	0.72
Slovenia	0.70
Canada	0.68
Argentina	0.63
Chile	0.54
Morocco	0.45
Sri Lanka	0.41
Peru	0.36
Hungary	0.36
Brazil	0.35
South Korea	0.31
Fiji	0.28
Czech Republic	0.27
Uganda	0.26
Greece	0.25
United States	0.24
Bolivia	0.20
Turkey	0.17
Mauritius	0.15
Senegal	0.11
Mali	0.09
Estonia	0.07
Tunisia	0.04
Cuba	-0.01
Burkina Faso	-0.02
Albania	-0.02
South Africa	-0.02
Macedonia	-0.06
Trinidad and Tobago	-0.08
Croatia	-0.09
Lithuania	-0.12
Costa Rica	-0.13
Kenya	-0.14
Central African Republic	-0.17
Malaysia	-0.18
Jordan	-0.19
Latvia	-0.20
Botswana	-0.22
Poland	-0.23
Malawi	-0.24
Niger	-0.27
Haiti	-0.28
Rwanda	-0.32
Burundi	-0.34
Romania	-0.35
Mozambique	-0.35
Bangladesh	-0.37
Bhutan	-0.37
Nepal	-0.39
Slovak Republic	-0.40
Tanzania	-0.41
Zambia	-0.43
Kuwait	-0.43
Togo	-0.43
El Salvador	-0.45
Moldova	-0.46
Jamaica	-0.46
Gabon	-0.46
Madagascar	-0.46
Cameroon	-0.49
Philippines	-0.51
Mexico	-0.55
Bulgaria	-0.55
Panama	-0.57
Armenia	-0.61
Kyrgyz Republic	-0.62
Colombia	-0.64
Pakistan	-0.65
Lebanon	-0.65
Ethiopia	-0.65
Ghana	-0.65
Honduras	-0.66
Nicaragua	-0.66
Syria	-0.67
Egypt	-0.68
China	-0.70
Thailand	-0.72
Russian Federation	-0.73
Paraguay	-0.73
Mongolia	-0.73
Dominican Republic	-0.76
Vietnam	-0.77
Guatemala	-0.77
Azerbaijan	-0.77
Benin	-0.78
Papua New Guinea	-0.78
Belarus	-0.81
India	-0.82
Ukraine	-0.89
Zimbabwe	-0.92
Algeria	-0.98
Kazakhstan	-1.00
Sudan	-1.02
Saudi Arabia	-1.10
Libya	-1.15
Venezuela	-1.21
Iran	-1.30
Ecuador	-1.35
Nigeria	-1.36
Uzbekistan	-1.36
Indonesia	-1.54

Indicator: International Commitment

This indicator includes the following variables:

- Number of Memberships in Environmental Intergovernmental Organizations
- Percentage of Convention on International Trade in Endangered Species (CITES) Reporting Requirements Met
- Levels of Participation in the Vienna Convention and the Montreal Protocol on Ozone Depleting Substances
- Compliance with Environmental Agreements

High numbers represent higher sustainability; the mean -0.06.

Netherlands	1.58
Germany	1.53
Sweden	1.50
Norway	1.29
Denmark	1.28
Austria	1.20
France	1.19
United Kingdom	1.12
Finland	1.11
Switzerland	1.09
Spain	1.01
Japan	0.91
Belgium	0.91
Canada	0.91
Australia	0.88
Italy	0.81
Tunisia	0.80
United States	0.78
New Zealand	0.68
Greece	0.62
Singapore	0.58
South Korea	0.56
Czech Republic	0.53
Senegal	0.53
Panama	0.52
Hungary	0.47
Portugal	0.44
Sri Lanka	0.42
Cameroon	0.39
India	0.30
Slovak Republic	0.30
Cuba	0.29
Morocco	0.29
Trinidad and Tobago	0.28
Colombia	0.27
Poland	0.27
Kenya	0.27
Nicaragua	0.26
Pakistan	0.24
Malaysia	0.24
Uruguay	0.19
Uganda	0.17
Mexico	0.16
Togo	0.16
Tanzania	0.15
Brazil	0.15
Costa Rica	0.14
Latvia	0.13
Malawi	0.13
China	0.12
Chile	0.12
Egypt	0.10
Mali	0.09
Indonesia	0.09
Russian Federation	0.08
Algeria	0.07
Bulgaria	0.04
Ghana	0.02
Niger	0.02
Iran	0.00
Estonia	0.00
Argentina	-0.01
South Africa	-0.02
Mongolia	-0.02
Turkey	-0.02
Mauritius	-0.03
Ecuador	-0.06
Thailand	-0.06
Botswana	-0.06
Iceland	-0.06
Ireland	-0.10
Bolivia	-0.10
Israel	-0.13
Jordan	-0.15
Venezuela	-0.16
Mozambique	-0.18
Peru	-0.18
Zimbabwe	-0.19
Syria	-0.20
Papua New Guinea	-0.21
Burkina Faso	-0.23
Jamaica	-0.24
Philippines	-0.25
Zambia	-0.28
Paraguay	-0.37
Slovenia	-0.40
Vietnam	-0.42
Romania	-0.43
Bangladesh	-0.45
Benin	-0.46
Lebanon	-0.46
Nepal	-0.46
Guatemala	-0.46
Uzbekistan	-0.50
Croatia	-0.51
Dominican Republic	-0.52
Gabon	-0.65
Macedonia	-0.66
Ethiopia	-0.67
Nigeria	-0.67
Sudan	-0.67
Madagascar	-0.69
Kuwait	-0.71
Azerbaijan	-0.72
Belarus	-0.75
Fiji	-0.81
Lithuania	-0.81
Saudi Arabia	-0.81
Ukraine	-1.03
Haiti	-1.07
Central African Republic	-1.17
El Salvador	-1.27
Honduras	-1.32
Libya	-1.47
Burundi	-1.47
Rwanda	-1.57
Albania	-1.68
Kazakhstan	-1.73
Moldova	-1.73
Armenia	-1.78
Bhutan	-1.78
Kyrgyz Republic	-1.78

Indicator: Global-Scale Funding/Participation

This indicator includes the following variables:

- Montreal Protocol Multilateral Fund Participation
- Global Environmental Facility Participation

High numbers represent higher sustainability; zero represents the mean.

Lithuania	2.34
Bulgaria	2.28
Azerbaijan	2.12
Slovak Republic	1.97
Czech Republic	1.85
Mauritius	1.56
Uruguay	1.27
Malaysia	1.11
Costa Rica	1.05
Jamaica	0.84
Hungary	0.79
Sweden	0.75
Canada	0.73
Finland	0.71
New Zealand	0.69
Denmark	0.68
Panama	0.67
Switzerland	0.63
Norway	0.63
Greece	0.63
Australia	0.62
Egypt	0.62
Belgium	0.61
Netherlands	0.56
Austria	0.53
United States	0.49
Ireland	0.49
Poland	0.49
Dominican Republic	0.45
Germany	0.44
Spain	0.44
Argentina	0.44
United Kingdom	0.43
France	0.40
Mexico	0.40
Japan	0.39
Venezuela	0.39
South Africa	0.34
Thailand	0.31
Lebanon	0.29
Peru	0.28
Italy	0.28
Portugal	0.25
Philippines	0.21
El Salvador	0.20
Guatemala	0.16
Bangladesh	0.14
Brazil	0.14
Bhutan	0.13
Sri Lanka	0.12
Slovenia	0.12
Ghana	0.11
Pakistan	0.11
Jordan	0.07
Bolivia	0.06
India	0.06
Latvia	0.04
Uzbekistan	0.04
Mongolia	0.04
Papua New Guinea	0.02
China	0.02
Cuba	0.02
Central African Republic	0.01
Ecuador	0.01
Zimbabwe	-0.01
Belarus	-0.03
Turkey	-0.03
Ukraine	-0.04
Benin	-0.04
Nicaragua	-0.06
Uganda	-0.07
Madagascar	-0.08
Honduras	-0.08
Cameroon	-0.10
Mozambique	-0.10
Armenia	-0.12
Senegal	-0.12
Tunisia	-0.13
Mali	-0.14
Romania	-0.14
Nepal	-0.14
Algeria	-0.15
Trinidad and Tobago	-0.15
Syria	-0.17
Vietnam	-0.17
Russian Federation	-0.17
Chile	-0.18
Niger	-0.20
Burkina Faso	-0.23
Indonesia	-0.25
Kenya	-0.27
Sudan	-0.31
Gabon	-0.52
Colombia	-0.58
Iceland	-0.59
Israel	-0.77
Morocco	-0.87
Paraguay	-0.93
Moldova	-1.00
Singapore	-1.03
Nigeria	-1.06
Kuwait	-1.07
Estonia	-1.07
Malawi	-1.09
Burundi	-1.12
Zambia	-1.13
Botswana	-1.13
Tanzania	-1.15
Iran	-1.15
Albania	-1.17
Croatia	-1.17
Ethiopia	-1.17
Fiji	-1.17
Haiti	-1.17
Kazakhstan	-1.17
South Korea	-1.17
Kyrgyz Republic	-1.17
Libya	-1.17
Macedonia	-1.17
Rwanda	-1.17
Saudi Arabia	-1.17
Togo	-1.17

Indicator: Protecting International Commons

This indicator includes the following variables:

- Forest Stewardship Council (FSC) Accredited Forest Area as a Percentage of Total Forest Area
- Ecological Footprint “Deficit”
- Carbon-Dioxide (CO₂) Emissions (Total times Per Capita)
- Historic Cumulative Carbon-Dioxide (CO₂) Emissions
- Cluorofluorocarbon (CFC) Consumption (Total times Per Capita)
- Sulfur Dioxide (SO₂) Exports

High numbers represent higher sustainability; the mean is 0.02.

Central African Republic	1.74
Papua New Guinea	1.43
Bolivia	1.38
Gabon	1.17
Uganda	0.99
Mozambique	0.87
Benin	0.87
Burundi	0.83
Mali	0.82
Madagascar	0.80
Ethiopia	0.79
Burkina Faso	0.78
Honduras	0.76
Malawi	0.76
Zambia	0.75
Guatemala	0.74
Nepal	0.72
Fiji	0.67
New Zealand	0.65
Niger	0.65
Bhutan	0.62
Costa Rica	0.62
Nicaragua	0.61
Cameroon	0.58
Rwanda	0.57
Sri Lanka	0.53
Iceland	0.53
Tanzania	0.52
Botswana	0.51
Ghana	0.50
Croatia	0.47
Paraguay	0.43
Mongolia	0.40
Sudan	0.39
Mauritius	0.38
Peru	0.37
Togo	0.37
Senegal	0.35
Sweden	0.34
Switzerland	0.33
Latvia	0.31
Zimbabwe	0.30
Haiti	0.28
Slovak Republic	0.26
Albania	0.24
Kenya	0.22
Czech Republic	0.22
Moldova	0.22
Armenia	0.19
Canada	0.11
Bangladesh	0.11
El Salvador	0.11
Brazil	0.10
Uruguay	0.10
Hungary	0.08
Slovenia	0.08
Panama	0.05
Macedonia	0.04
Australia	0.03
South Africa	0.03
Lithuania	0.02
Vietnam	0.02
Ecuador	0.01
Norway	0.00
Netherlands	-0.07
Dominican Republic	-0.07
Kyrgyz Republic	-0.07
Malaysia	-0.09
Indonesia	-0.11
Colombia	-0.15
Pakistan	-0.17
Belgium	-0.17
Estonia	-0.18
Jamaica	-0.19
Uzbekistan	-0.24
Finland	-0.25
Morocco	-0.25
Tunisia	-0.26
Azerbaijan	-0.27
Belarus	-0.27
Philippines	-0.30
Jordan	-0.30
Cuba	-0.30
Israel	-0.33
Poland	-0.36
Austria	-0.36
Bulgaria	-0.37
Singapore	-0.38
Trinidad and Tobago	-0.38
Lebanon	-0.39
Mexico	-0.39
Ireland	-0.41
Argentina	-0.43
Chile	-0.46
Portugal	-0.48
Ukraine	-0.49
Egypt	-0.49
Romania	-0.51
Nigeria	-0.52
Denmark	-0.53
France	-0.54
Syria	-0.55
Algeria	-0.57
Venezuela	-0.59
Libya	-0.64
United Kingdom	-0.65
Greece	-0.67
Japan	-0.68
Italy	-0.73
Kazakhstan	-0.73
Germany	-0.74
Thailand	-0.76
Turkey	-0.76
India	-0.79
United States	-0.79
Iran	-0.88
South Korea	-0.90
Kuwait	-0.93
Spain	-1.00
Saudi Arabia	-1.03
Russian Federation	-1.16
China	-1.63



2001 Environmental Sustainability Index

Annex 5: Country Profiles

**An Initiative of the
Global Leaders of Tomorrow Environment Task Force,
World Economic Forum**

**Annual Meeting 2001
Davos, Switzerland**

In collaboration with:

*Yale Center for Environmental Law and Policy (YCELP)
Yale University
Center for International Earth Science Information Network (CIESIN)
Columbia University*

Annex 5. Country Profiles

The following pages provide information about the 122 countries in the Environmental Sustainability Index.

In the upper right of each page we report a country's Environmental Sustainability Index score, and the average Index score for the countries in the country's peer group as defined by GDP per capita (Purchasing Power Parity). Peer groups were assigned by dividing the countries of the index into five equal groups, sorted by GDP per capita, as follows:

Quintile	GDP per capita	Average ESI score
1	\$14,375 - \$29,605	65.2
2	\$6,190 - \$14,375	52.2
3	\$3,330 - \$6,190	45.7
4	\$1,540 - \$3,300	45.2
5	\$480 - \$1,540	39.3

We use income to assign peer groups not because we wish to privilege the view that income determines environmental performance. To the contrary, one of our conclusions is that within similar levels of economic performance countries exhibit significant variation in their levels of environmental sustainability. By comparing a country's Index score with that of others in its peer group, one can get a useful measure of how effective its environmental efforts are.

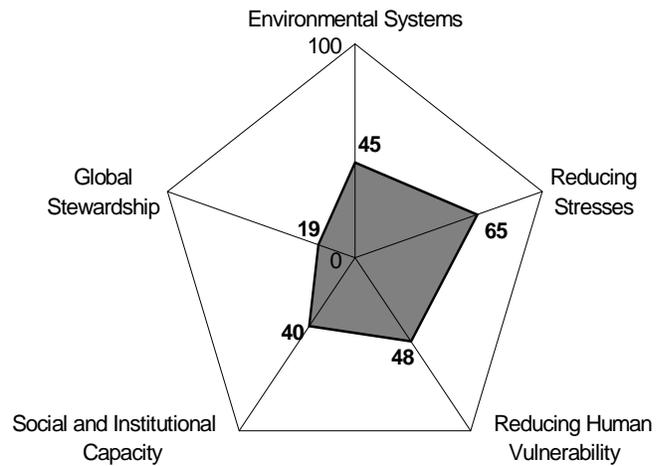
In the upper right of each page we show a graph that provides a snapshot of a country's performance along the five components of environmental sustainability. These graphs have five axes that begin at a single point and radiate out in opposite directions. A country's score for each component is marked on each axis, and then the points are connected to form a closed area. The size of this area is a measure of its overall performance on these five components. The shape of the area reflects the particular distribution of scores across the five components. These provide a useful benchmark for comparing performance in a slightly more precise manner than the single Index score.

Both the Index score and the Component scores are presented as standard normal percentiles. These have a theoretically possible range of 0-100; the actual range is determined by the shape of the distribution of scores across all the countries (see Annex 1 for the ranges of each component). In all cases higher scores represent higher measures of environmental sustainability.

Finally, we present the scores of the 22 indicators in a set of bar graphs. The shaded bars represent the scores of the country, and the empty bars show the average scores for the peer group. These scores represent the average of the standardized ("z") scores of the variables that comprise the indicators. Higher numbers represent higher levels of performance

Albania

ESI:	44.2
Ranking:	78
GDP/Capita:	\$2,804
Peer group ESI:	45.2
Variable coverage:	46
Missing variables imputed:	14

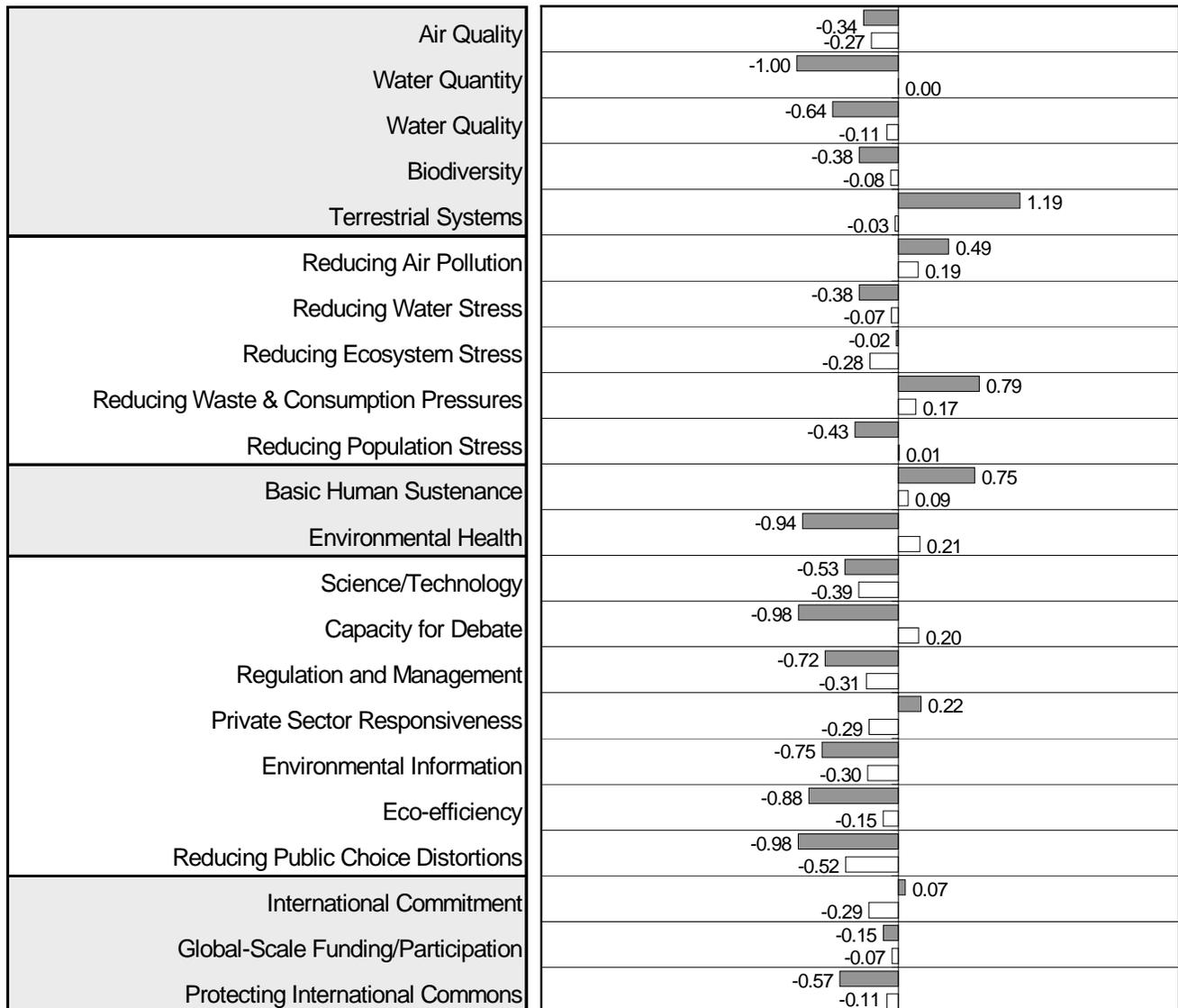
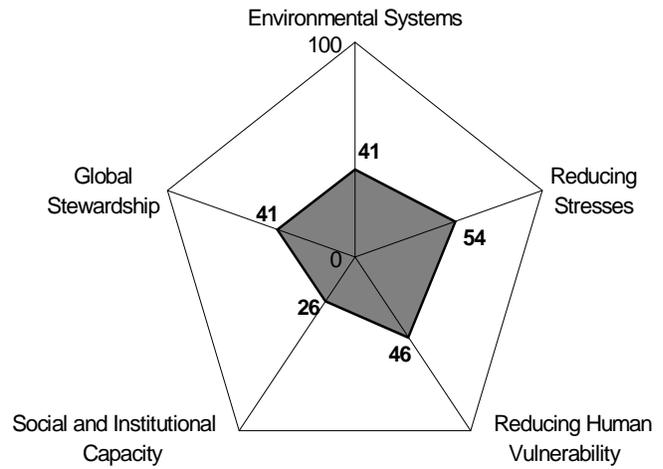


Air Quality	0.06	-0.22
Water Quantity	0.15	0.03
Water Quality	-0.14	-0.35
Biodiversity	1.01	0.06
Terrestrial Systems	-1.75	-0.05
Reducing Air Pollution	-0.06	0.30
Reducing Water Stress	-0.02	0.67
Reducing Ecosystem Stress	0.39	0.14
Reducing Waste & Consumption Pressures	0.64	0.59
Reducing Population Stress	0.33	0.03
Basic Human Sustenance	-0.09	-0.20
Environmental Health	0.00	-0.18
Science/Technology	-0.60	-0.29
Capacity for Debate	-0.52	-0.42
Regulation and Management	-0.70	-0.36
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	0.16	-0.04
Eco-efficiency	0.31	-0.18
Reducing Public Choice Distortions	-0.02	-0.64
International Commitment	-1.68	-0.41
Global-Scale Funding/Participation	-1.17	-0.07
Protecting International Commons	0.24	0.06

= Indicator value
 = Reference (average value for peer group)

Algeria

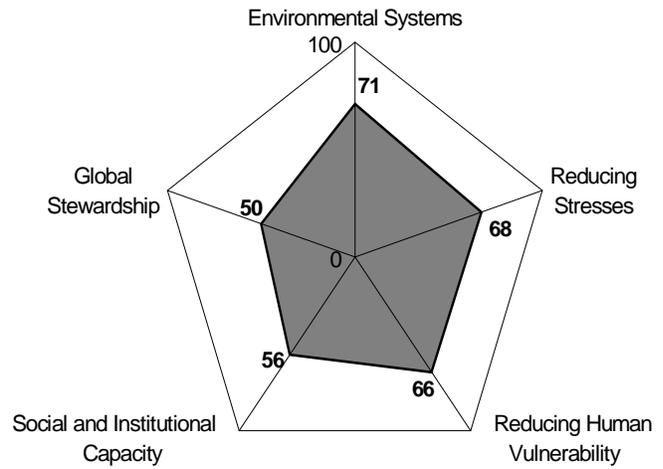
ESI:	38.9
Ranking:	102
GDP/Capita:	\$4,792
Peer group ESI:	45.7
Variable coverage:	46
Missing variables imputed:	12



= Indicator value
 = Reference (average value for peer group)

Argentina

ESI:	62.5
Ranking:	19
GDP/Capita:	\$12,013
Peer group ESI:	52.2
Variable coverage:	62
Missing variables imputed:	2

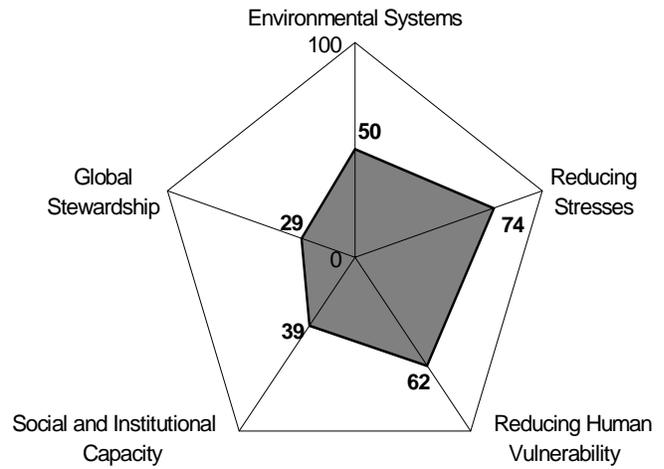


Air Quality	0.76	0.18
Water Quantity	0.72	0.04
Water Quality	1.03	0.25
Biodiversity	0.04	-0.12
Terrestrial Systems	0.25	-0.13
Reducing Air Pollution	0.86	-0.28
Reducing Water Stress	0.41	-0.06
Reducing Ecosystem Stress	0.37	0.12
Reducing Waste & Consumption Pressures	0.40	-0.10
Reducing Population Stress	0.24	0.51
Basic Human Sustenance	0.30	0.58
Environmental Health	0.54	0.60
Science/Technology	-0.36	0.08
Capacity for Debate	0.22	0.03
Regulation and Management	-0.36	-0.25
Private Sector Responsiveness	-0.26	0.00
Environmental Information	0.69	0.13
Eco-efficiency	0.52	-0.39
Reducing Public Choice Distortions	0.63	-0.02
International Commitment	-0.01	-0.02
Global-Scale Funding/Participation	0.44	0.26
Protecting International Commons	-0.43	-0.21

■ = Indicator value
 □ = Reference (average value for peer group)

Armenia

ESI:	50.6
Ranking:	48
GDP/Capita:	\$2,072
Peer group ESI:	45.2
Variable coverage:	42
Missing variables imputed:	18

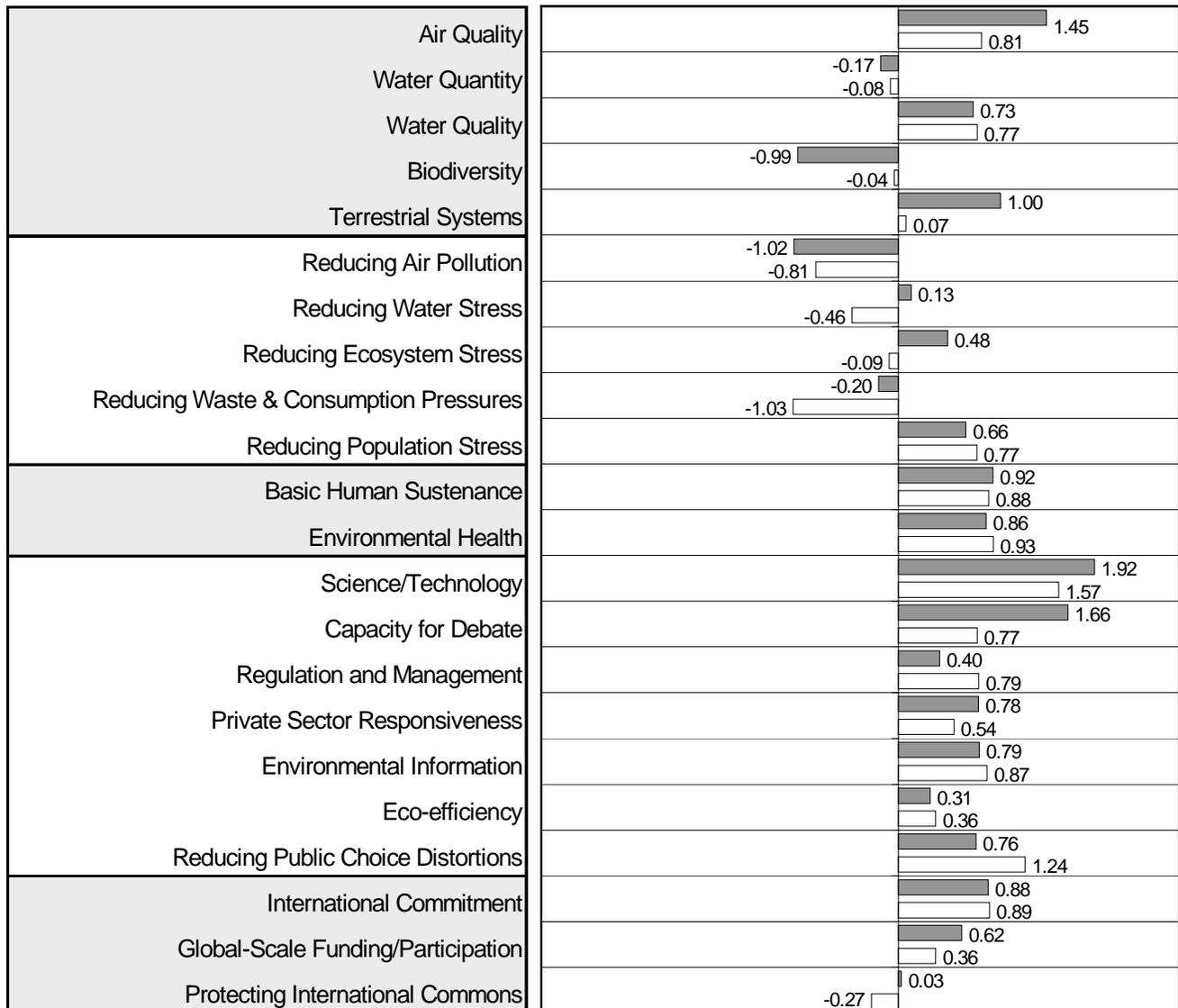
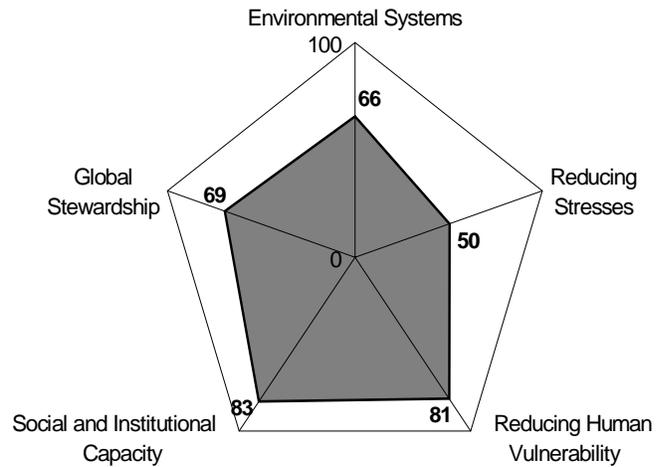


Air Quality	-0.22	0.14
Water Quantity	-0.38	0.03
Water Quality	-0.19	-0.35
Biodiversity		0.80
Terrestrial Systems	-0.33	0.06
Reducing Air Pollution	-0.05	-0.31
Reducing Water Stress	-0.05	-0.02
Reducing Ecosystem Stress		1.33
Reducing Waste & Consumption Pressures		1.25
Reducing Population Stress		1.04
Basic Human Sustenance		0.28
Environmental Health	-0.20	-0.18
Science/Technology		0.43
Capacity for Debate	-0.29	-0.32
Regulation and Management	-0.42	-0.37
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	-0.96	-0.04
Eco-efficiency		0.40
Reducing Public Choice Distortions	-0.61	-0.64
International Commitment	-1.78	-0.41
Global-Scale Funding/Participation		-0.12
Protecting International Commons		-0.07
		0.19
		0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Australia

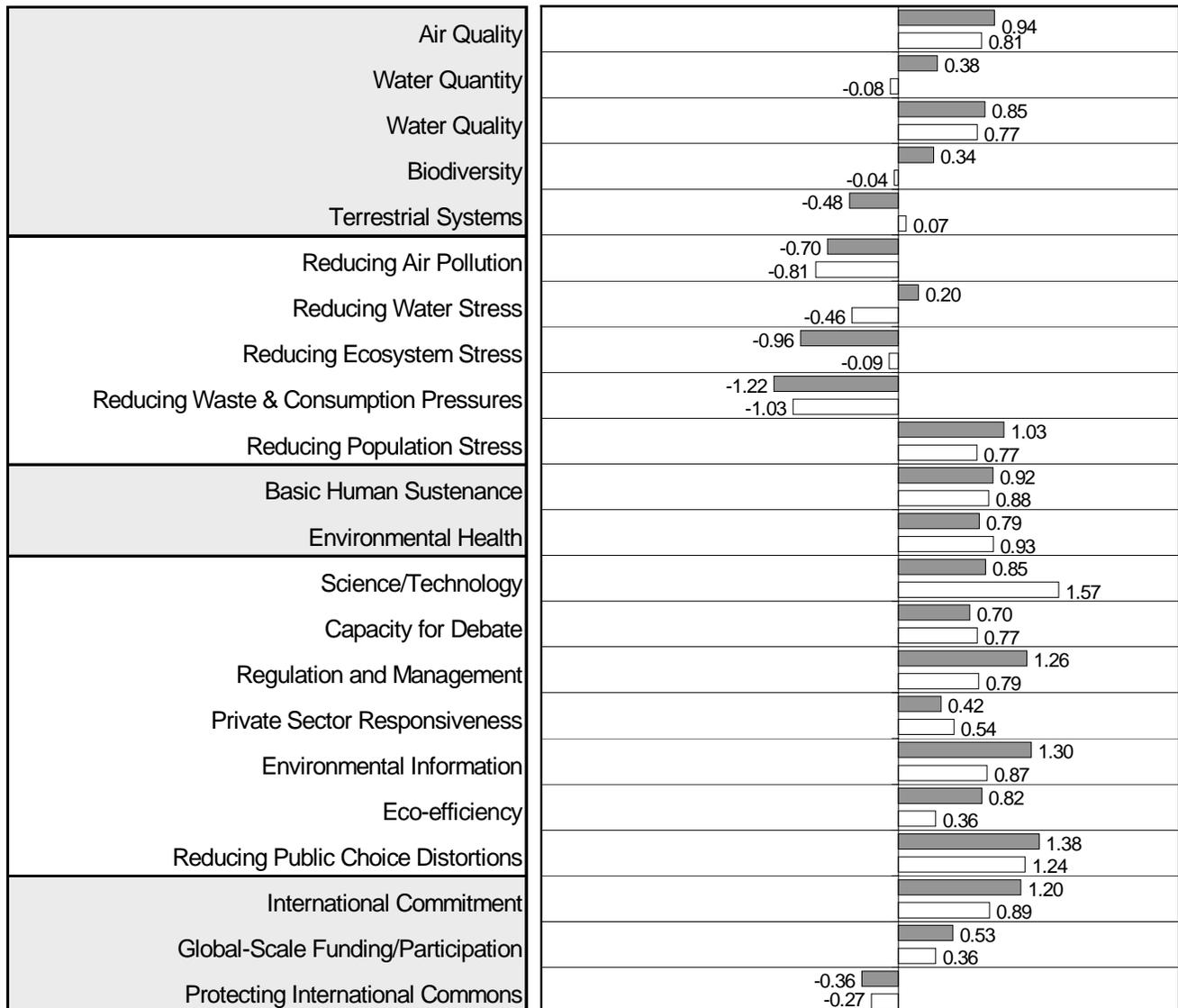
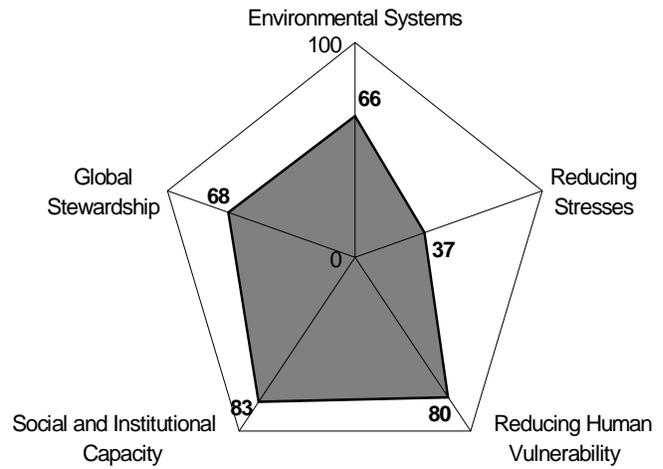
ESI:	70.7
Ranking:	7
GDP/Capita:	\$22,452
Peer group ESI:	65.2
Variable coverage:	60
Missing variables imputed:	6



= Indicator value
 = Reference (average value for peer group)

Austria

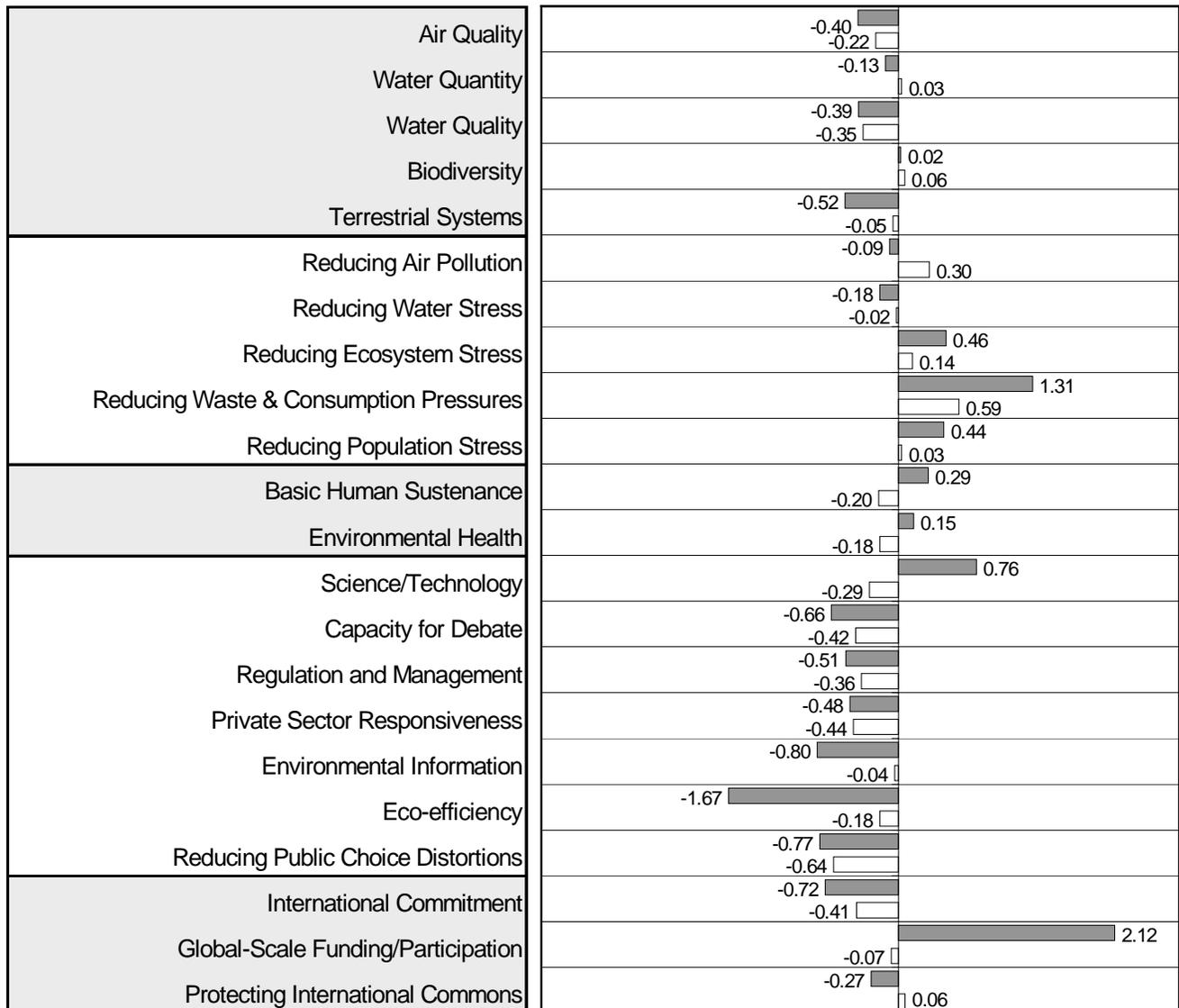
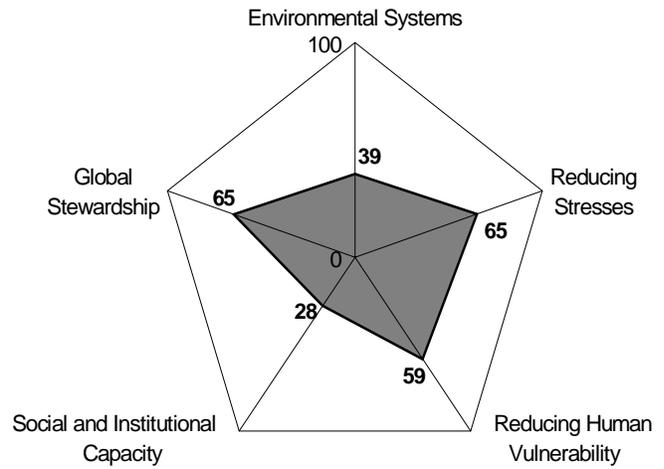
ESI:	67.8
Ranking:	8
GDP/Capita:	\$23,166
Peer group ESI:	65.2
Variable coverage:	60
Missing variables imputed:	5



= Indicator value
 = Reference (average value for peer group)

Azerbaijan

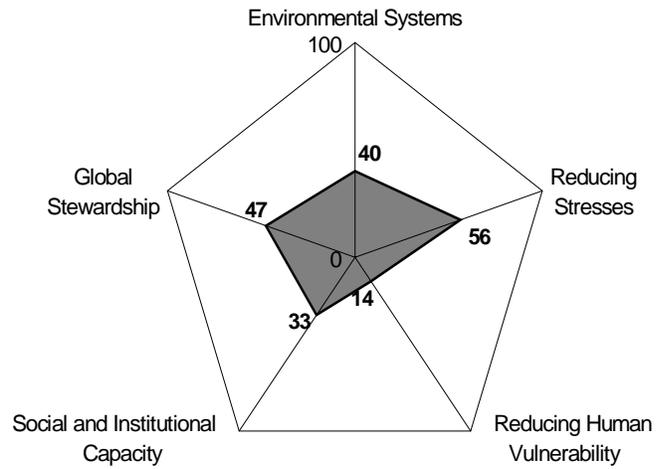
ESI:	46.4
Ranking:	69
GDP/Capita:	\$2,175
Peer group ESI:	45.2
Variable coverage:	42
Missing variables imputed:	17



■ = Indicator value
 □ = Reference (average value for peer group)

Bangladesh

ESI:	39.5
Ranking:	99
GDP/Capita:	\$1,361
Peer group ESI:	39.3
Variable coverage:	49
Missing variables imputed:	10

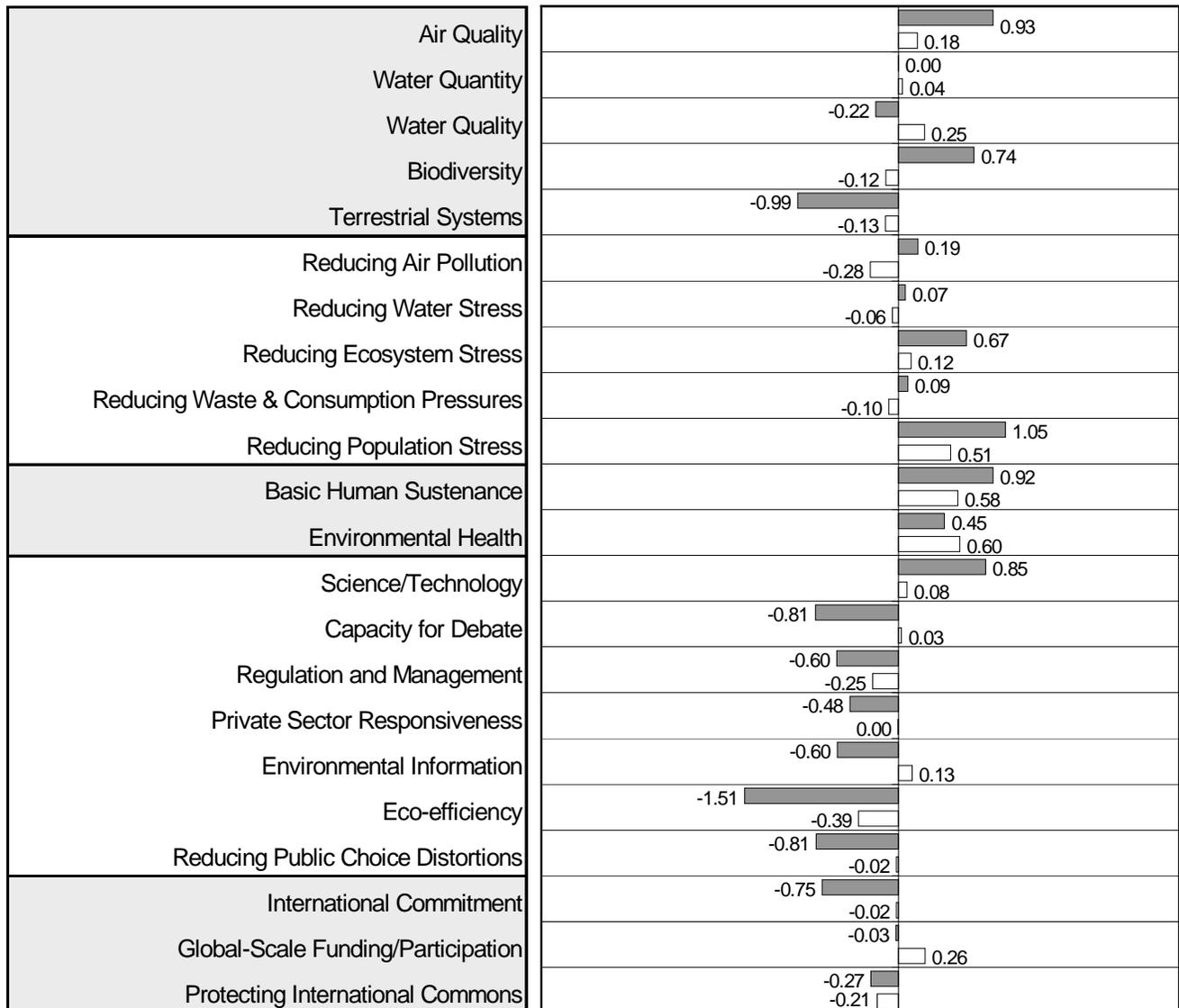
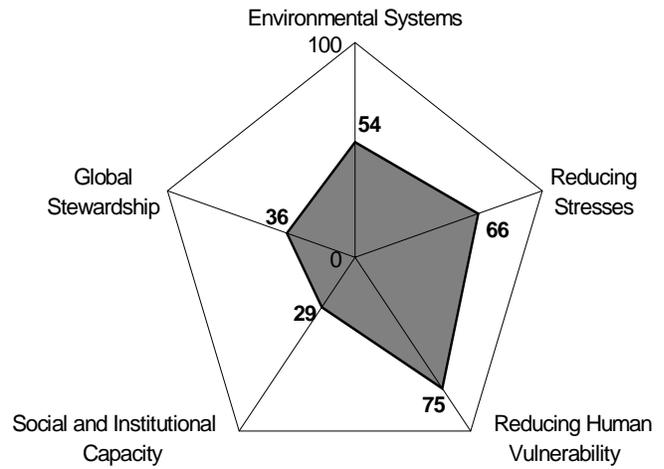


Air Quality	-0.48	0.40
Water Quantity	-0.02	0.14
Water Quality	-0.55	0.18
Biodiversity	-1.21	0.19
Terrestrial Systems	-0.77	0.15
Reducing Air Pollution	-0.41	0.57
Reducing Water Stress		0.05
Reducing Ecosystem Stress		0.57
Reducing Waste & Consumption Pressures		0.13
Reducing Population Stress		0.11
Basic Human Sustenance		1.12
Environmental Health		0.69
Science/Technology	-0.10	
Capacity for Debate	-1.33	
Regulation and Management	-0.46	
Private Sector Responsiveness	-1.38	
Environmental Information	-1.71	
Eco-efficiency	-1.57	
Reducing Public Choice Distortions	-0.74	
International Commitment	-0.90	
Global-Scale Funding/Participation	-0.43	
Protecting International Commons	-0.56	
	-0.33	
	-0.26	
	-0.48	
	-0.45	
	-0.77	
	-0.62	
		0.06
		0.42
	-0.37	
	-0.37	
	-0.45	
	-0.41	
		0.14
	-0.49	
		0.11
		0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Belarus

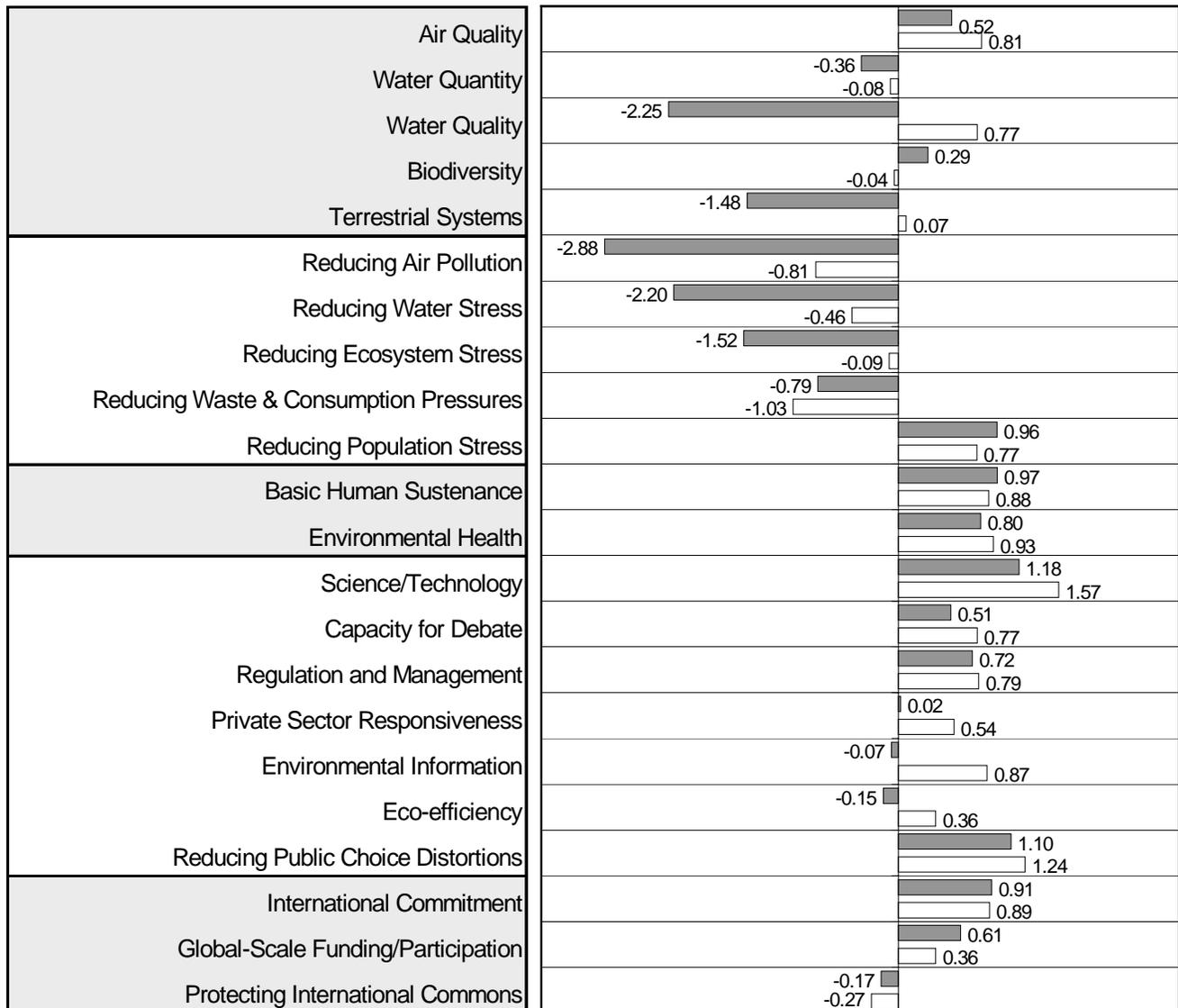
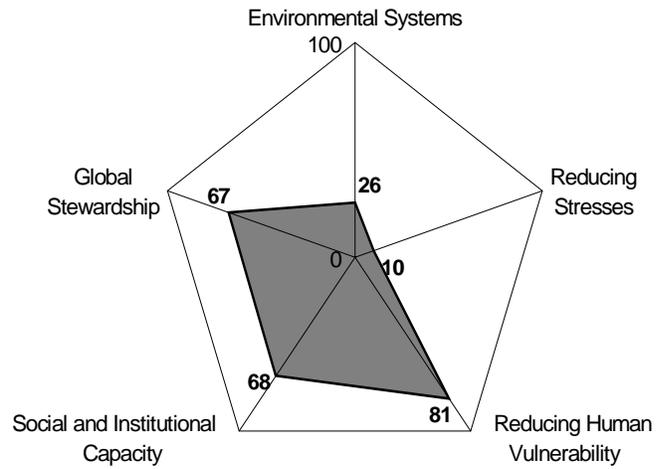
ESI:	48.0
Ranking:	57
GDP/Capita:	\$6,319
Peer group ESI:	52.2
Variable coverage:	47
Missing variables imputed:	13



= Indicator value
 = Reference (average value for peer group)

Belgium

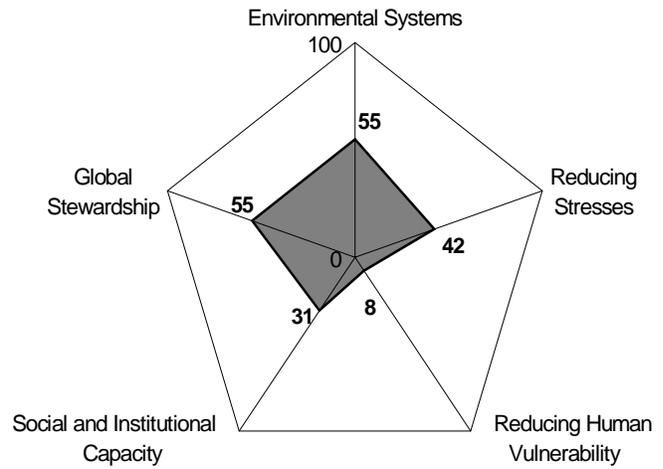
ESI:	44.1
Ranking:	79
GDP/Capita:	\$23,223
Peer group ESI:	65.2
Variable coverage:	59
Missing variables imputed:	8



= Indicator value
 = Reference (average value for peer group)

Benin

ESI:	38.6
Ranking:	103
GDP/Capita:	\$867
Peer group ESI:	39.3
Variable coverage:	43
Missing variables imputed:	15

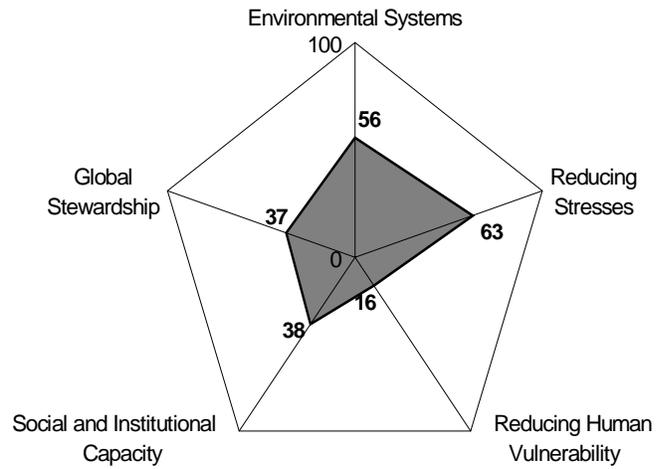


Air Quality	-0.61	-0.48
Water Quantity	-0.02	0.21
Water Quality	-0.70	-0.55
Biodiversity	1.03	0.19
Terrestrial Systems	0.69	0.15
Reducing Air Pollution	0.38	0.57
Reducing Water Stress	0.41	0.57
Reducing Ecosystem Stress	-0.03	0.11
Reducing Waste & Consumption Pressures	0.31	0.69
Reducing Population Stress	-2.03	-1.33
Basic Human Sustenance	-0.82	-1.38
Environmental Health	-2.04	-1.57
Science/Technology	-0.39	-0.90
Capacity for Debate	0.10	-0.56
Regulation and Management	-0.41	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-0.18	-0.62
Eco-efficiency	-1.42	0.42
Reducing Public Choice Distortions	-0.78	-0.37
International Commitment	-0.46	-0.41
Global-Scale Funding/Participation	-0.04	-0.49
Protecting International Commons	0.87	0.62

= Indicator value
 = Reference (average value for peer group)

Bhutan

ESI:	45.1
Ranking:	75
GDP/Capita:	\$1,536
Peer group ESI:	39.3
Variable coverage:	42
Missing variables imputed:	18

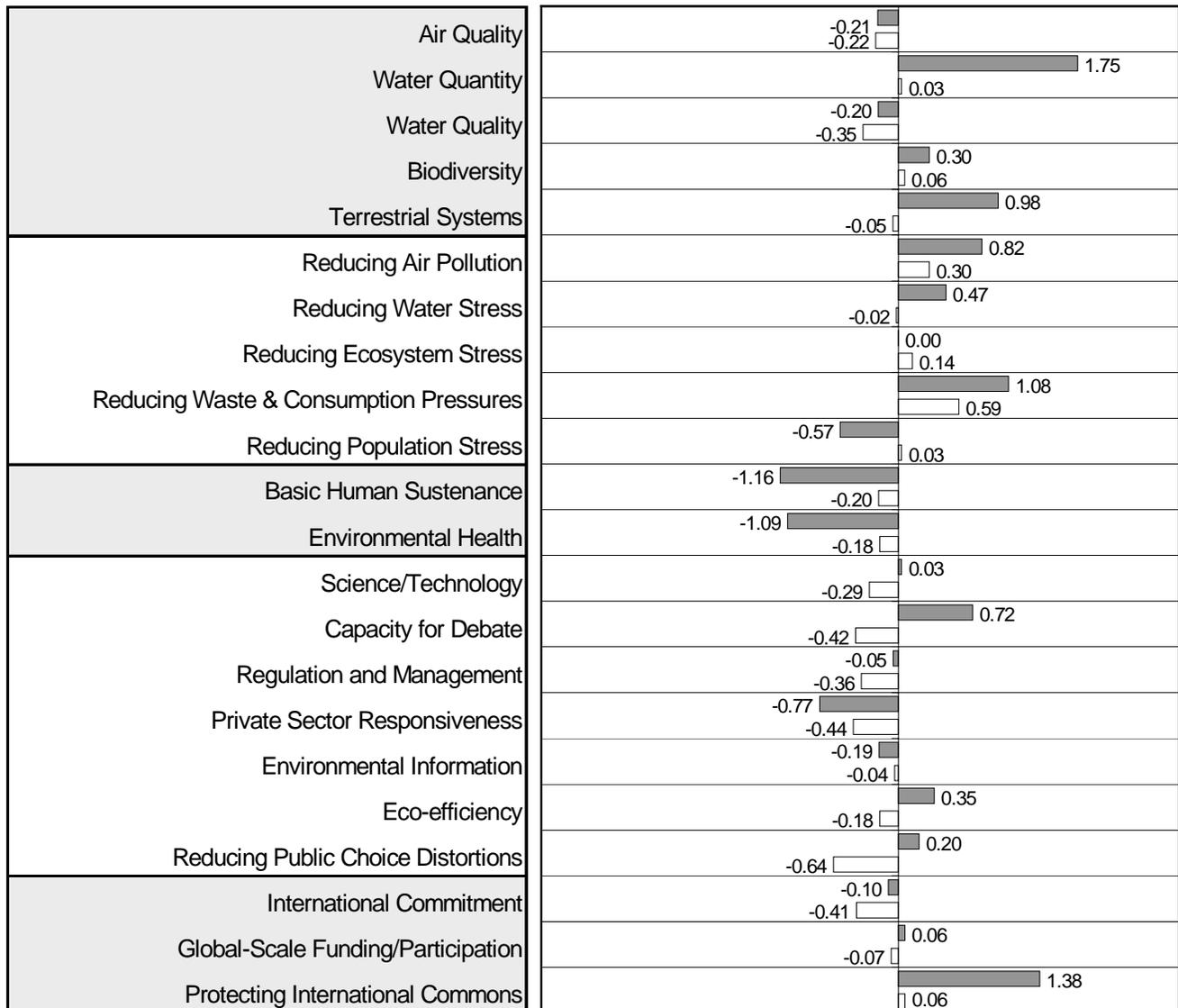
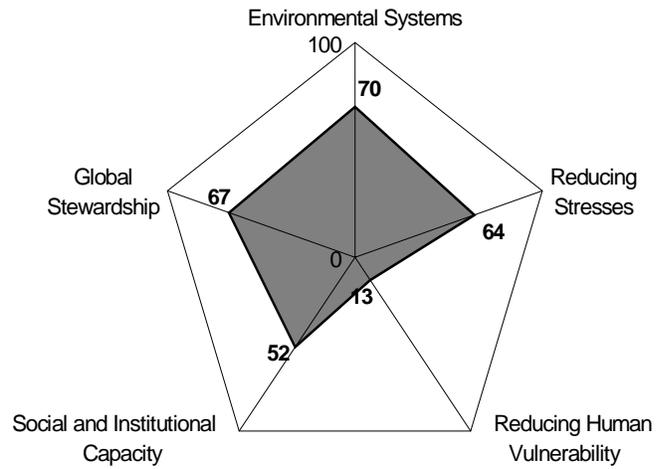


Air Quality	-0.48	0.00
Water Quantity	-0.02	0.73
Water Quality	-0.49	-0.55
Biodiversity	-0.40	0.19
Terrestrial Systems		0.88
Reducing Air Pollution		0.15
Reducing Water Stress		1.36
Reducing Ecosystem Stress		0.57
Reducing Waste & Consumption Pressures		0.96
Reducing Population Stress		0.57
Basic Human Sustenance		0.34
Environmental Health		0.11
Science/Technology		0.36
Capacity for Debate		0.69
Regulation and Management	-1.37	-0.20
Private Sector Responsiveness	-1.33	-1.38
Environmental Information	-1.77	-1.57
Eco-efficiency	-0.89	-0.90
Reducing Public Choice Distortions	-0.81	-0.56
International Commitment		0.55
Global-Scale Funding/Participation		-0.26
Protecting International Commons		-0.48
		-0.45
		-0.91
		-0.62
		0.83
		0.42
		-0.37
		-0.37
		-1.78
		-0.41
		0.13
		-0.49
		0.62
		0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Bolivia

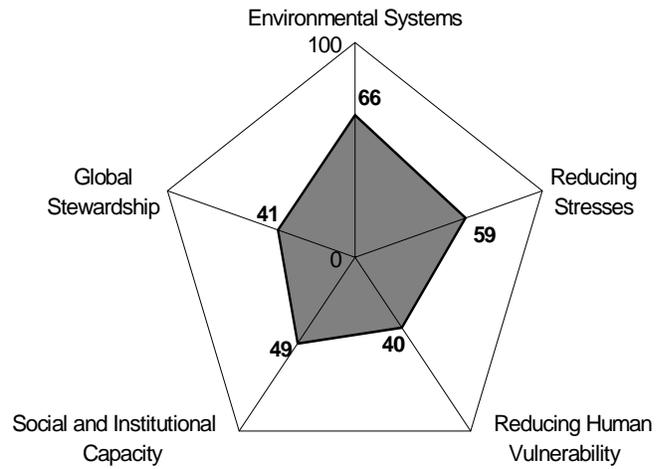
ESI:	56.9
Ranking:	30
GDP/Capita:	\$2,269
Peer group ESI:	45.2
Variable coverage:	50
Missing variables imputed:	13



■ = Indicator value
 □ = Reference (average value for peer group)

Botswana

ESI:	53.6
Ranking:	40
GDP/Capita:	\$6,103
Peer group ESI:	45.7
Variable coverage:	45
Missing variables imputed:	13

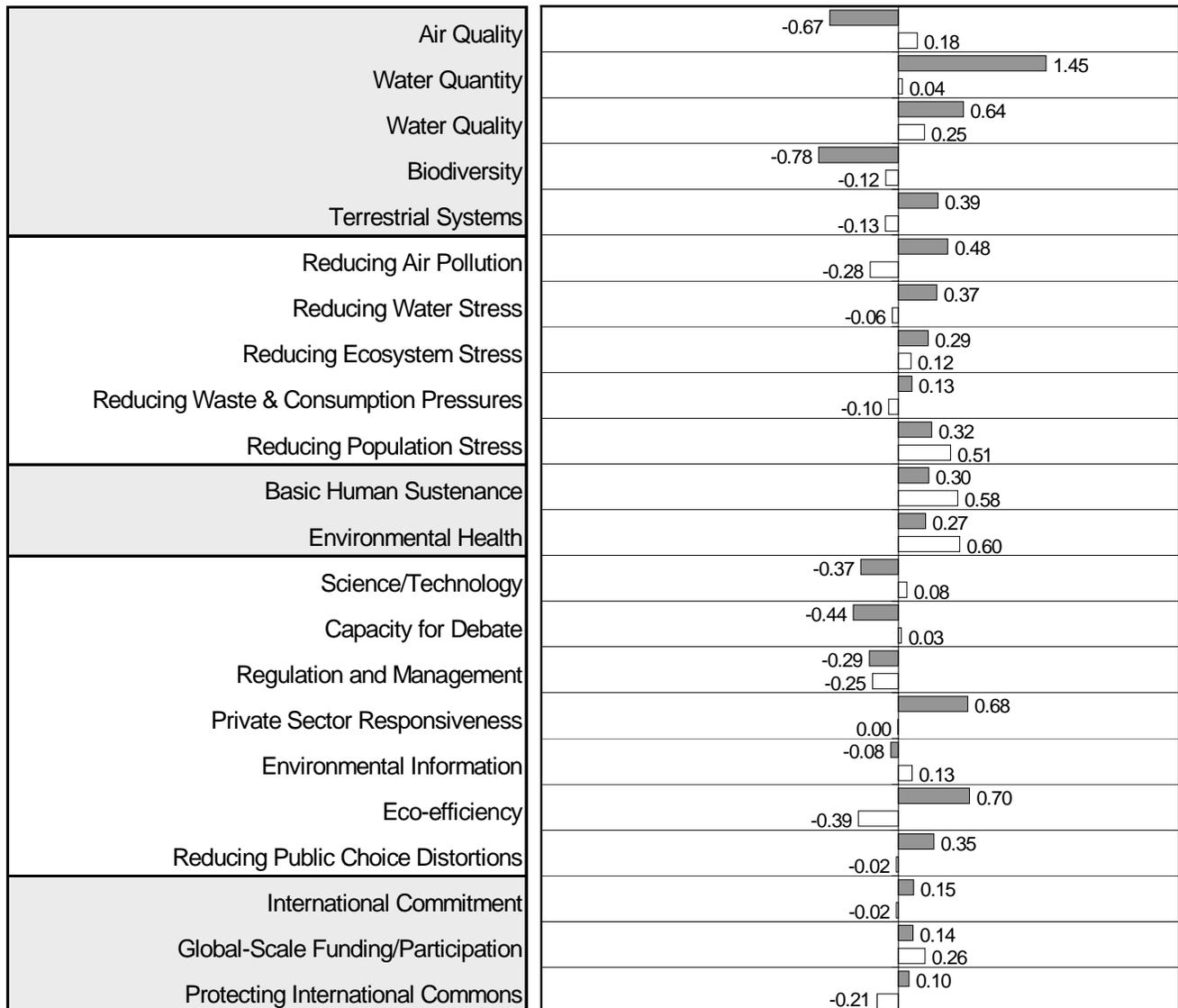
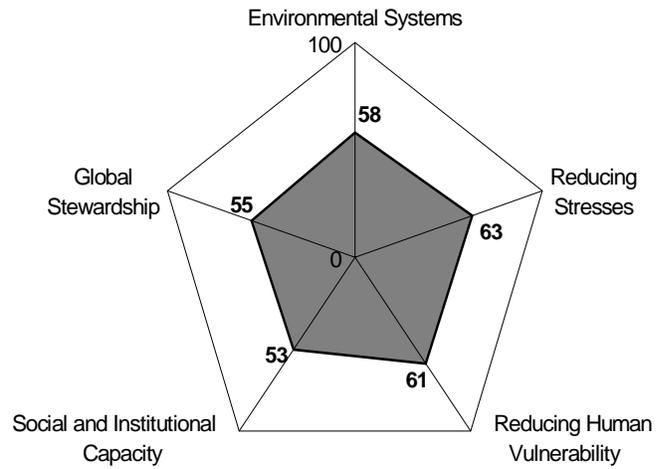


Air Quality	-0.16	0.25
Water Quantity	-0.27	0.00
Water Quality	-0.11	0.04
Biodiversity	-0.08	1.15
Terrestrial Systems	-0.03	0.82
Reducing Air Pollution	-0.20	0.19
Reducing Water Stress	-0.07	0.70
Reducing Ecosystem Stress	-0.28	0.27
Reducing Waste & Consumption Pressures	-0.14	0.17
Reducing Population Stress	-0.23	0.01
Basic Human Sustenance	-0.16	0.09
Environmental Health	-0.32	0.21
Science/Technology	-0.43	0.20
Capacity for Debate	-0.39	2.14
Regulation and Management	-0.31	0.36
Private Sector Responsiveness	-0.48	-0.29
Environmental Information	-0.62	-0.30
Eco-efficiency	-0.84	-0.15
Reducing Public Choice Distortions	-0.22	-0.52
International Commitment	-0.06	-0.29
Global-Scale Funding/Participation	-1.13	-0.07
Protecting International Commons	-0.11	0.51

■ = Indicator value
 □ = Reference (average value for peer group)

Brazil

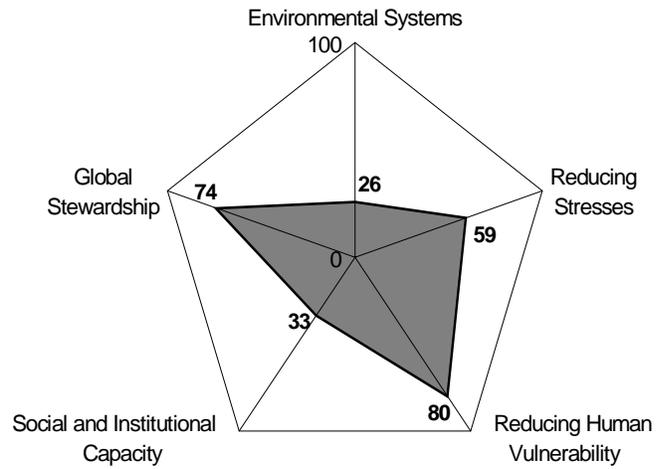
ESI:	57.4
Ranking:	28
GDP/Capita:	\$6,625
Peer group ESI:	52.2
Variable coverage:	62
Missing variables imputed:	3



■ = Indicator value
 □ = Reference (average value for peer group)

Bulgaria

ESI:	47.4
Ranking:	60
GDP/Capita:	\$4,809
Peer group ESI:	45.7
Variable coverage:	60
Missing variables imputed:	5

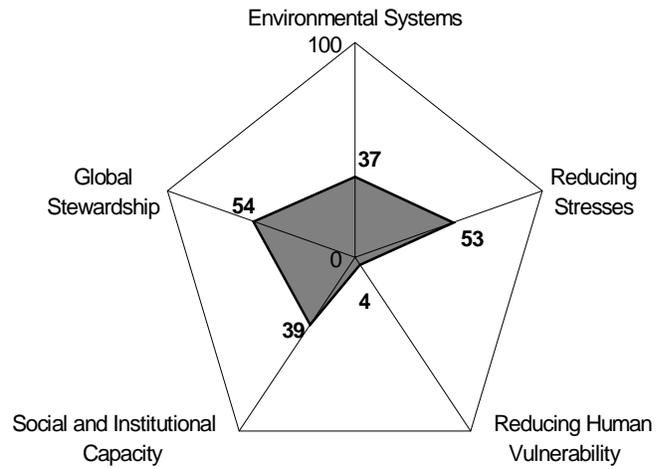


Air Quality	-1.87	-0.27
Water Quantity		0.42
Water Quality		0.04
Biodiversity	-0.49	-0.08
Terrestrial Systems	-1.37	-0.03
Reducing Air Pollution	-0.61	0.19
Reducing Water Stress	-0.07	0.20
Reducing Ecosystem Stress	-0.28	0.08
Reducing Waste & Consumption Pressures		0.42
Reducing Population Stress		1.08
Basic Human Sustenance		0.92
Environmental Health		0.76
Science/Technology	-0.39	0.19
Capacity for Debate	-0.08	0.20
Regulation and Management	-0.71	-0.31
Private Sector Responsiveness	-0.73	-0.29
Environmental Information		-0.12
Eco-efficiency	-0.98	-0.30
Reducing Public Choice Distortions	-0.55	-0.15
International Commitment		0.04
Global-Scale Funding/Participation	-0.29	2.28
Protecting International Commons	-0.07	-0.37
		-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Burkina Faso

ESI:	38.6
Ranking:	104
GDP/Capita:	\$870
Peer group ESI:	39.3
Variable coverage:	45
Missing variables imputed:	13

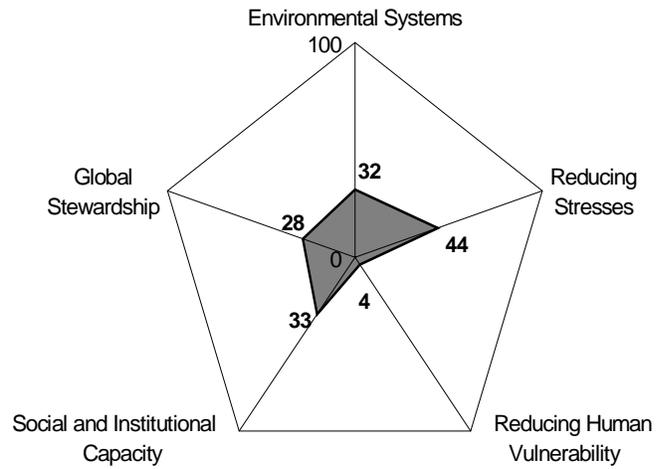


Air Quality	-0.81	-0.48
Water Quantity	-0.76	-0.02
Water Quality	-1.00	-0.55
Biodiversity		1.15
Terrestrial Systems	-0.20	0.19
Reducing Air Pollution		0.99
Reducing Water Stress		0.57
Reducing Ecosystem Stress		0.57
Reducing Waste & Consumption Pressures		0.57
Reducing Population Stress	-2.21	0.18
Basic Human Sustenance	-1.52	0.11
Environmental Health	-1.38	0.80
Science/Technology	-1.90	0.69
Capacity for Debate	-0.69	
Regulation and Management	-0.90	
Private Sector Responsiveness	-0.43	
Environmental Information	-0.56	
Eco-efficiency	-0.18	
Reducing Public Choice Distortions	-0.26	
International Commitment	-0.48	
Global-Scale Funding/Participation	-0.45	
Protecting International Commons	-0.82	
	-0.62	0.60
	-0.02	0.42
	-0.37	
	-0.23	
	-0.41	
	-0.23	
	-0.49	
		0.78
		0.62

= Indicator value
 = Reference (average value for peer group)

Burundi

ESI:	30.1
Ranking:	120
GDP/Capita:	\$570
Peer group ESI:	39.3
Variable coverage:	42
Missing variables imputed:	16

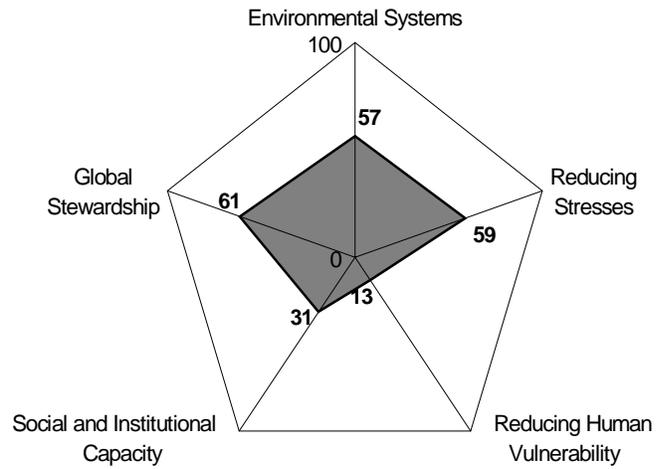


Air Quality	-0.75	-0.48
Water Quantity	-0.31	-0.02
Water Quality	-0.95	-0.55
Biodiversity		0.91
Terrestrial Systems	-1.31	0.19
Reducing Air Pollution	-0.66	0.15
Reducing Water Stress		0.57
Reducing Ecosystem Stress		0.68
Reducing Waste & Consumption Pressures		0.57
Reducing Population Stress		0.30
Basic Human Sustenance		0.11
Environmental Health		0.90
Science/Technology	-1.93	0.69
Capacity for Debate	-1.33	
Regulation and Management	-1.57	
Private Sector Responsiveness	-1.38	
Environmental Information	-1.90	
Eco-efficiency	-1.57	
Reducing Public Choice Distortions	-0.63	0.72
International Commitment	-0.90	0.42
Global-Scale Funding/Participation	-0.98	
Protecting International Commons	-0.56	
	-0.51	
	-0.26	
	-0.48	
	-0.45	
	-0.92	
	-0.62	
	-0.34	
	-0.37	
	-1.47	
	-0.41	
	-1.12	
	-0.49	
		0.83
		0.62

= Indicator value
 = Reference (average value for peer group)

Cameroon

ESI:	44.9
Ranking:	76
GDP/Capita:	\$1,474
Peer group ESI:	39.3
Variable coverage:	45
Missing variables imputed:	13

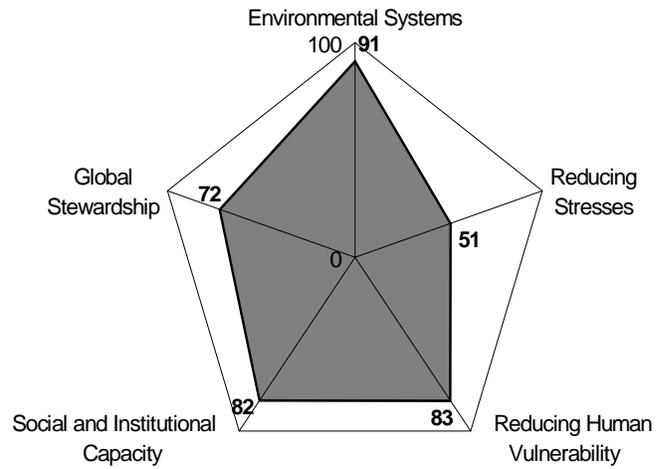


Air Quality	-0.50	-0.48
Water Quantity		0.68
Water Quality	-0.20	-0.55
Biodiversity		0.44
Terrestrial Systems		0.19
Reducing Air Pollution		0.41
Reducing Water Stress		0.15
Reducing Ecosystem Stress		0.77
Reducing Waste & Consumption Pressures		0.57
Reducing Population Stress		0.90
Basic Human Sustenance		0.21
Environmental Health		0.11
Science/Technology		0.43
Capacity for Debate		0.69
Regulation and Management	-1.19	-1.33
Private Sector Responsiveness	-1.21	-1.38
Environmental Information	-1.04	-1.57
Eco-efficiency	-0.73	-0.90
Reducing Public Choice Distortions	-1.28	-0.56
International Commitment	-0.58	-0.26
Global-Scale Funding/Participation	-0.48	-0.45
Protecting International Commons	-0.71	-0.62
		0.88
		0.42
		0.39
		0.58
		0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Canada

ESI:	78.1
Ranking:	3
GDP/Capita:	\$23,582
Peer group ESI:	65.2
Variable coverage:	66
Missing variables imputed:	0

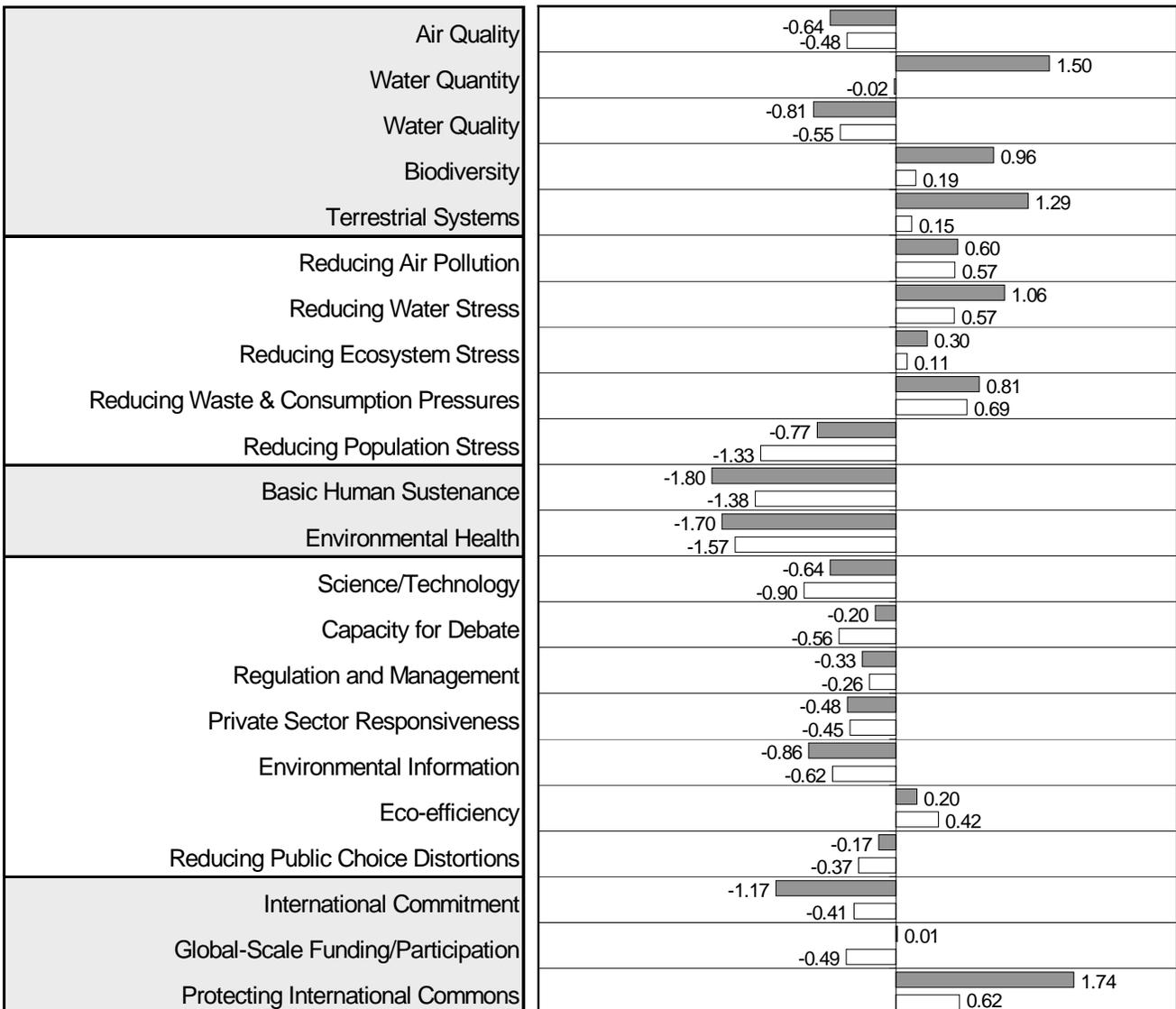
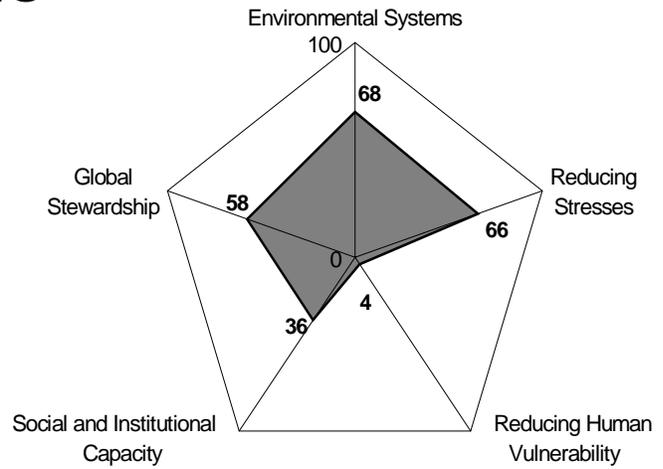


Air Quality	0.98	0.81
Water Quantity	1.70	-0.08
Water Quality	1.54	0.77
Biodiversity	1.12	-0.04
Terrestrial Systems	1.45	0.07
Reducing Air Pollution	-0.51	-0.81
Reducing Water Stress	0.52	-0.46
Reducing Ecosystem Stress	0.34	-0.09
Reducing Waste & Consumption Pressures	-0.92	-1.03
Reducing Population Stress	0.72	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.95	0.93
Science/Technology	1.80	1.57
Capacity for Debate	0.90	0.77
Regulation and Management	1.21	0.79
Private Sector Responsiveness	0.71	0.54
Environmental Information	0.68	0.87
Eco-efficiency	0.55	0.36
Reducing Public Choice Distortions	0.68	1.24
International Commitment	0.91	0.89
Global-Scale Funding/Participation	0.73	0.36
Protecting International Commons	0.11	-0.27

= Indicator value
 = Reference (average value for peer group)

Central African Republic

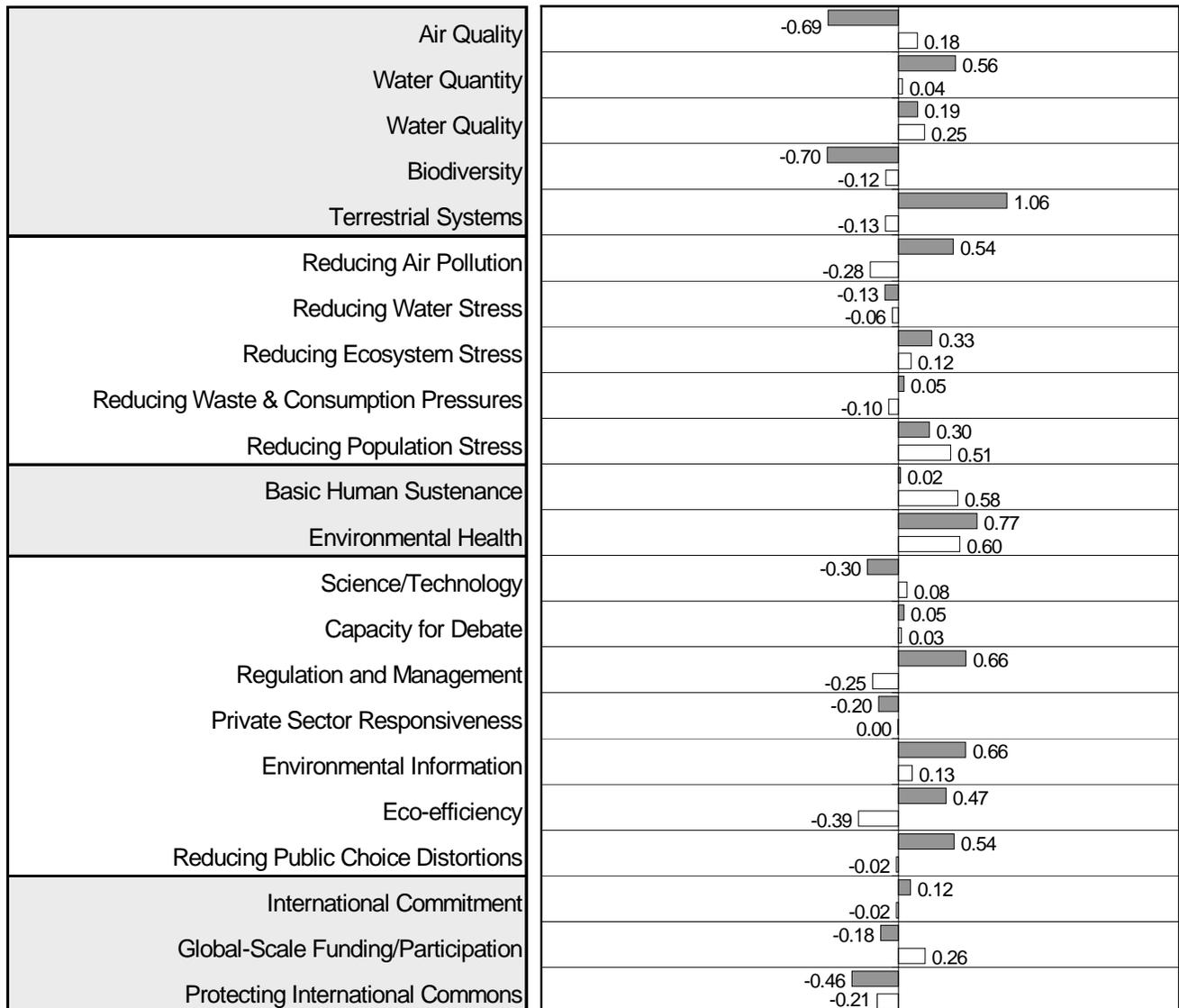
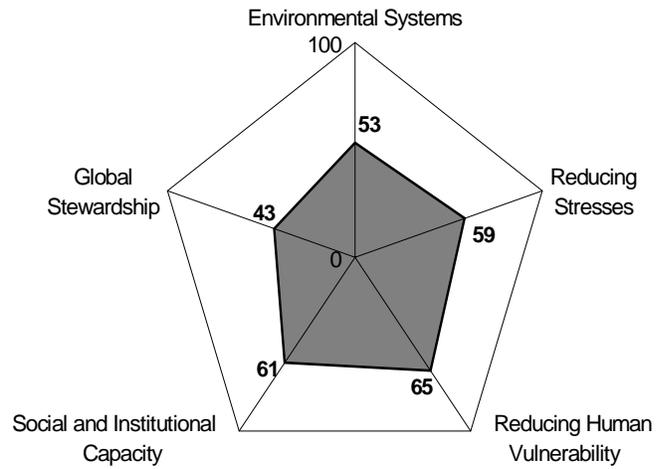
ESI:	48.0
Ranking:	56
GDP/Capita:	\$1,118
Peer group ESI:	39.3
Variable coverage:	42
Missing variables imputed:	16



■ = Indicator value
 □ = Reference (average value for peer group)

Chile

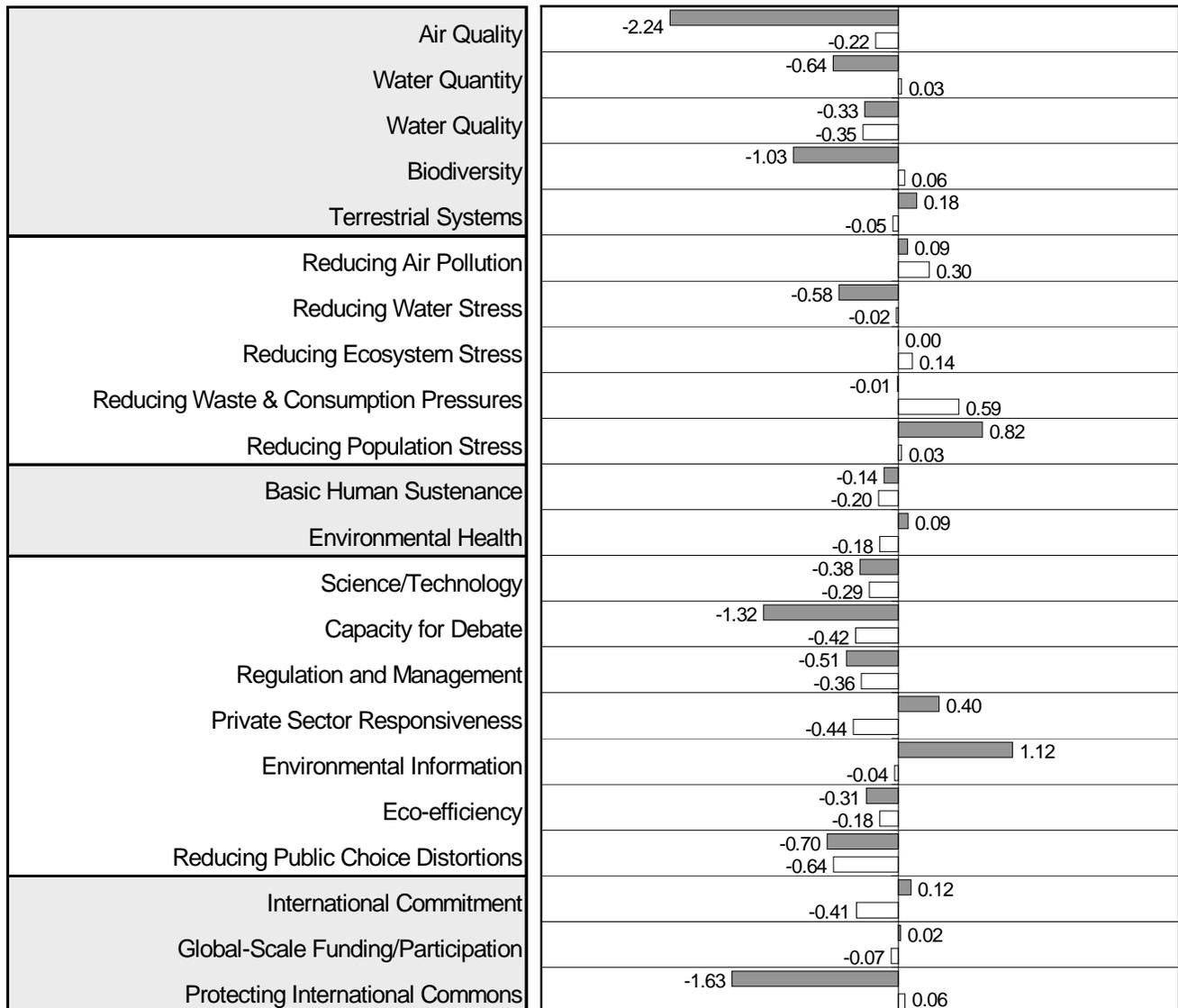
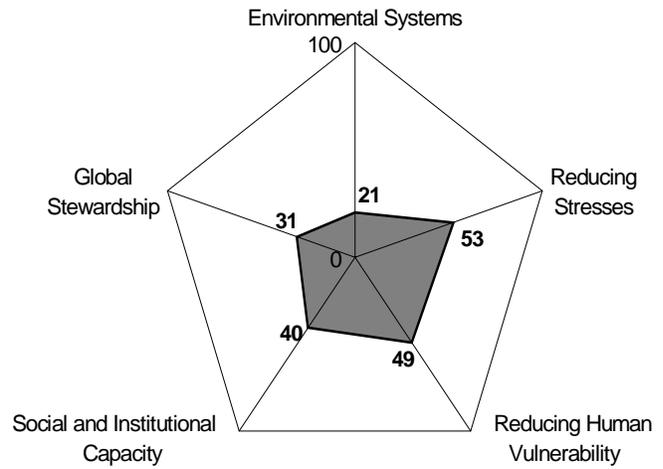
ESI:	56.6
Ranking:	31
GDP/Capita:	\$8,787
Peer group ESI:	52.2
Variable coverage:	61
Missing variables imputed:	4



■ = Indicator value
 □ = Reference (average value for peer group)

China

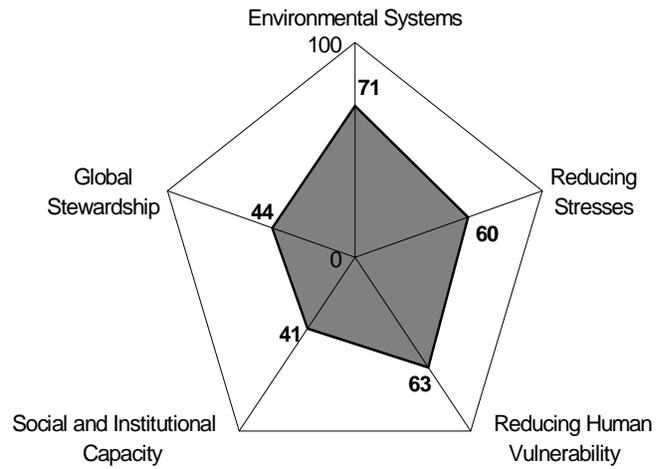
ESI:	37.6
Ranking:	108
GDP/Capita:	\$3,105
Peer group ESI:	45.2
Variable coverage:	60
Missing variables imputed:	4



■ = Indicator value
 □ = Reference (average value for peer group)

Colombia

ESI:	54.8
Ranking:	36
GDP/Capita:	\$6,006
Peer group ESI:	45.7
Variable coverage:	59
Missing variables imputed:	4

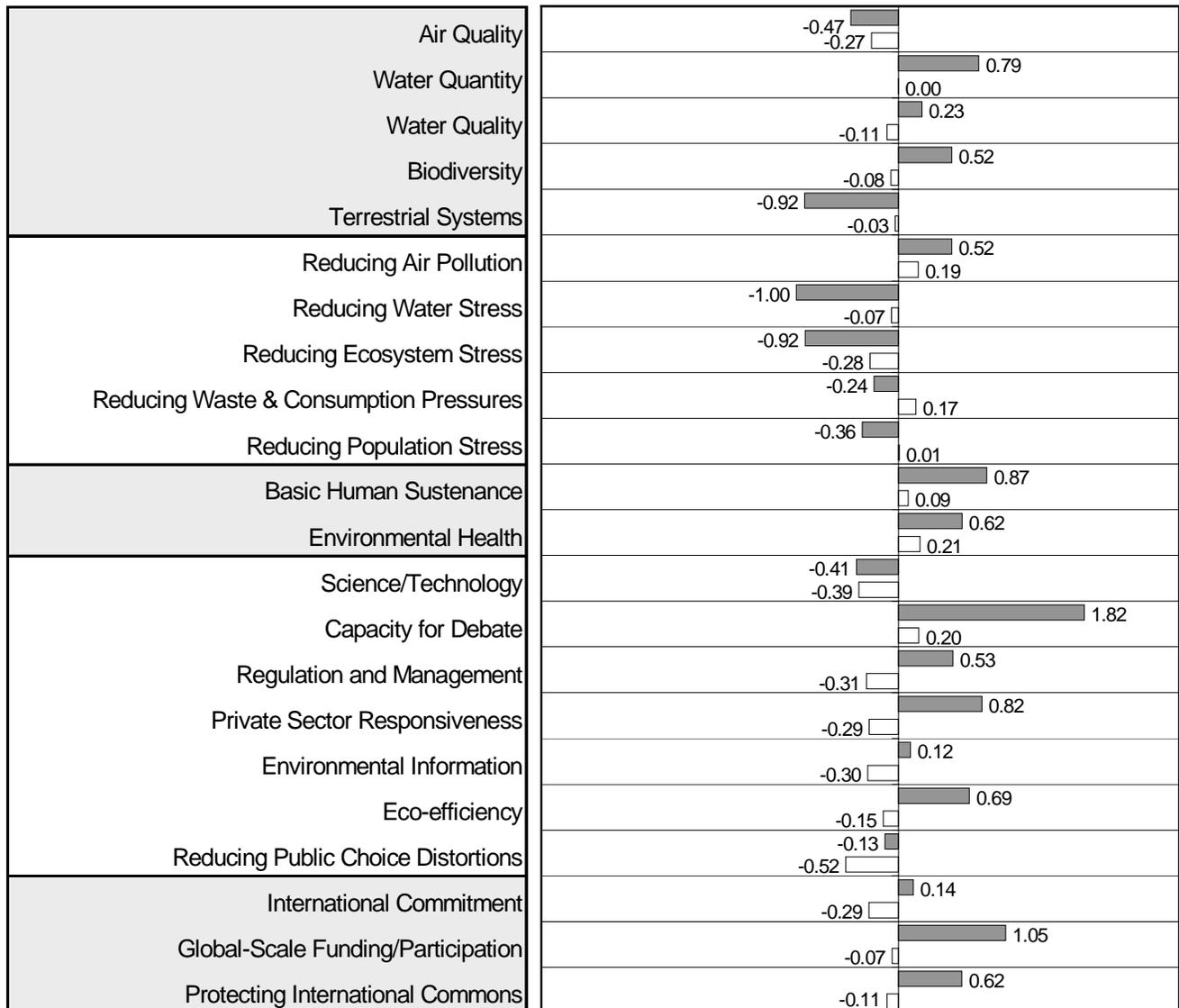
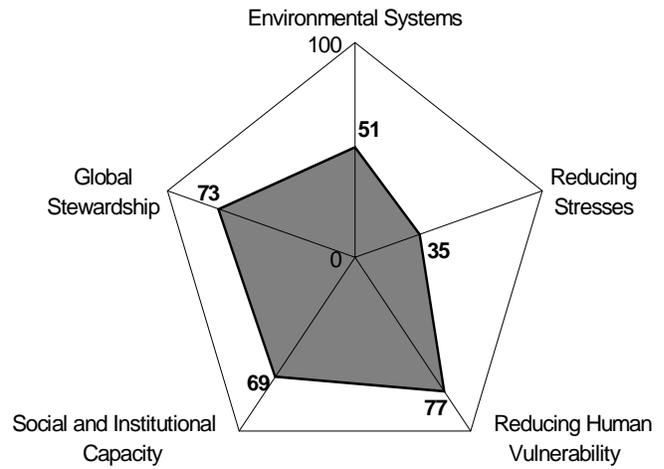


Air Quality	0.00	-0.27
Water Quantity	1.74	0.00
Water Quality	0.27	-0.11
Biodiversity	0.04	-0.08
Terrestrial Systems	0.65	-0.03
Reducing Air Pollution	0.48	-0.04
Reducing Water Stress	0.19	-0.07
Reducing Ecosystem Stress	0.28	-0.28
Reducing Waste & Consumption Pressures	0.79	0.17
Reducing Population Stress	0.01	-0.19
Basic Human Sustenance	0.09	0.09
Environmental Health	0.59	0.21
Science/Technology	-0.71	-0.39
Capacity for Debate	-0.42	0.20
Regulation and Management	-0.30	-0.31
Private Sector Responsiveness	-0.50	-0.29
Environmental Information	0.62	-0.30
Eco-efficiency	0.36	-0.15
Reducing Public Choice Distortions	-0.64	-0.52
International Commitment	0.27	-0.29
Global-Scale Funding/Participation	-0.58	-0.07
Protecting International Commons	-0.15	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Costa Rica

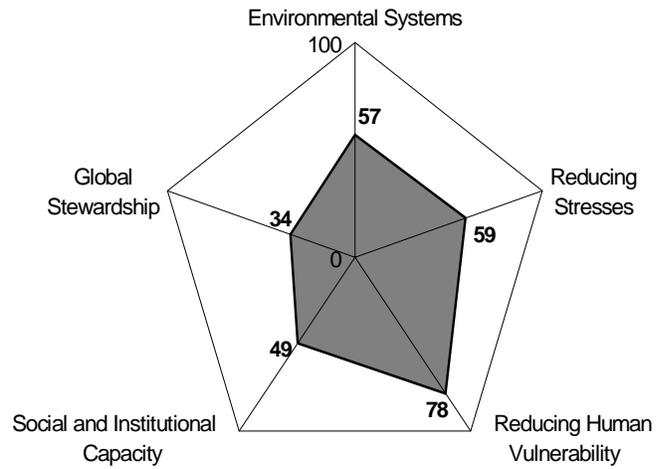
ESI:	58.8
Ranking:	26
GDP/Capita:	\$5,987
Peer group ESI:	45.7
Variable coverage:	58
Missing variables imputed:	5



= Indicator value
 = Reference (average value for peer group)

Croatia

ESI:	54.1
Ranking:	39
GDP/Capita:	\$6,749
Peer group ESI:	52.2
Variable coverage:	48
Missing variables imputed:	11

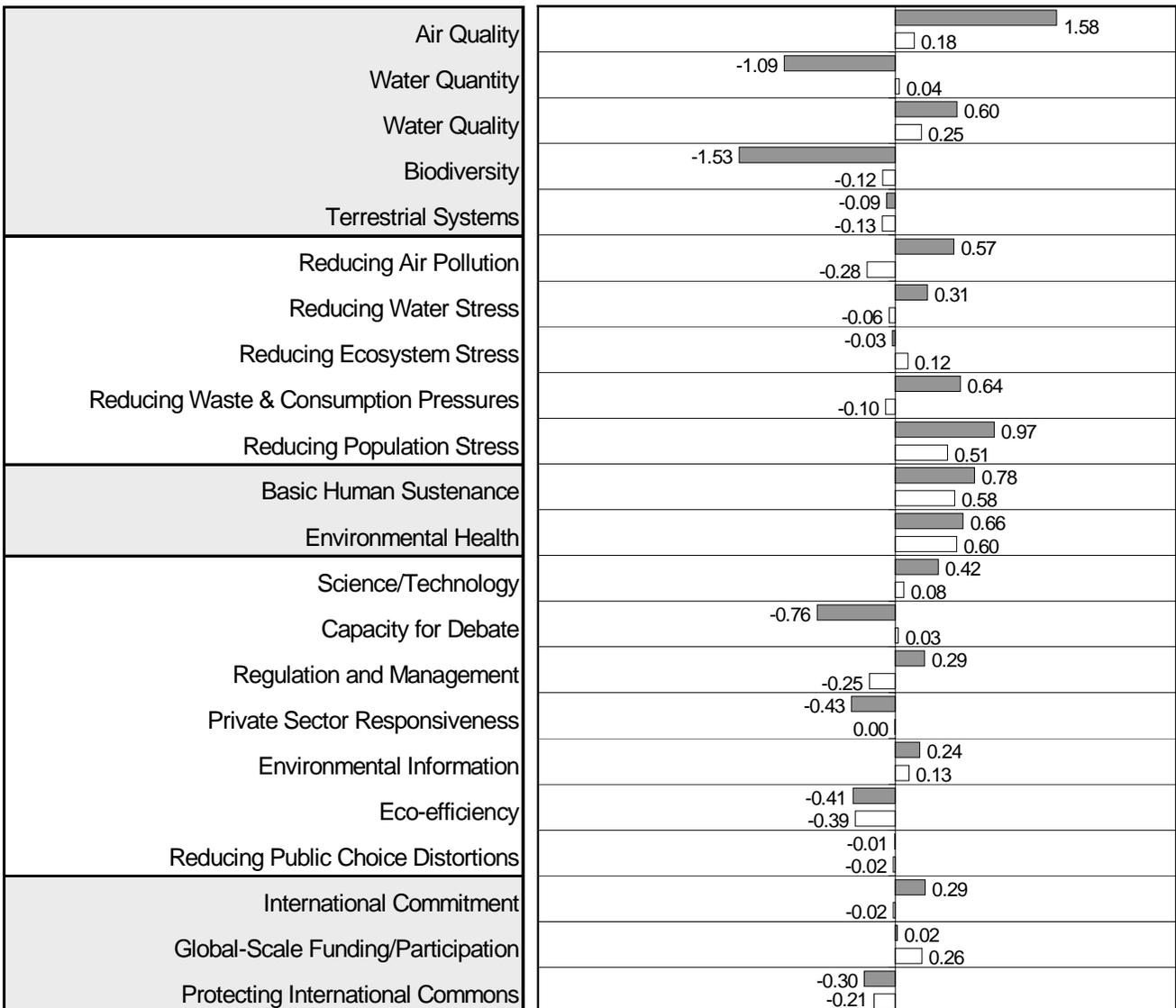
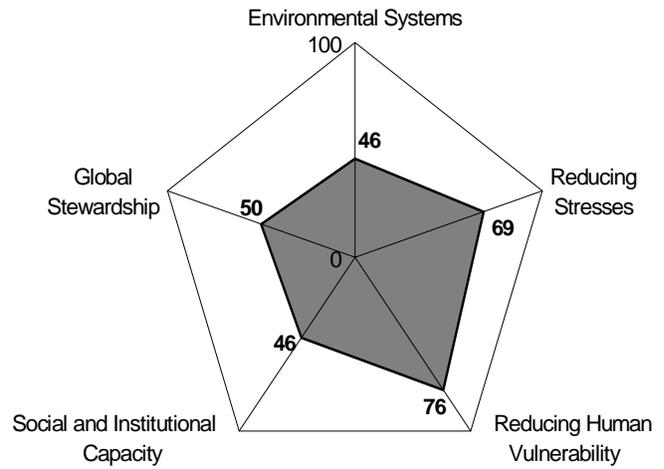


Air Quality	0.28	0.18
Water Quantity	0.72	0.04
Water Quality	0.09	0.25
Biodiversity	0.10	
Terrestrial Systems	-0.12	
Reducing Air Pollution	-0.30	
Reducing Water Stress	-0.13	
Reducing Ecosystem Stress	-0.76	
Reducing Waste & Consumption Pressures	-0.28	
Reducing Population Stress	0.20	
Basic Human Sustenance	0.34	0.12
Environmental Health	0.37	
Science/Technology	1.00	0.51
Capacity for Debate	0.65	
Regulation and Management	0.58	
Private Sector Responsiveness	0.92	
Environmental Information	0.60	
Eco-efficiency	0.41	0.08
Reducing Public Choice Distortions	-0.20	0.03
International Commitment	-0.43	
Global-Scale Funding/Participation	-0.25	
Protecting International Commons	0.38	
	0.00	
	-0.29	0.13
	0.10	
	-0.39	
	-0.09	
	-0.02	
	-0.51	
	-0.02	
	-1.17	0.26
	0.47	
	-0.21	

■ = Indicator value
 □ = Reference (average value for peer group)

Cuba

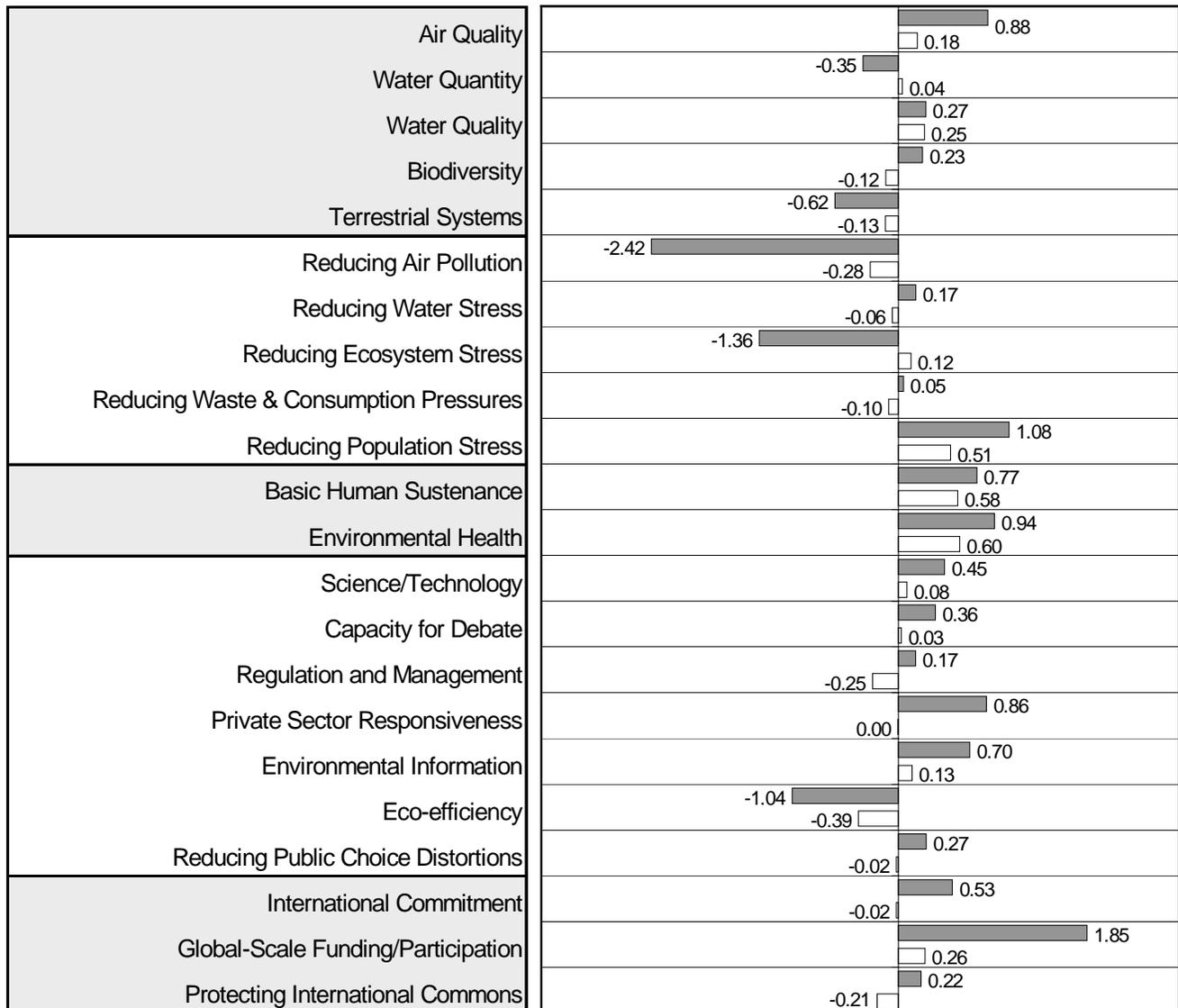
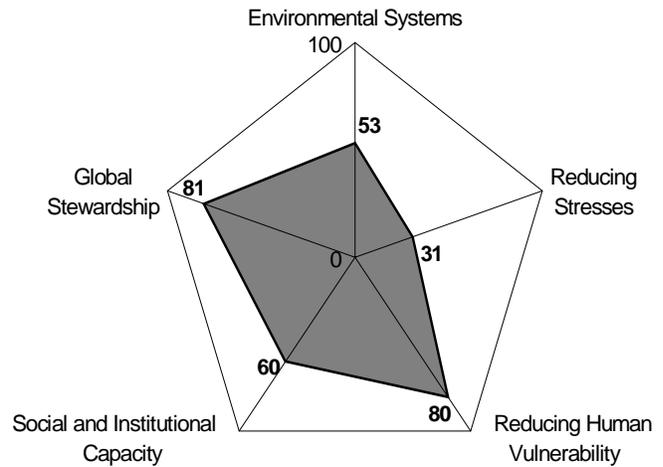
ESI:	54.9
Ranking:	35
GDP/Capita:	
Peer group ESI:	52.2
Variable coverage:	52
Missing variables imputed:	6



■ = Indicator value
□ = Reference (average value for peer group)

Czech Republic

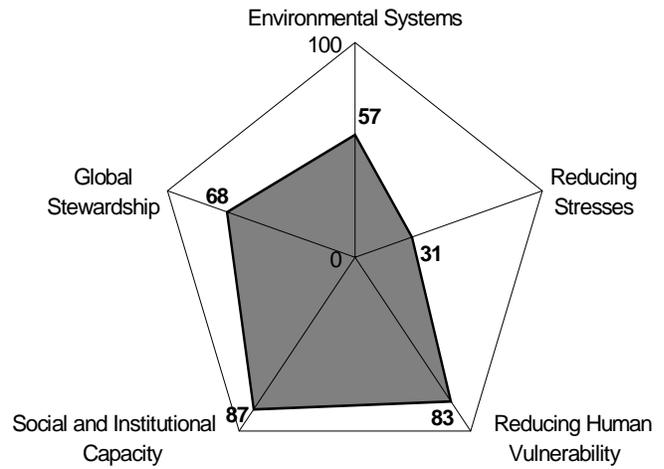
ESI:	57.2
Ranking:	29
GDP/Capita:	\$12,362
Peer group ESI:	52.2
Variable coverage:	56
Missing variables imputed:	9



■ = Indicator value
 □ = Reference (average value for peer group)

Denmark

ESI:	67.0
Ranking:	10
GDP/Capita:	\$24,218
Peer group ESI:	65.2
Variable coverage:	60
Missing variables imputed:	7

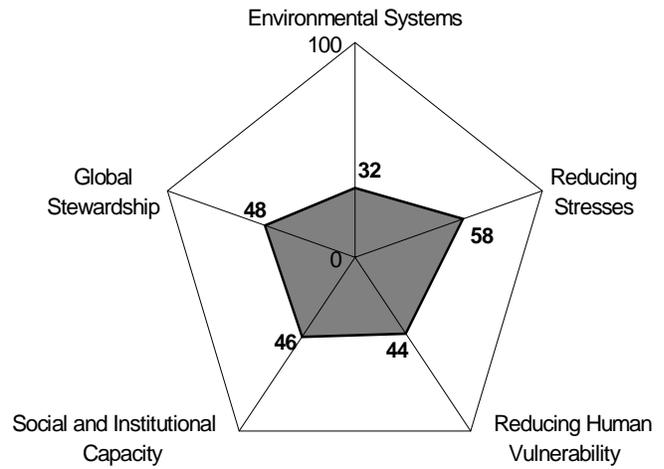


Air Quality	0.69	0.81
Water Quantity	-1.05	-0.08
Water Quality	0.55	0.77
Biodiversity	0.66	-0.04
Terrestrial Systems	0.04	0.07
Reducing Air Pollution	-1.54	-0.81
Reducing Water Stress	-0.19	-0.46
Reducing Ecosystem Stress	-1.07	-0.09
Reducing Waste & Consumption Pressures	-0.51	-1.03
Reducing Population Stress	0.78	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.97	0.93
Science/Technology	1.92	1.57
Capacity for Debate	1.10	0.77
Regulation and Management	1.54	0.79
Private Sector Responsiveness	0.72	0.54
Environmental Information	0.63	0.87
Eco-efficiency	0.48	0.36
Reducing Public Choice Distortions	1.62	1.24
International Commitment	1.28	0.89
Global-Scale Funding/Participation	0.68	0.36
Protecting International Commons	-0.53	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Dominican Republic

ESI:	45.4
Ranking:	72
GDP/Capita:	\$4,598
Peer group ESI:	45.7
Variable coverage:	43
Missing variables imputed:	15

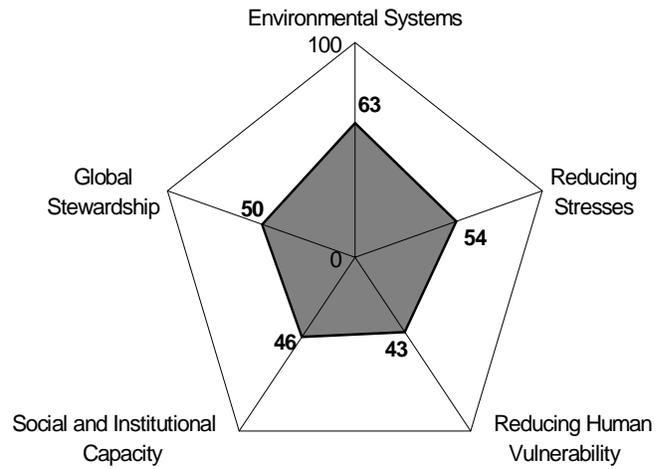


Air Quality	-0.29	-0.27
Water Quantity	-0.62	0.00
Water Quality	-0.28	-0.11
Biodiversity	-1.07	-0.08
Terrestrial Systems	-0.05	-0.03
Reducing Air Pollution	0.42	0.19
Reducing Water Stress	0.10	-0.07
Reducing Ecosystem Stress	-0.19	-0.28
Reducing Waste & Consumption Pressures	0.81	0.17
Reducing Population Stress	-0.16	0.01
Basic Human Sustenance	-0.43	0.09
Environmental Health	0.12	0.21
Science/Technology	-0.45	-0.39
Capacity for Debate	0.05	0.20
Regulation and Management	1.24	-0.31
Private Sector Responsiveness	-0.43	-0.29
Environmental Information	-0.75	-0.30
Eco-efficiency	0.34	-0.15
Reducing Public Choice Distortions	-0.76	-0.52
International Commitment	-0.52	-0.29
Global-Scale Funding/Participation	0.45	-0.07
Protecting International Commons	-0.07	-0.11

= Indicator value
 = Reference (average value for peer group)

Ecuador

ESI:	51.8
Ranking:	44
GDP/Capita:	\$3,003
Peer group ESI:	45.2
Variable coverage:	56
Missing variables imputed:	7

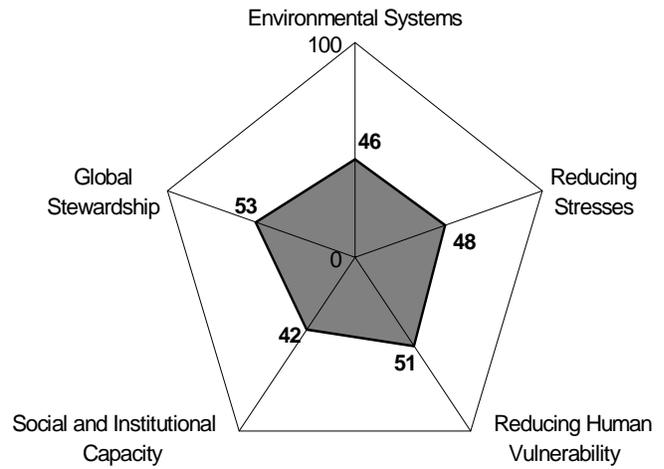


Air Quality	0.20	-0.22
Water Quantity	0.81	0.03
Water Quality	-0.06	-0.35
Biodiversity	0.07	0.06
Terrestrial Systems	0.59	-0.05
Reducing Air Pollution	0.27	0.30
Reducing Water Stress	0.37	-0.02
Reducing Ecosystem Stress	-0.20	0.14
Reducing Waste & Consumption Pressures	0.23	0.59
Reducing Population Stress	-0.14	0.03
Basic Human Sustenance	-0.54	-0.20
Environmental Health	0.19	-0.18
Science/Technology	-0.70	-0.29
Capacity for Debate	0.75	-0.42
Regulation and Management	-0.06	-0.36
Private Sector Responsiveness	-0.42	-0.44
Environmental Information	0.81	-0.04
Eco-efficiency	0.22	-0.18
Reducing Public Choice Distortions	-1.35	-0.64
International Commitment	-0.06	-0.41
Global-Scale Funding/Participation	0.01	-0.07
Protecting International Commons	0.01	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Egypt

ESI:	46.5
Ranking:	67
GDP/Capita:	\$3,041
Peer group ESI:	45.2
Variable coverage:	57
Missing variables imputed:	7

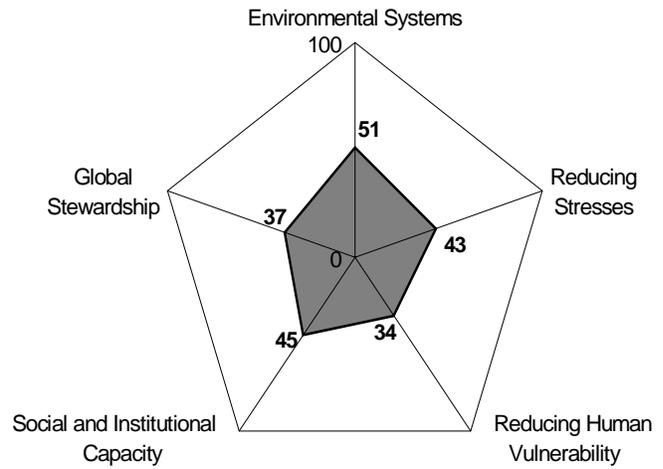


Air Quality	-0.79	-0.22
Water Quantity	-0.34	0.03
Water Quality	-0.15	-0.35
Biodiversity	-0.75	0.06
Terrestrial Systems	-0.05	1.48
Reducing Air Pollution	-0.35	0.30
Reducing Water Stress	-0.64	-0.02
Reducing Ecosystem Stress		0.46
Reducing Waste & Consumption Pressures		0.49
Reducing Population Stress	-0.17	0.59
Basic Human Sustenance		0.03
Environmental Health		0.78
Science/Technology	-0.72	-0.18
Capacity for Debate	-0.53	-0.29
Regulation and Management	-1.02	-0.42
Private Sector Responsiveness		0.11
Environmental Information	-0.36	-0.03
Eco-efficiency	-0.44	0.77
Reducing Public Choice Distortions	-0.04	-0.09
International Commitment	-0.68	-0.18
Global-Scale Funding/Participation	-0.64	-0.64
Protecting International Commons		0.10
	-0.41	0.62
	-0.07	
	-0.49	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

El Salvador

ESI:	43.7
Ranking:	84
GDP/Capita:	\$4,036
Peer group ESI:	45.7
Variable coverage:	55
Missing variables imputed:	8

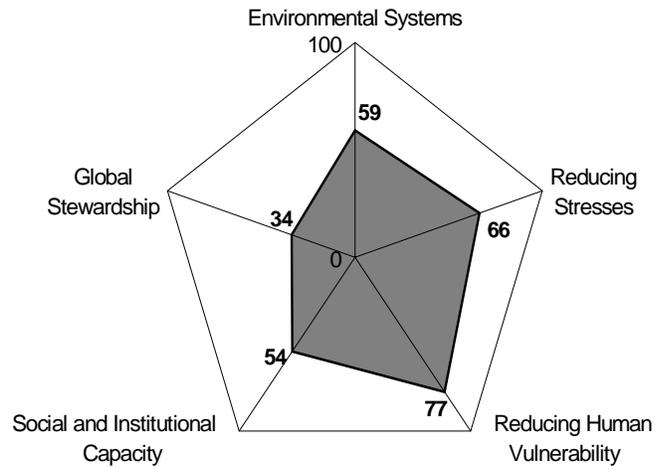


Air Quality	-0.55	-0.27
Water Quantity	-0.13	0.00
Water Quality	-0.11	0.08
Biodiversity	-0.08	1.65
Terrestrial Systems	-0.91	-0.03
Reducing Air Pollution	0.04	0.19
Reducing Water Stress	-0.07	0.20
Reducing Ecosystem Stress	-1.06	-0.28
Reducing Waste & Consumption Pressures	0.63	0.17
Reducing Population Stress	-0.66	0.01
Basic Human Sustenance	-0.58	0.09
Environmental Health	-0.27	0.21
Science/Technology	-0.39	0.18
Capacity for Debate	0.69	0.20
Regulation and Management	-1.32	-0.31
Private Sector Responsiveness	-0.87	-0.29
Environmental Information	-0.30	0.19
Eco-efficiency	0.60	-0.15
Reducing Public Choice Distortions	-0.45	-0.52
International Commitment	-1.27	-0.29
Global-Scale Funding/Participation	0.20	-0.07
Protecting International Commons	0.11	-0.11

= Indicator value
 = Reference (average value for peer group)

Estonia

ESI:	57.7
Ranking:	27
GDP/Capita:	\$7,682
Peer group ESI:	52.2
Variable coverage:	48
Missing variables imputed:	12

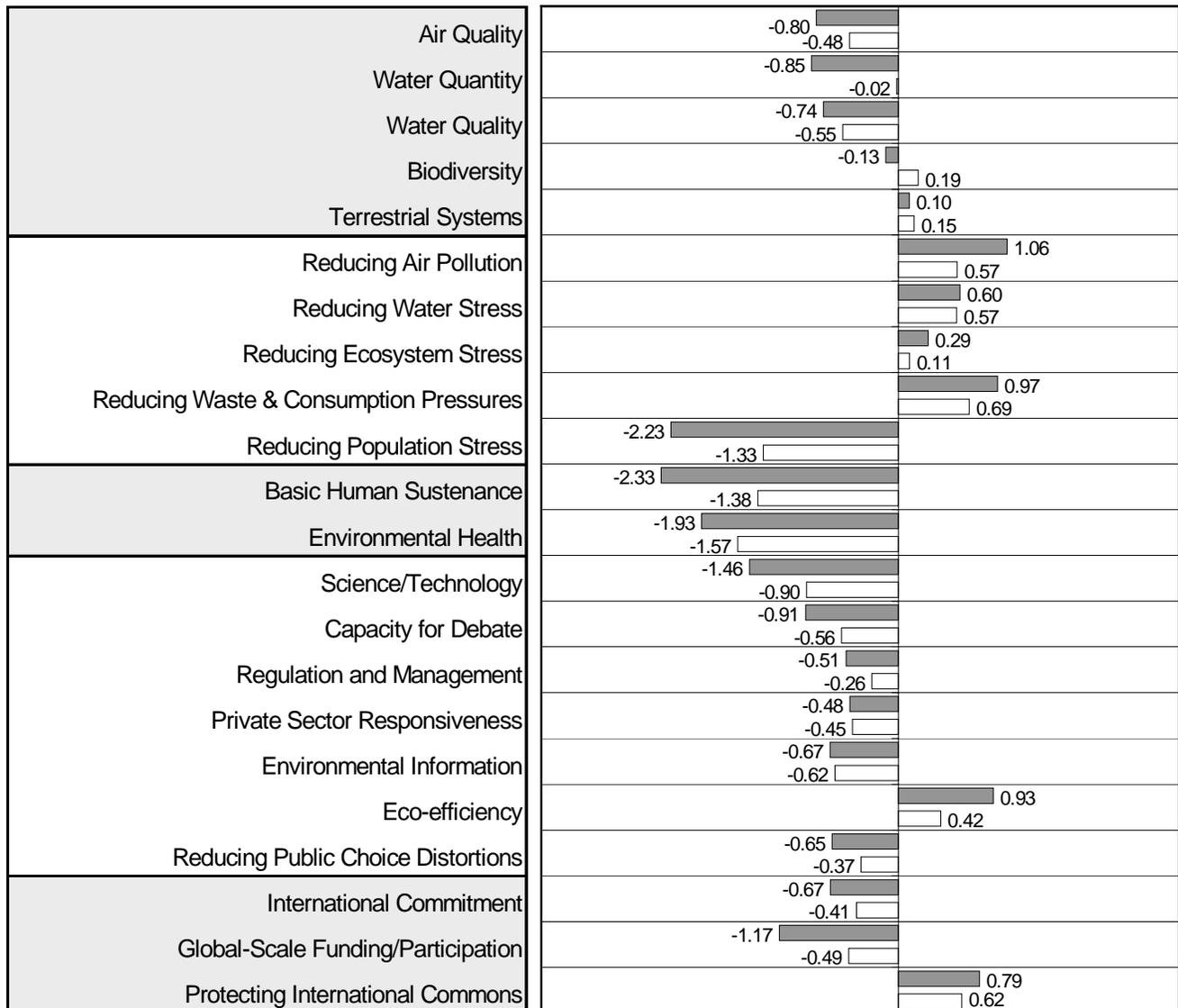
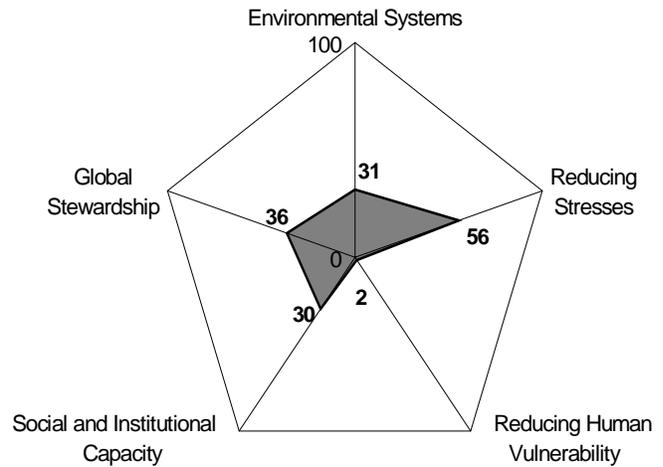


Air Quality	0.32	0.18
Water Quantity	0.46	0.04
Water Quality	0.11	0.25
Biodiversity	0.76	
Terrestrial Systems	-0.12	-0.50
Reducing Air Pollution	0.18	-0.28
Reducing Water Stress	0.46	-0.06
Reducing Ecosystem Stress	0.63	0.12
Reducing Waste & Consumption Pressures	-0.21	-0.10
Reducing Population Stress	1.07	0.51
Basic Human Sustenance	0.66	0.58
Environmental Health	0.85	0.60
Science/Technology	0.51	0.08
Capacity for Debate	0.90	0.03
Regulation and Management	-0.08	-0.25
Private Sector Responsiveness	-0.02	0.00
Environmental Information	0.27	0.13
Eco-efficiency	-0.95	-0.39
Reducing Public Choice Distortions	0.07	-0.02
International Commitment	0.00	-0.02
Global-Scale Funding/Participation	-1.07	0.26
Protecting International Commons	-0.18	-0.21

= Indicator value
 = Reference (average value for peer group)

Ethiopia

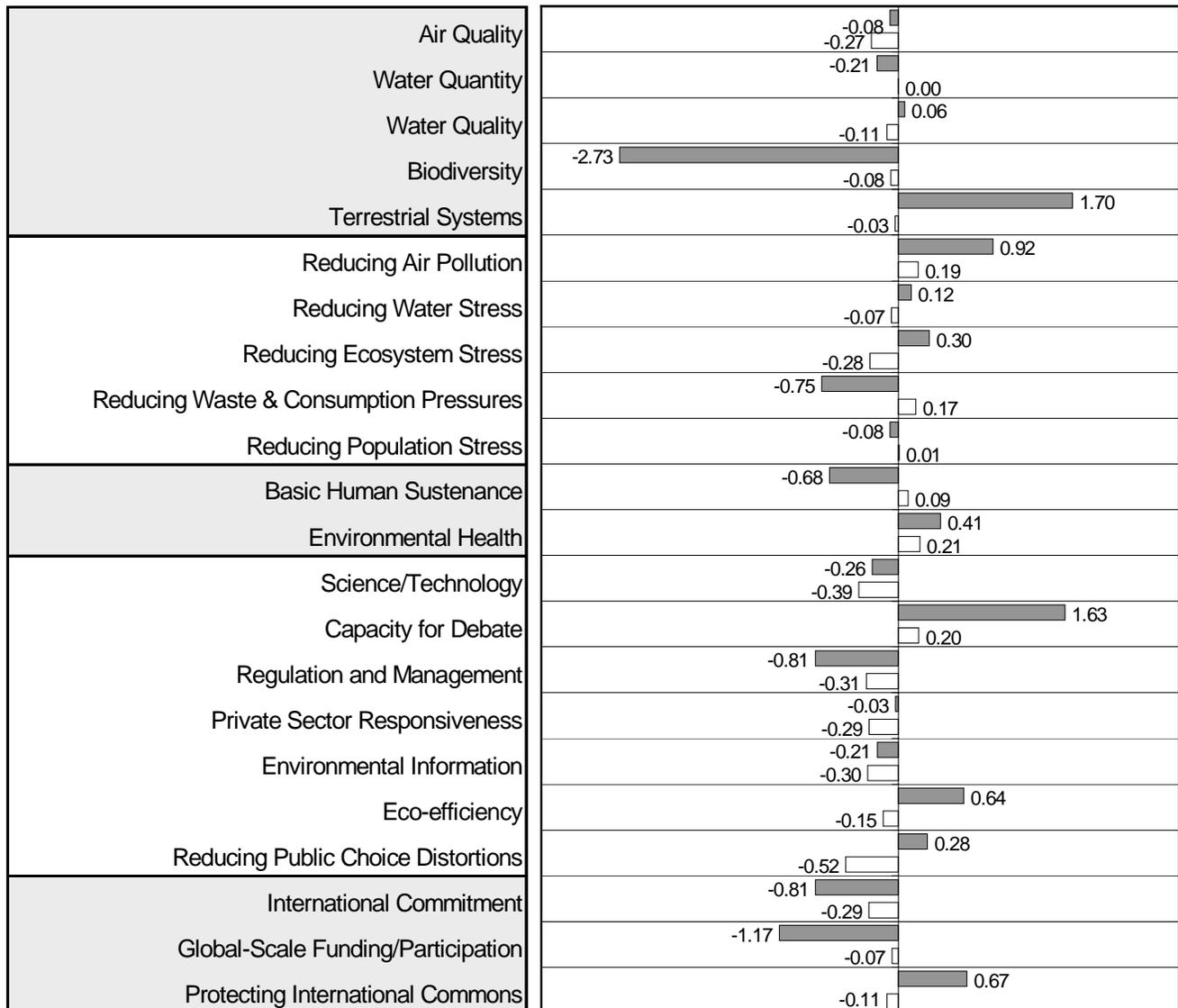
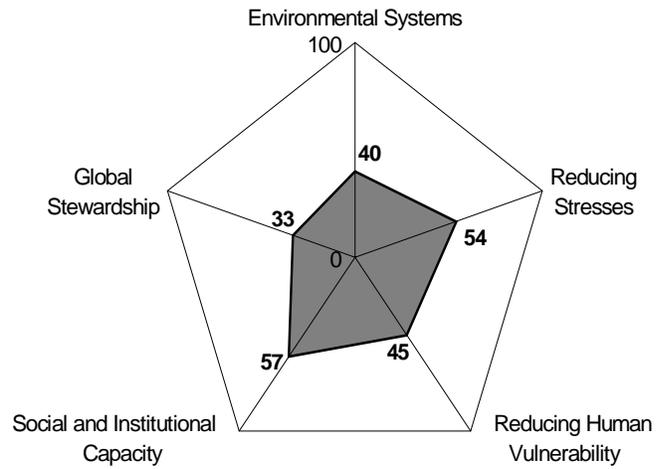
ESI:	31.2
Ranking:	119
GDP/Capita:	\$574
Peer group ESI:	39.3
Variable coverage:	44
Missing variables imputed:	14



■ = Indicator value
 □ = Reference (average value for peer group)

Fiji

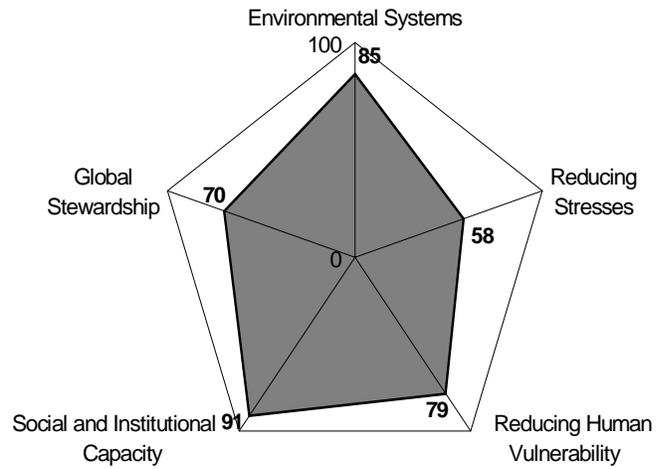
ESI:	48.1
Ranking:	55
GDP/Capita:	\$4,231
Peer group ESI:	45.7
Variable coverage:	43
Missing variables imputed:	15



■ = Indicator value
 □ = Reference (average value for peer group)

Finland

ESI:	80.5
Ranking:	1
GDP/Capita:	\$20,847
Peer group ESI:	65.2
Variable coverage:	66
Missing variables imputed:	1

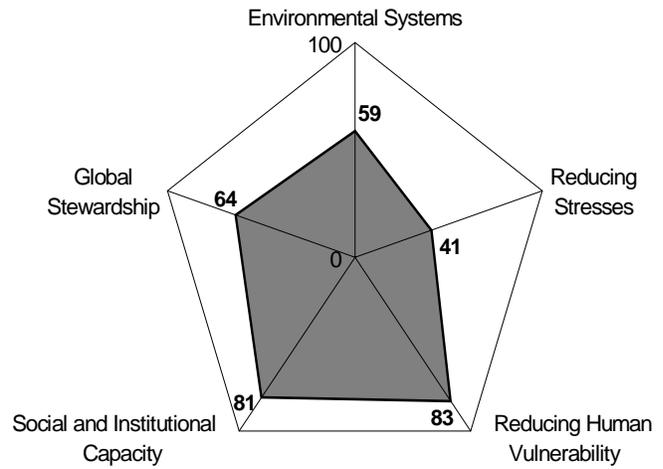


Air Quality	1.28	0.81
Water Quantity	0.66	-0.08
Water Quality	1.85	0.77
Biodiversity	0.61	-0.04
Terrestrial Systems	0.84	0.07
Reducing Air Pollution	0.06	-0.81
Reducing Water Stress	0.36	-0.46
Reducing Ecosystem Stress	0.40	-0.09
Reducing Waste & Consumption Pressures	-0.73	-1.03
Reducing Population Stress	0.92	0.77
Basic Human Sustenance	0.64	0.88
Environmental Health	0.94	0.93
Science/Technology	2.04	1.57
Capacity for Debate	0.85	0.77
Regulation and Management	1.21	0.79
Private Sector Responsiveness	0.89	0.54
Environmental Information	1.54	0.87
Eco-efficiency	0.69	0.36
Reducing Public Choice Distortions	2.25	1.24
International Commitment	1.11	0.89
Global-Scale Funding/Participation	0.71	0.36
Protecting International Commons	-0.25	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

France

ESI:	65.8
Ranking:	13
GDP/Capita:	\$21,175
Peer group ESI:	65.2
Variable coverage:	63
Missing variables imputed:	4

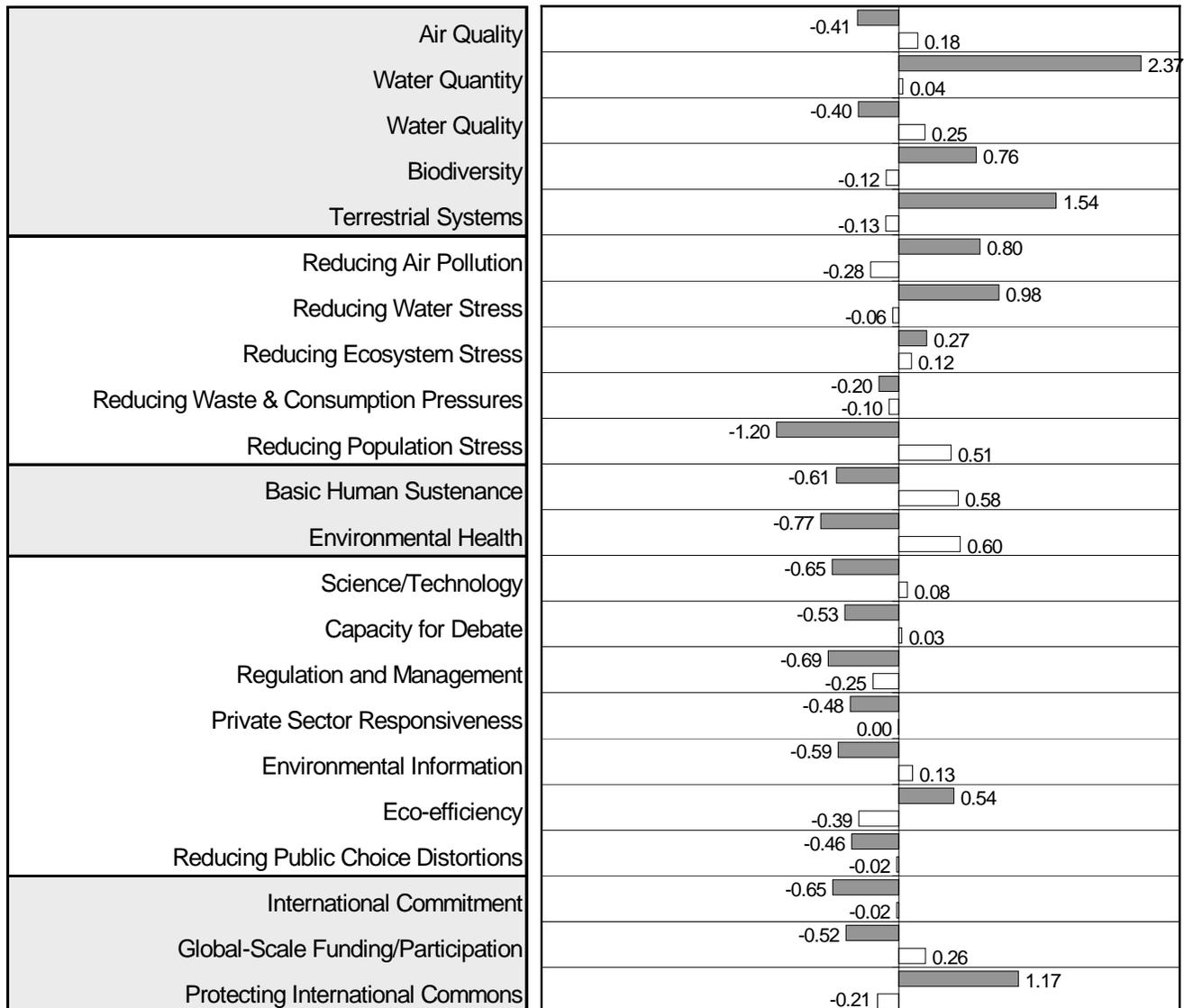
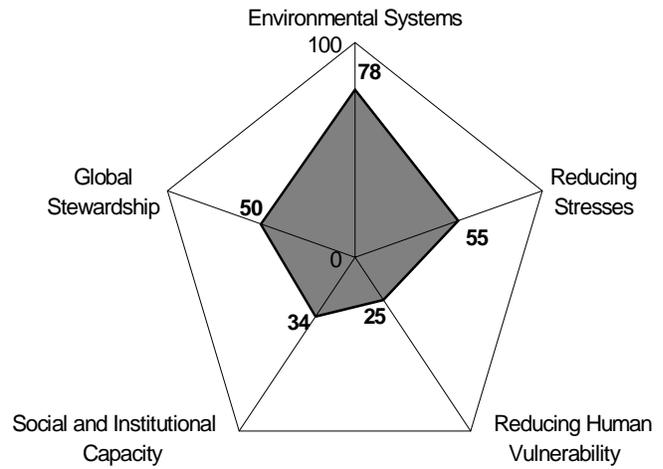


Air Quality	0.70	0.81
Water Quantity	-0.16	-0.08
Water Quality	1.13	0.77
Biodiversity	-0.06	-0.04
Terrestrial Systems	-0.50	0.07
Reducing Air Pollution	-0.51	-0.81
Reducing Water Stress	-0.32	-0.46
Reducing Ecosystem Stress	0.32	-0.09
Reducing Waste & Consumption Pressures	-1.47	-1.03
Reducing Population Stress	0.82	0.77
Basic Human Sustenance	0.95	0.88
Environmental Health	0.94	0.93
Science/Technology	1.72	1.57
Capacity for Debate	0.42	0.77
Regulation and Management	0.82	0.79
Private Sector Responsiveness	0.14	0.54
Environmental Information	1.12	0.87
Eco-efficiency	0.49	0.36
Reducing Public Choice Distortions	1.36	1.24
International Commitment	1.19	0.89
Global-Scale Funding/Participation	0.40	0.36
Protecting International Commons	-0.54	-0.27

= Indicator value
 = Reference (average value for peer group)

Gabon

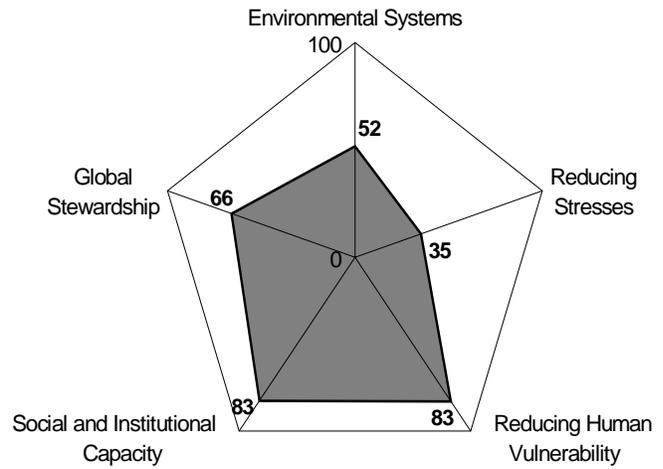
ESI:	50.5
Ranking:	49
GDP/Capita:	\$6,353
Peer group ESI:	52.2
Variable coverage:	43
Missing variables imputed:	15



= Indicator value
 = Reference (average value for peer group)

Germany

ESI:	64.2
Ranking:	15
GDP/Capita:	\$22,169
Peer group ESI:	65.2
Variable coverage:	60
Missing variables imputed:	7

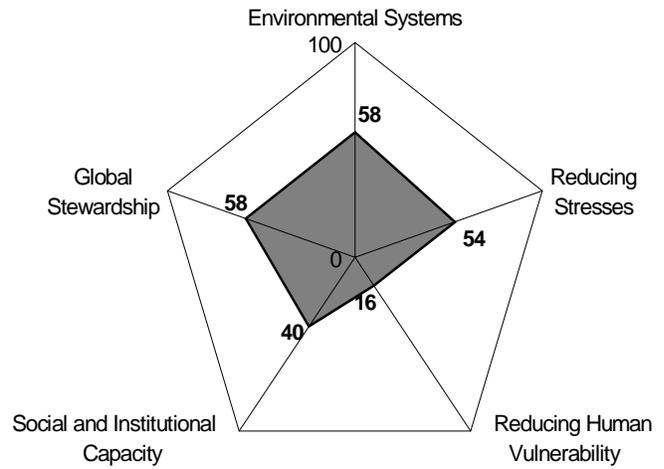


Air Quality	0.95	0.81
Water Quantity	-0.21	-0.08
Water Quality	-0.06	0.77
Biodiversity	0.22	-0.04
Terrestrial Systems	-0.70	0.07
Reducing Air Pollution	-1.44	-0.81
Reducing Water Stress	-0.12	-0.46
Reducing Ecosystem Stress	-0.99	-0.09
Reducing Waste & Consumption Pressures	-0.39	-1.03
Reducing Population Stress	1.03	0.77
Basic Human Sustenance	0.94	0.88
Environmental Health	0.96	0.93
Science/Technology	1.79	1.57
Capacity for Debate	0.18	0.77
Regulation and Management	1.34	0.79
Private Sector Responsiveness	1.09	0.54
Environmental Information	0.79	0.87
Eco-efficiency	0.24	0.36
Reducing Public Choice Distortions	1.11	1.24
International Commitment	1.53	0.89
Global-Scale Funding/Participation	0.44	0.36
Protecting International Commons	-0.74	-0.27

= Indicator value
 = Reference (average value for peer group)

Ghana

ESI:	47.0
Ranking:	63
GDP/Capita:	\$1,735
Peer group ESI:	45.2
Variable coverage:	48
Missing variables imputed:	10

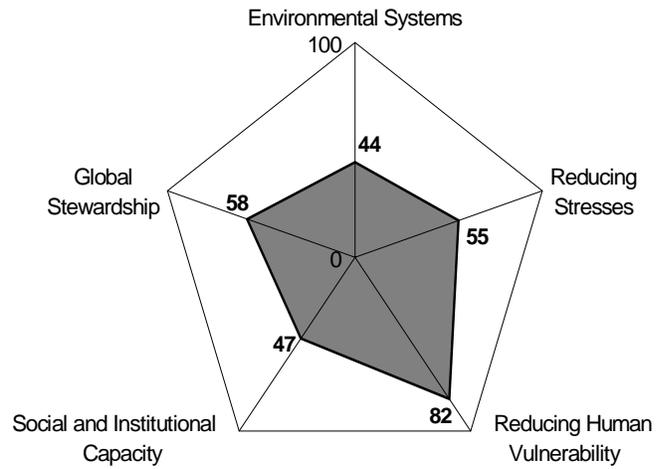


Air Quality	-0.06	-0.22
Water Quantity	-0.20	0.03
Water Quality	-0.35	0.23
Biodiversity		0.67
Terrestrial Systems		0.06
	-0.05	0.40
Reducing Air Pollution		0.55
Reducing Water Stress		0.30
Reducing Ecosystem Stress	-0.02	0.50
Reducing Waste & Consumption Pressures	-0.04	0.14
Reducing Population Stress	-0.13	0.59
Basic Human Sustenance	-0.44	0.03
Environmental Health	-1.24	-0.20
Science/Technology	-0.72	-0.18
Capacity for Debate	-0.59	-0.29
Regulation and Management	-0.24	-0.42
Private Sector Responsiveness	-0.39	-0.36
Environmental Information	-0.48	-0.44
Eco-efficiency	-0.27	-0.04
Reducing Public Choice Distortions	-0.18	0.80
International Commitment	-0.65	-0.64
Global-Scale Funding/Participation	-0.41	0.02
Protecting International Commons	-0.07	0.11
		0.50
		0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Greece

ESI:	53.1
Ranking:	41
GDP/Capita:	\$13,943
Peer group ESI:	52.2
Variable coverage:	58
Missing variables imputed:	7

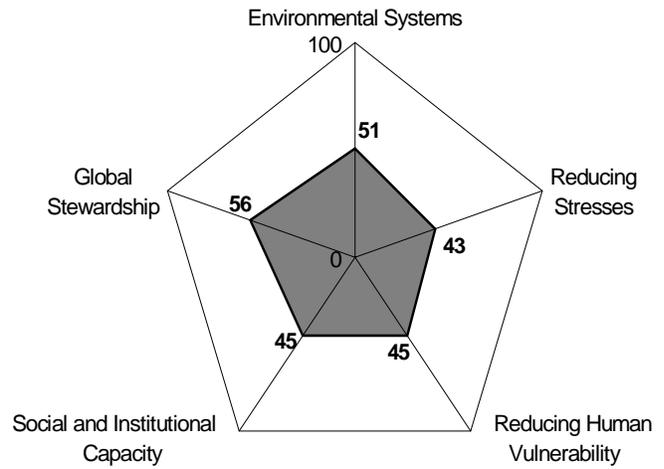


Air Quality	-0.49	0.18
Water Quantity	-0.09	0.04
Water Quality		0.61
Biodiversity	-0.23	-0.12
Terrestrial Systems	-0.52	-0.13
Reducing Air Pollution	-0.66	-0.28
Reducing Water Stress	-0.34	-0.06
Reducing Ecosystem Stress		1.16
Reducing Waste & Consumption Pressures	-0.54	-0.10
Reducing Population Stress		1.04
Basic Human Sustenance		0.51
Environmental Health		0.85
Science/Technology	-0.03	0.08
Capacity for Debate		0.30
Regulation and Management	-0.45	-0.25
Private Sector Responsiveness	-0.50	0.00
Environmental Information	-0.35	0.13
Eco-efficiency		0.19
Reducing Public Choice Distortions	-0.39	0.25
International Commitment	-0.02	0.62
Global-Scale Funding/Participation	-0.02	0.63
Protecting International Commons	-0.67	0.26
	-0.21	

■ = Indicator value
 □ = Reference (average value for peer group)

Guatemala

ESI:	47.3
Ranking:	61
GDP/Capita:	\$3,505
Peer group ESI:	45.7
Variable coverage:	48
Missing variables imputed:	11

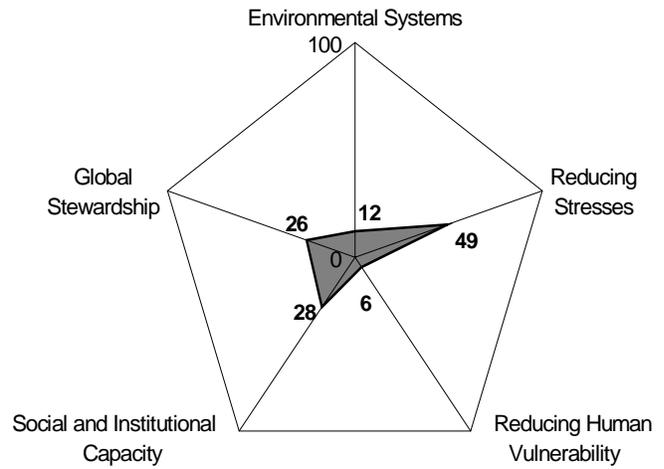


Air Quality	-1.08	-0.27
Water Quantity		0.44
Water Quality	-0.30	-0.11
Biodiversity		1.25
Terrestrial Systems	-0.08	-0.22
		-0.03
Reducing Air Pollution		0.34
		0.19
Reducing Water Stress		0.17
	-0.07	
Reducing Ecosystem Stress	-0.39	
		-0.28
Reducing Waste & Consumption Pressures		0.37
		0.17
Reducing Population Stress	-1.40	
		0.01
Basic Human Sustenance		0.00
		0.09
Environmental Health		-0.25
		0.21
Science/Technology	-0.66	
		-0.39
Capacity for Debate		0.34
		0.20
Regulation and Management		0.25
	-0.31	
Private Sector Responsiveness	-0.43	
		-0.29
Environmental Information		-0.22
		-0.30
Eco-efficiency		0.61
	-0.15	
Reducing Public Choice Distortions	-0.77	
		-0.52
International Commitment		-0.46
		-0.29
Global-Scale Funding/Participation		0.16
	-0.07	
Protecting International Commons		0.74
		-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Haiti

ESI:	24.7
Ranking:	122
GDP/Capita:	\$1,383
Peer group ESI:	39.3
Variable coverage:	42
Missing variables imputed:	16

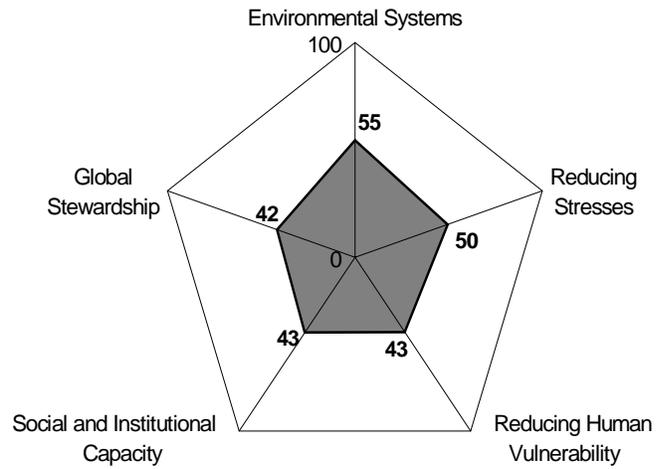


Air Quality	-0.53	-0.48
Water Quantity	-0.69	-0.02
Water Quality	-0.61	-0.55
Biodiversity	-3.07	0.19
Terrestrial Systems	-0.93	0.15
Reducing Air Pollution	0.33	0.57
Reducing Water Stress	0.52	0.57
Reducing Ecosystem Stress	-1.16	0.11
Reducing Waste & Consumption Pressures	0.92	0.69
Reducing Population Stress	-0.70	
Basic Human Sustenance	-1.93	-1.38
Environmental Health	-1.26	-1.57
Science/Technology	-1.06	-0.90
Capacity for Debate	-0.50	-0.56
Regulation and Management	-0.86	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-1.44	-0.62
Eco-efficiency	0.63	0.42
Reducing Public Choice Distortions	-0.28	-0.37
International Commitment	-1.07	-0.41
Global-Scale Funding/Participation	-1.17	-0.49
Protecting International Commons	0.28	0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Honduras

ESI:	46.9
Ranking:	64
GDP/Capita:	\$2,433
Peer group ESI:	45.2
Variable coverage:	46
Missing variables imputed:	12

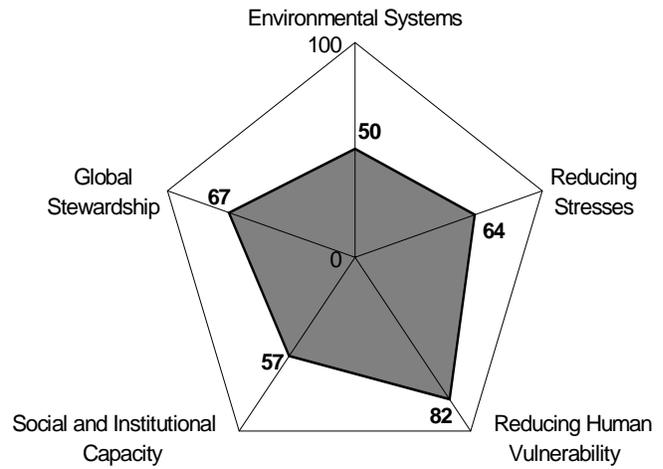


Air Quality	-0.33	-0.22
Water Quantity	0.69	0.03
Water Quality	-0.36	-0.35
Biodiversity	1.07	0.06
Terrestrial Systems	-0.50	-0.05
Reducing Air Pollution	0.64	0.30
Reducing Water Stress	-0.10	-0.02
Reducing Ecosystem Stress	-0.53	0.14
Reducing Waste & Consumption Pressures	0.49	0.59
Reducing Population Stress	-0.56	0.03
Basic Human Sustenance	-0.26	-0.20
Environmental Health	-0.09	-0.18
Science/Technology	-0.57	-0.29
Capacity for Debate	0.32	-0.42
Regulation and Management	-0.21	-0.36
Private Sector Responsiveness	-0.24	-0.44
Environmental Information	-0.58	-0.04
Eco-efficiency	0.74	-0.18
Reducing Public Choice Distortions	-0.66	-0.64
International Commitment	-1.32	-0.41
Global-Scale Funding/Participation	-0.08	-0.07
Protecting International Commons	0.76	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Hungary

ESI:	61.0
Ranking:	21
GDP/Capita:	\$10,232
Peer group ESI:	52.2
Variable coverage:	65
Missing variables imputed:	0

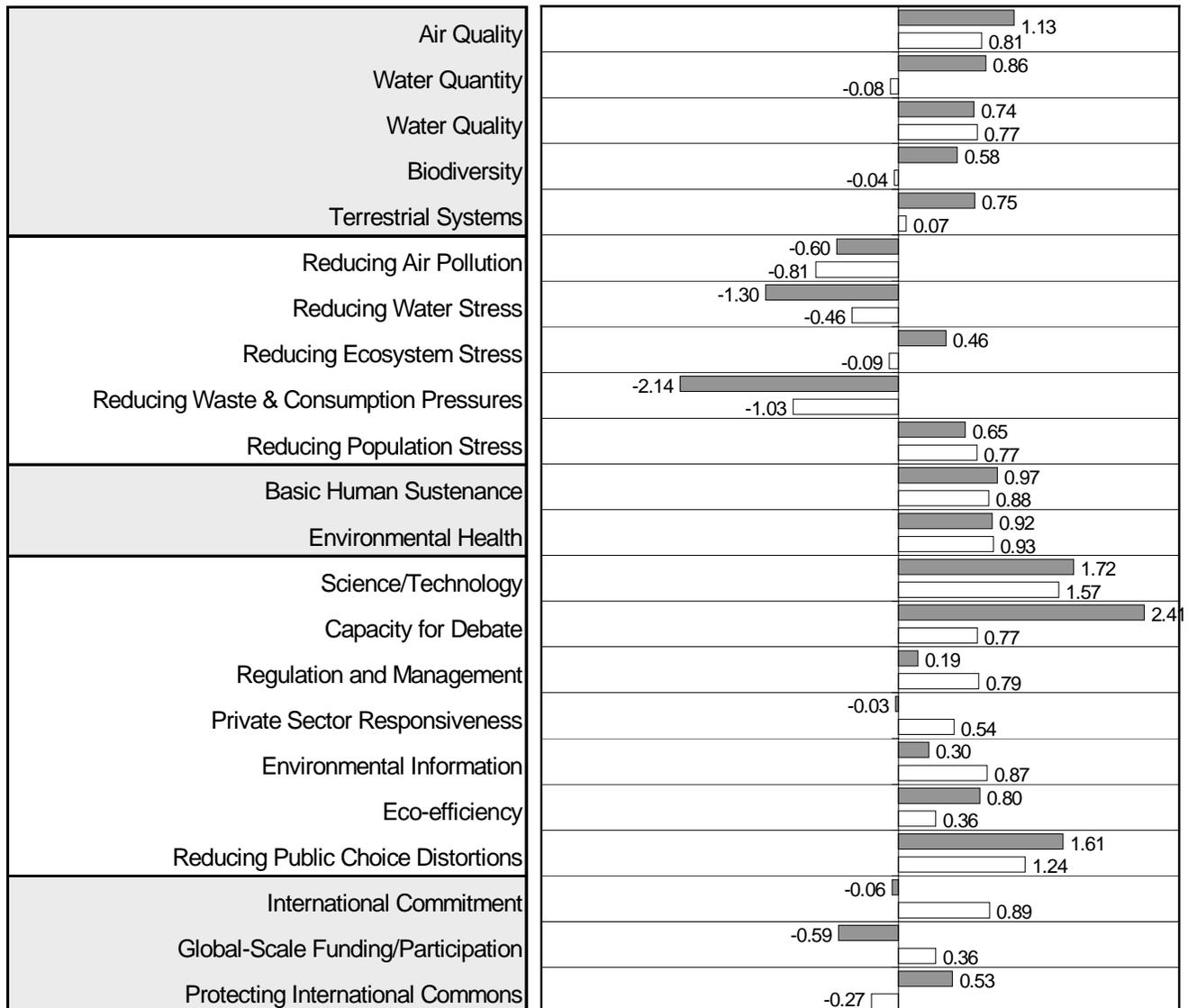
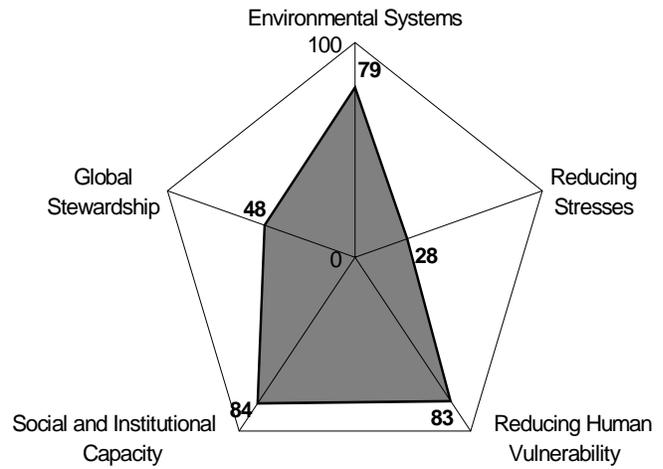


Air Quality	0.32	0.18
Water Quantity	0.21	0.04
Water Quality	0.93	0.25
Biodiversity	-0.10	-0.12
Terrestrial Systems	-1.32	-0.13
Reducing Air Pollution	-0.59	-0.28
Reducing Water Stress	0.26	-0.06
Reducing Ecosystem Stress	0.83	0.12
Reducing Waste & Consumption Pressures	0.27	-0.10
Reducing Population Stress	1.04	0.51
Basic Human Sustenance	0.89	0.58
Environmental Health	0.91	0.60
Science/Technology	0.14	0.08
Capacity for Debate	0.30	0.03
Regulation and Management	-0.36	-0.25
Private Sector Responsiveness	0.83	0.00
Environmental Information	0.83	0.13
Eco-efficiency	-0.93	-0.39
Reducing Public Choice Distortions	0.36	-0.02
International Commitment	0.47	-0.02
Global-Scale Funding/Participation	0.79	0.26
Protecting International Commons	0.08	-0.21

■ = Indicator value
 □ = Reference (average value for peer group)

Iceland

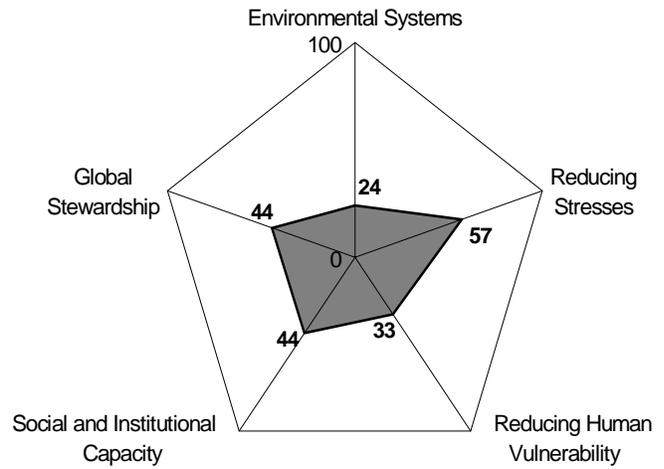
ESI:	67.3
Ranking:	9
GDP/Capita:	\$25,110
Peer group ESI:	65.2
Variable coverage:	52
Missing variables imputed:	12



■ = Indicator value
 □ = Reference (average value for peer group)

India

ESI:	40.9
Ranking:	93
GDP/Capita:	\$2,077
Peer group ESI:	45.2
Variable coverage:	60
Missing variables imputed:	5

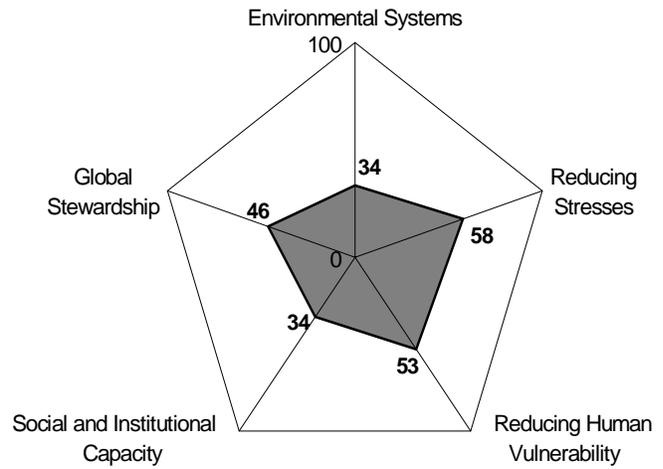


Air Quality	-0.06	0.03
Water Quantity	-0.22	0.03
Water Quality	-0.42	0.03
Biodiversity	-1.31	0.06
Terrestrial Systems	-0.35	0.06
Reducing Air Pollution	-1.16	0.07
Reducing Water Stress	-0.58	0.30
Reducing Ecosystem Stress	-0.17	0.14
Reducing Waste & Consumption Pressures	-0.02	0.62
Reducing Population Stress	0.47	0.59
Basic Human Sustenance	-0.10	0.03
Environmental Health	-0.20	0.03
Science/Technology	-0.20	0.03
Capacity for Debate	-0.69	0.03
Regulation and Management	-0.42	0.01
Private Sector Responsiveness	-0.29	0.01
Environmental Information	-0.23	0.83
Eco-efficiency	-0.42	0.01
Reducing Public Choice Distortions	-0.36	0.01
International Commitment	-0.44	0.30
Global-Scale Funding/Participation	-0.44	0.06
Protecting International Commons	-0.04	0.06
	-0.03	0.06
	-0.18	0.06
	-0.82	0.06
	-0.64	0.06
	-0.79	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Indonesia

ESI:	42.6
Ranking:	86
GDP/Capita:	\$2,651
Peer group ESI:	45.2
Variable coverage:	60
Missing variables imputed:	6

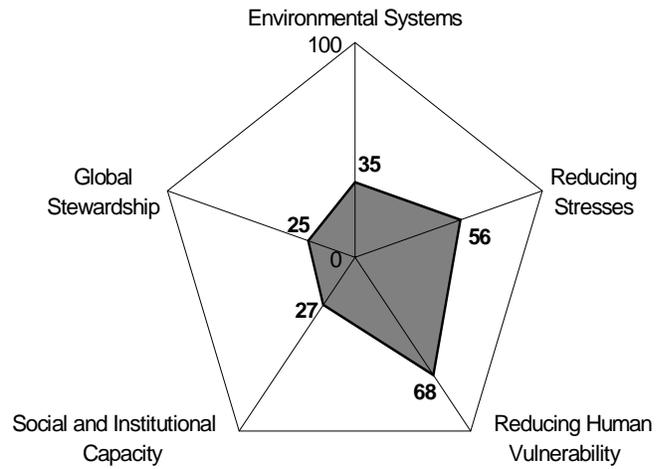


Air Quality	-0.40	-0.22
Water Quantity	0.04	0.03
Water Quality	-0.77	-0.35
Biodiversity	-1.14	0.06
Terrestrial Systems	-0.05	0.14
Reducing Air Pollution	0.23	0.30
Reducing Water Stress	-0.02	0.42
Reducing Ecosystem Stress	-0.14	0.14
Reducing Waste & Consumption Pressures	0.28	0.59
Reducing Population Stress	0.20	0.03
Basic Human Sustenance	0.21	-0.20
Environmental Health	-0.08	-0.18
Science/Technology	-0.66	-0.29
Capacity for Debate	-0.64	-0.42
Regulation and Management	-0.23	-0.36
Private Sector Responsiveness	-0.73	-0.44
Environmental Information	1.01	-0.04
Eco-efficiency	-0.05	-0.18
Reducing Public Choice Distortions	-1.54	-0.64
International Commitment	0.09	-0.41
Global-Scale Funding/Participation	-0.25	-0.07
Protecting International Commons	-0.11	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Iran

ESI:	38.4
Ranking:	105
GDP/Capita:	\$5,121
Peer group ESI:	45.7
Variable coverage:	51
Missing variables imputed:	8

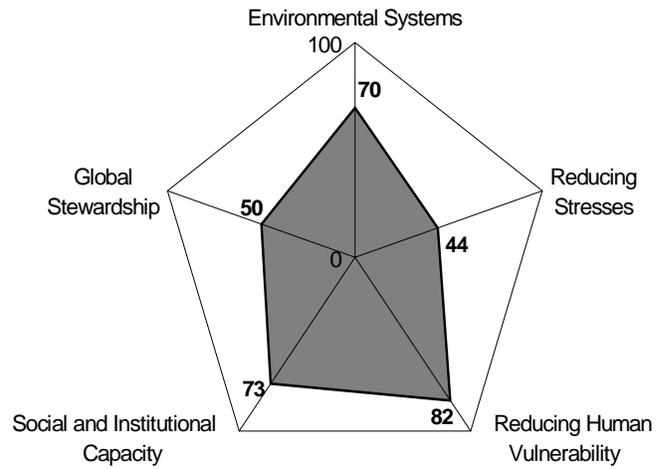


Air Quality	-1.65	-0.27
Water Quantity	-0.48	0.00
Water Quality	-0.11	0.52
Biodiversity	-0.31	-0.08
Terrestrial Systems	-0.02	-0.03
Reducing Air Pollution	0.79	0.19
Reducing Water Stress	-0.43	-0.07
Reducing Ecosystem Stress	-0.26	-0.28
Reducing Waste & Consumption Pressures	0.60	0.17
Reducing Population Stress	0.10	0.01
Basic Human Sustenance	0.78	0.09
Environmental Health	0.15	0.21
Science/Technology	-0.28	-0.39
Capacity for Debate	-1.19	0.20
Regulation and Management	-0.54	-0.31
Private Sector Responsiveness	-0.41	-0.29
Environmental Information	-0.23	-0.30
Eco-efficiency	-0.29	-0.15
Reducing Public Choice Distortions	-1.30	-0.52
International Commitment	0.00	-0.29
Global-Scale Funding/Participation	-1.15	-0.07
Protecting International Commons	-0.88	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Ireland

ESI:	64.0
Ranking:	17
GDP/Capita:	\$21,482
Peer group ESI:	65.2
Variable coverage:	57
Missing variables imputed:	9

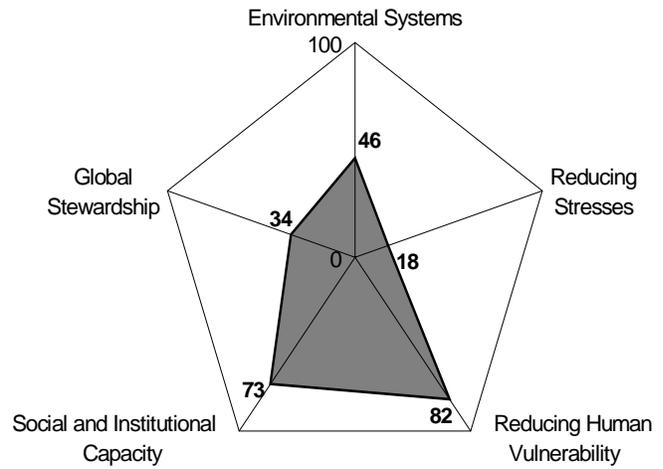


Air Quality	0.58	0.81
Water Quantity	0.39	-0.08
Water Quality	0.86	0.77
Biodiversity	0.61	-0.04
Terrestrial Systems	0.15	0.07
Reducing Air Pollution	0.03	-0.81
Reducing Water Stress	-0.40	-0.46
Reducing Ecosystem Stress	-0.19	-0.09
Reducing Waste & Consumption Pressures	-0.86	-1.03
Reducing Population Stress	0.69	0.77
Basic Human Sustenance	0.93	0.88
Environmental Health	0.94	0.93
Science/Technology	0.92	1.57
Capacity for Debate	0.75	0.77
Regulation and Management	0.07	0.79
Private Sector Responsiveness	0.00	0.54
Environmental Information	0.73	0.87
Eco-efficiency	0.28	0.36
Reducing Public Choice Distortions	1.44	1.24
International Commitment	-0.10	0.89
Global-Scale Funding/Participation	0.49	0.36
Protecting International Commons	-0.41	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Israel

ESI:	49.5
Ranking:	53
GDP/Capita:	\$17,301
Peer group ESI:	65.2
Variable coverage:	54
Missing variables imputed:	9

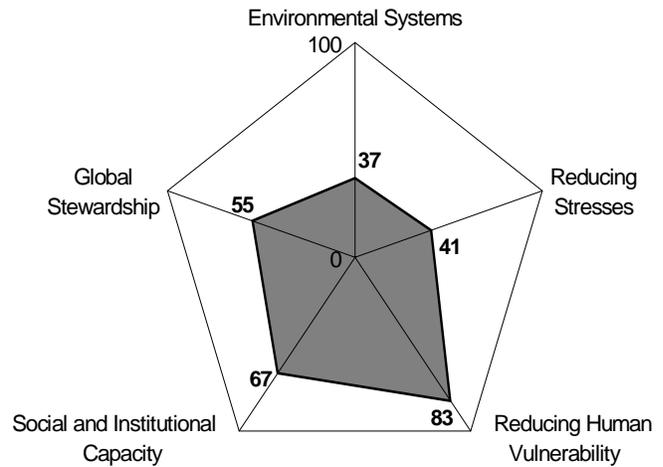


Air Quality	0.48	0.81
Water Quantity	-1.22	-0.08
Water Quality	-0.35	0.77
Biodiversity	-0.15	-0.04
Terrestrial Systems	0.76	0.07
Reducing Air Pollution	-1.72	-0.81
Reducing Water Stress	-2.13	-0.46
Reducing Ecosystem Stress	0.46	-0.09
Reducing Waste & Consumption Pressures	-1.34	-1.03
Reducing Population Stress	0.11	0.77
Basic Human Sustenance	0.87	0.88
Environmental Health	0.94	0.93
Science/Technology	2.50	1.57
Capacity for Debate	0.62	0.77
Regulation and Management	0.05	0.79
Private Sector Responsiveness	0.05	0.54
Environmental Information	0.56	0.87
Eco-efficiency	-0.61	0.36
Reducing Public Choice Distortions	1.09	1.24
International Commitment	-0.13	0.89
Global-Scale Funding/Participation	-0.77	0.36
Protecting International Commons	-0.33	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Italy

ESI:	54.3
Ranking:	37
GDP/Capita:	\$20,585
Peer group ESI:	65.2
Variable coverage:	59
Missing variables imputed:	8

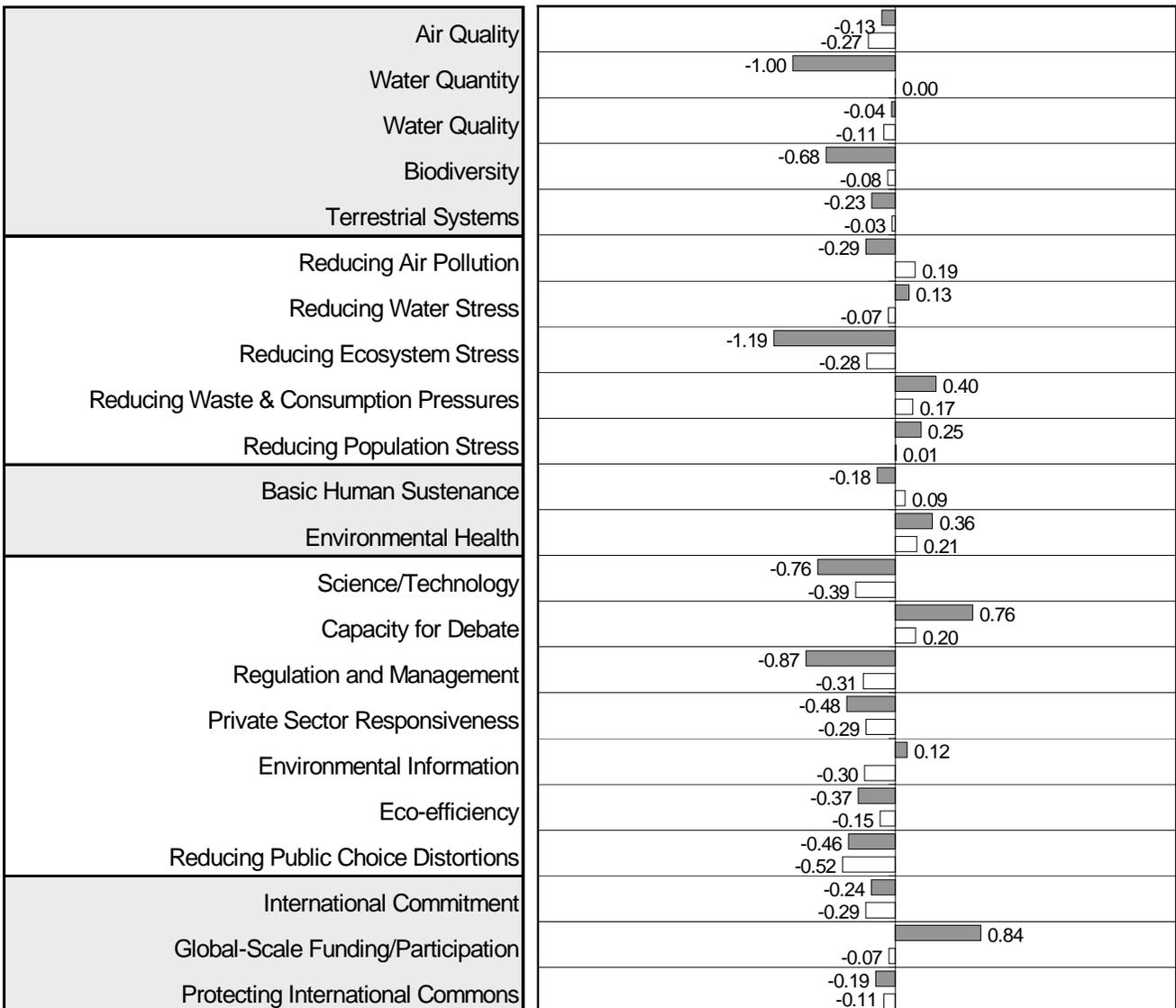
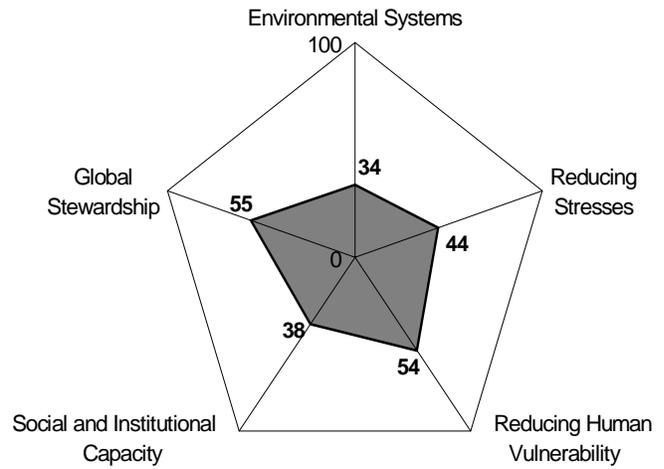


Air Quality	-0.74	0.81
Water Quantity	-0.79	-0.08
Water Quality		0.47
Biodiversity		0.06
Terrestrial Systems	-0.68	0.07
Reducing Air Pollution	-0.61	-0.81
Reducing Water Stress	-1.28	-0.46
Reducing Ecosystem Stress		-0.01
Reducing Waste & Consumption Pressures		-0.09
Reducing Population Stress	-1.03	-0.35
Basic Human Sustenance		1.07
Environmental Health		0.77
Science/Technology		0.92
Capacity for Debate		0.88
Regulation and Management		0.96
Private Sector Responsiveness		0.93
Environmental Information		0.97
Eco-efficiency		1.57
Reducing Public Choice Distortions		0.26
International Commitment		0.77
Global-Scale Funding/Participation		0.08
Protecting International Commons	-0.35	0.79
		0.54
		0.58
		0.87
		0.51
		0.36
		0.98
		1.24
		0.81
		0.89
		0.28
		0.36
	-0.73	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Jamaica

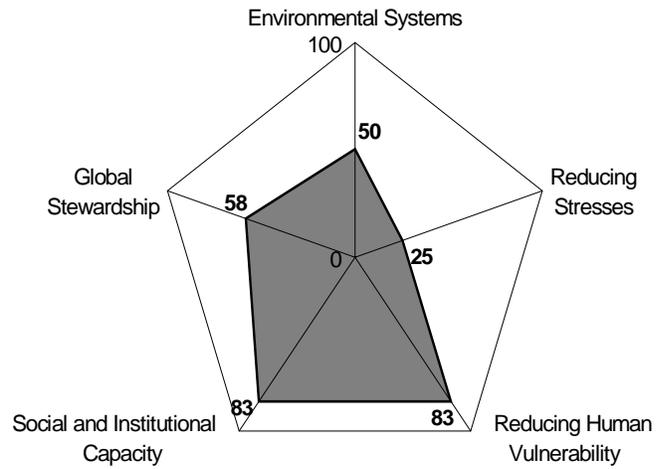
ESI:	42.3
Ranking:	88
GDP/Capita:	\$3,389
Peer group ESI:	45.7
Variable coverage:	46
Missing variables imputed:	12



■ = Indicator value
 □ = Reference (average value for peer group)

Japan

ESI:	60.6
Ranking:	22
GDP/Capita:	\$23,257
Peer group ESI:	65.2
Variable coverage:	64
Missing variables imputed:	2

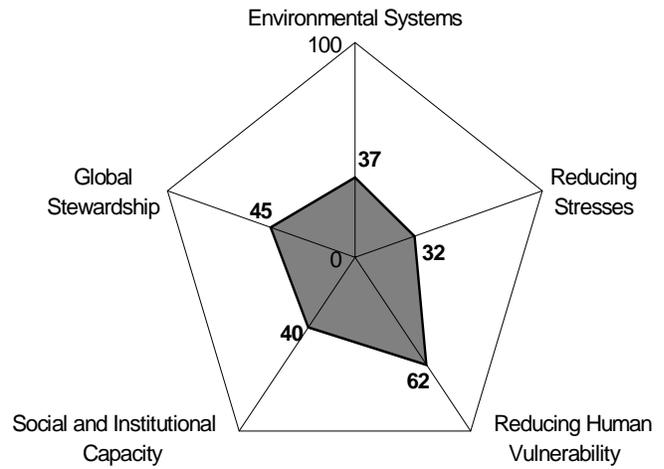


Air Quality	0.28	0.81
Water Quantity	-1.05	-0.08
Water Quality	1.32	0.77
Biodiversity	-1.58	-0.04
Terrestrial Systems	1.07	0.07
Reducing Air Pollution	-1.49	-0.81
Reducing Water Stress	-0.57	-0.46
Reducing Ecosystem Stress	0.14	-0.09
Reducing Waste & Consumption Pressures	-2.42	-1.03
Reducing Population Stress	1.03	0.77
Basic Human Sustenance	0.97	0.88
Environmental Health	0.94	0.93
Science/Technology	2.17	1.57
Capacity for Debate	0.15	0.77
Regulation and Management	0.35	0.79
Private Sector Responsiveness	1.83	0.54
Environmental Information	0.79	0.87
Eco-efficiency	0.48	0.36
Reducing Public Choice Distortions	0.86	1.24
International Commitment	0.91	0.89
Global-Scale Funding/Participation	0.39	0.36
Protecting International Commons	-0.68	-0.27

= Indicator value
 = Reference (average value for peer group)

Jordan

ESI:	40.1
Ranking:	96
GDP/Capita:	\$3,347
Peer group ESI:	45.7
Variable coverage:	54
Missing variables imputed:	9

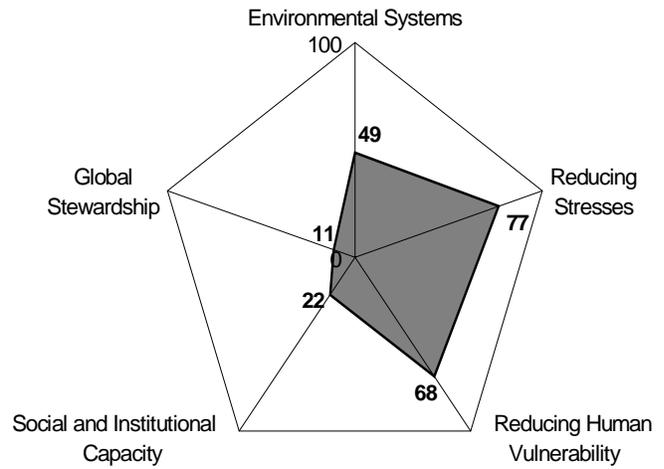


Air Quality	-0.27	0.00
Water Quantity	-0.71	0.00
Water Quality	-1.26	-0.11
Biodiversity	-0.08	0.16
Terrestrial Systems	-0.03	0.15
Reducing Air Pollution	0.08	0.19
Reducing Water Stress	-1.27	-0.07
Reducing Ecosystem Stress	-0.61	-0.28
Reducing Waste & Consumption Pressures	0.50	0.17
Reducing Population Stress	-1.06	0.01
Basic Human Sustenance	0.40	0.09
Environmental Health	0.20	0.21
Science/Technology	-0.62	-0.39
Capacity for Debate	0.97	0.20
Regulation and Management	-0.40	-0.31
Private Sector Responsiveness	-0.29	0.03
Environmental Information	-0.51	-0.30
Eco-efficiency	-0.99	-0.15
Reducing Public Choice Distortions	-0.19	-0.52
International Commitment	-0.15	-0.29
Global-Scale Funding/Participation	0.07	-0.07
Protecting International Commons	-0.30	-0.11

= Indicator value
 = Reference (average value for peer group)

Kazakhstan

ESI:	41.6
Ranking:	91
GDP/Capita:	\$4,378
Peer group ESI:	45.7
Variable coverage:	43
Missing variables imputed:	15

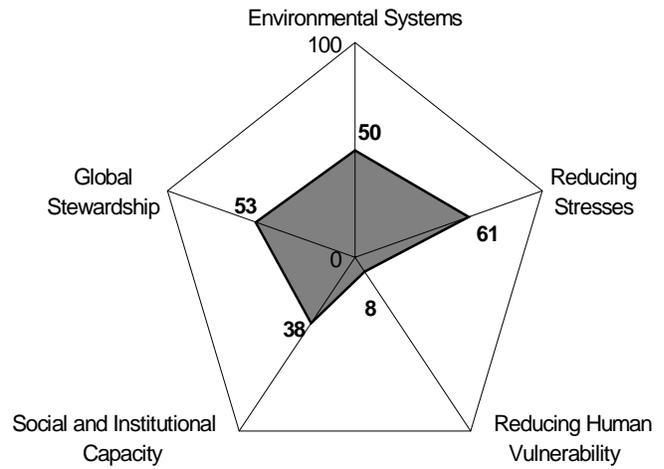


Air Quality	-0.34	-0.27
Water Quantity	0.21	0.00
Water Quality	-0.33	-0.11
Biodiversity	0.15	-0.08
Terrestrial Systems	0.15	-0.03
Reducing Air Pollution	0.78	0.19
Reducing Water Stress	0.25	-0.07
Reducing Ecosystem Stress	1.12	-0.28
Reducing Waste & Consumption Pressures	0.58	0.17
Reducing Population Stress	0.92	0.01
Basic Human Sustenance	0.58	0.09
Environmental Health	0.38	0.21
Science/Technology	-0.36	-0.39
Capacity for Debate	-0.90	0.20
Regulation and Management	-0.70	-0.31
Private Sector Responsiveness	-0.48	-0.29
Environmental Information	-0.70	-0.30
Eco-efficiency	-1.39	-0.15
Reducing Public Choice Distortions	-1.00	-0.52
International Commitment	-1.73	-0.29
Global-Scale Funding/Participation	-1.17	-0.07
Protecting International Commons	-0.73	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Kenya

ESI:	43.9
Ranking:	82
GDP/Capita:	\$980
Peer group ESI:	39.3
Variable coverage:	46
Missing variables imputed:	12

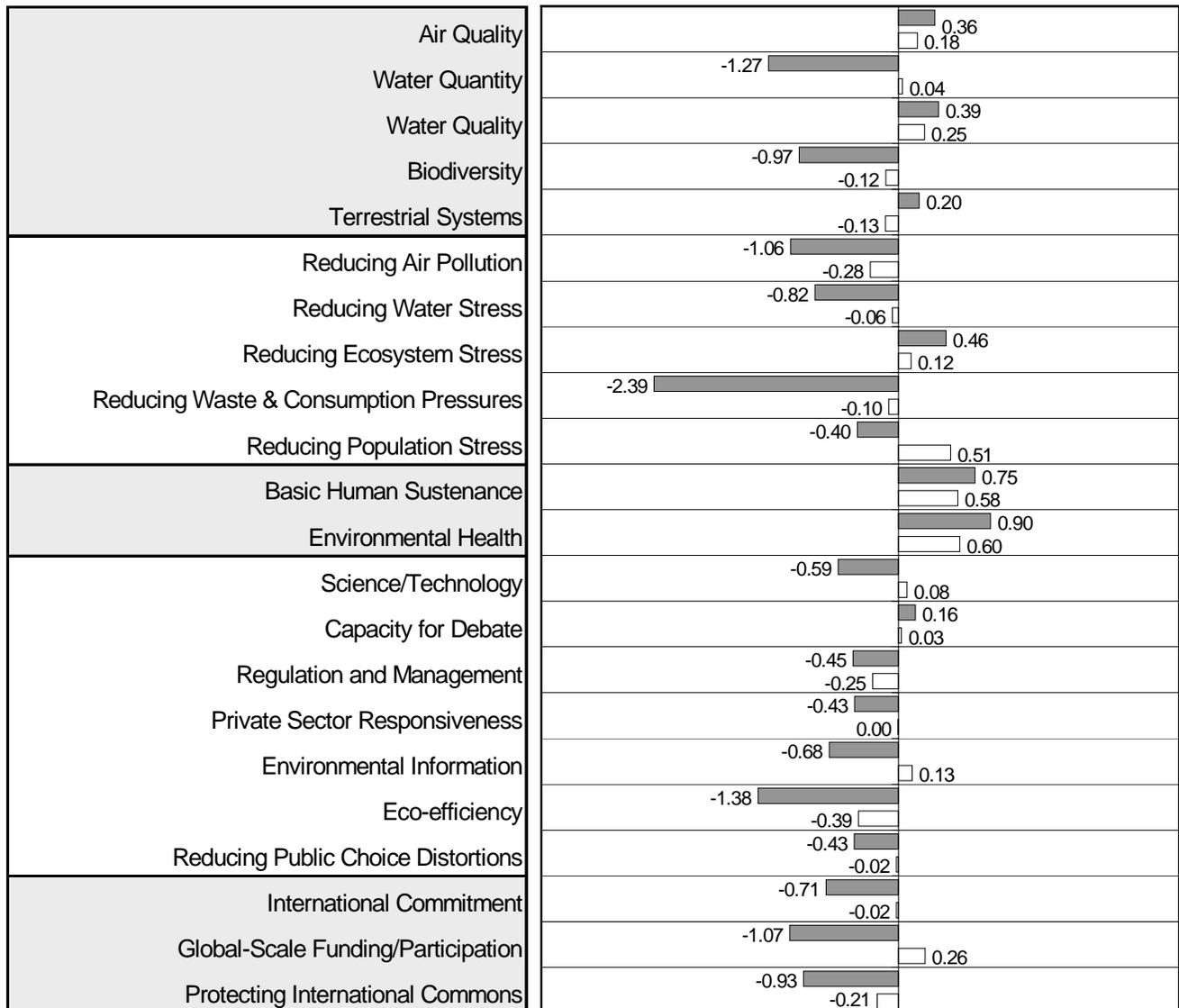
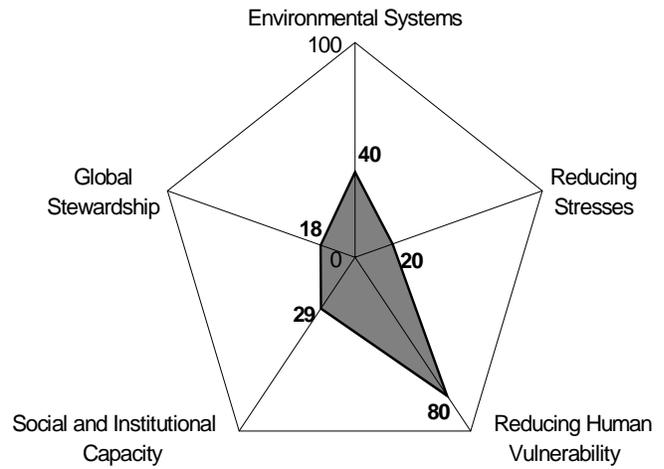


Air Quality	-0.48	0.17
Water Quantity	-0.28	
Water Quality	-0.26	-0.02
Biodiversity	-0.55	0.02
Terrestrial Systems		0.19
Reducing Air Pollution		0.33
Reducing Water Stress		0.52
Reducing Ecosystem Stress		0.57
Reducing Waste & Consumption Pressures		0.35
Reducing Population Stress		0.57
Basic Human Sustenance		0.37
Environmental Health		0.11
Science/Technology		0.34
Capacity for Debate		0.69
Regulation and Management	-0.19	
Private Sector Responsiveness	-1.33	
Environmental Information	-1.84	
Eco-efficiency	-1.38	
Reducing Public Choice Distortions	-0.95	
International Commitment	-1.57	
Global-Scale Funding/Participation	-0.75	
Protecting International Commons	-0.90	
	-0.86	
	-0.56	
	-0.30	
	-0.26	
	-0.48	
	-0.45	
	-0.26	
	-0.62	
		0.60
		0.42
	-0.14	
	-0.37	
		0.27
	-0.41	
	-0.27	
	-0.49	
		0.22
		0.62

= Indicator value
 = Reference (average value for peer group)

Kuwait

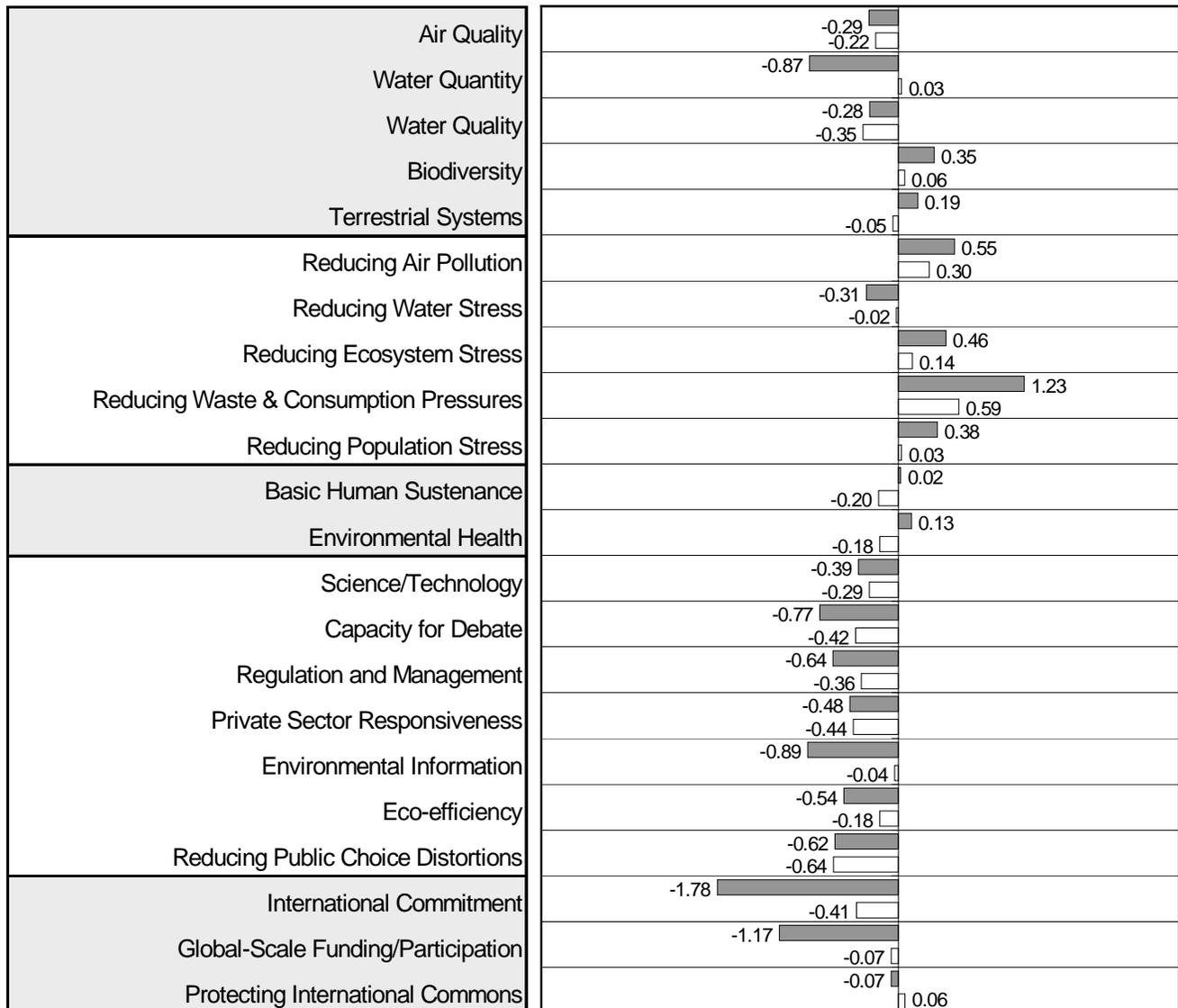
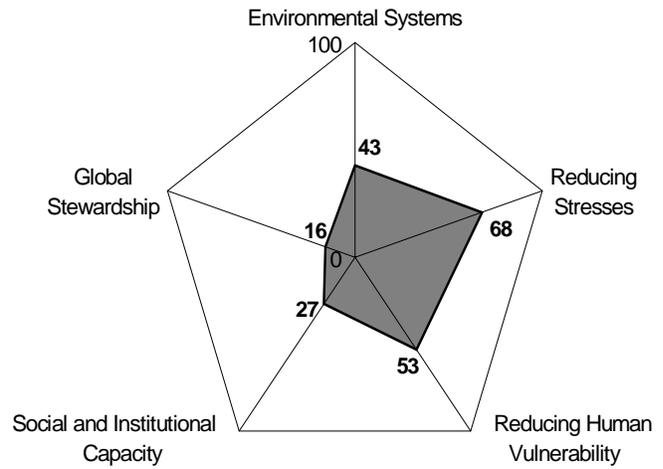
ESI:	31.9
Ranking:	116
GDP/Capita:	
Peer group ESI:	52.2
Variable coverage:	43
Missing variables imputed:	14



■ = Indicator value
 □ = Reference (average value for peer group)

Kyrgyz Republic

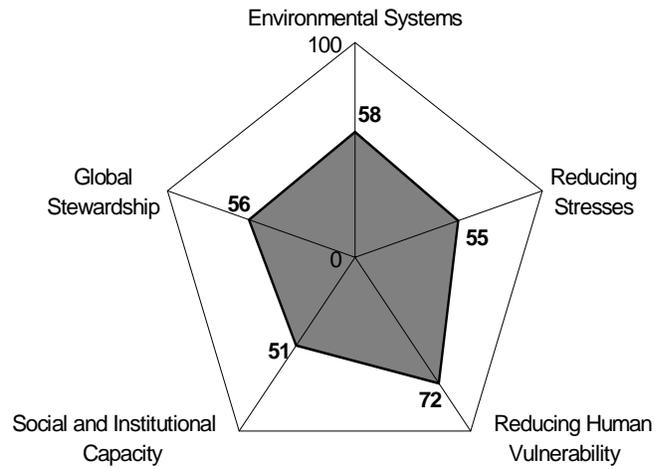
ESI:	39.6
Ranking:	98
GDP/Capita:	\$2,317
Peer group ESI:	45.2
Variable coverage:	43
Missing variables imputed:	16



■ = Indicator value
 □ = Reference (average value for peer group)

Latvia

ESI:	56.3
Ranking:	32
GDP/Capita:	\$5,728
Peer group ESI:	45.7
Variable coverage:	49
Missing variables imputed:	10

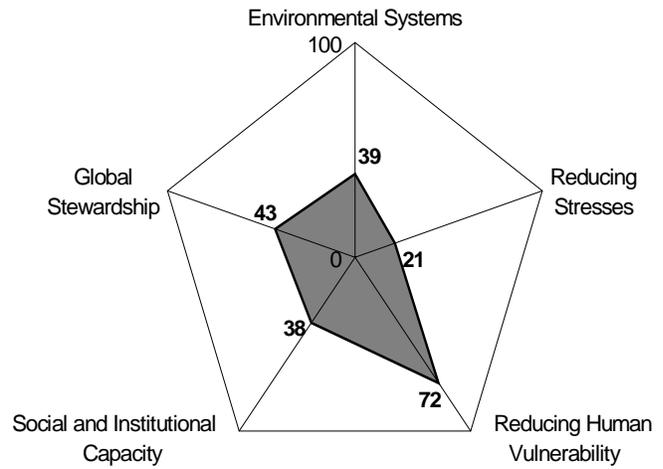


Air Quality	-0.27	0.35
Water Quantity		0.46
Water Quality	-0.11	0.15
Biodiversity	-0.08	0.69
Terrestrial Systems	-0.60	-0.03
Reducing Air Pollution		0.15
Reducing Water Stress		0.19
Reducing Ecosystem Stress	-0.07	0.66
Reducing Waste & Consumption Pressures	-1.64	0.41
Reducing Population Stress		0.17
Basic Human Sustenance		1.08
Environmental Health		0.01
Science/Technology	-0.05	0.56
Capacity for Debate	-0.39	0.09
Regulation and Management	-0.04	0.63
Private Sector Responsiveness	-0.31	0.21
Environmental Information	-0.39	
Eco-efficiency	-0.29	
Reducing Public Choice Distortions	-0.30	0.23
International Commitment		0.29
Global-Scale Funding/Participation		0.20
Protecting International Commons	-0.04	
	-0.31	
	-0.39	
	-0.29	
	-0.30	
	-0.15	
	-0.20	
	-0.52	
	-0.29	0.13
	-0.07	0.04
	-0.11	0.31

■ = Indicator value
 □ = Reference (average value for peer group)

Lebanon

ESI:	37.5
Ranking:	109
GDP/Capita:	\$4,326
Peer group ESI:	45.7
Variable coverage:	43
Missing variables imputed:	15

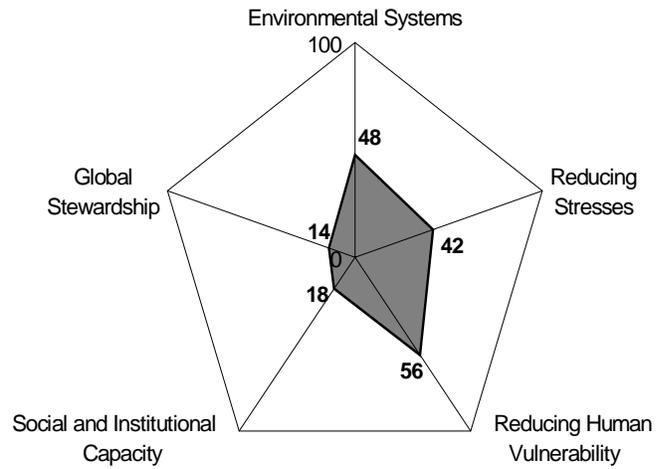


Air Quality	-0.14	-0.27
Water Quantity	-1.19	0.00
Water Quality	-0.11	-0.11
Biodiversity	-0.08	0.19
Terrestrial Systems	-0.18	-0.03
Reducing Air Pollution	-0.90	0.19
Reducing Water Stress	-0.93	-0.07
Reducing Ecosystem Stress	-1.19	-0.28
Reducing Waste & Consumption Pressures	-1.21	0.17
Reducing Population Stress		0.25
Basic Human Sustenance		0.01
Environmental Health		0.92
Science/Technology	-0.25	0.09
Capacity for Debate	-0.39	0.25
Regulation and Management	-0.86	0.20
Private Sector Responsiveness	-0.31	0.15
Environmental Information	-0.29	-0.95
Eco-efficiency	-0.30	-0.45
Reducing Public Choice Distortions	-0.15	-0.65
International Commitment	-0.52	-0.46
Global-Scale Funding/Participation	-0.29	0.29
Protecting International Commons	-0.07	-0.39
	-0.11	

■ = Indicator value
 □ = Reference (average value for peer group)

Libya

ESI:	31.3
Ranking:	118
GDP/Capita:	
Peer group ESI:	45.7
Variable coverage:	44
Missing variables imputed:	13

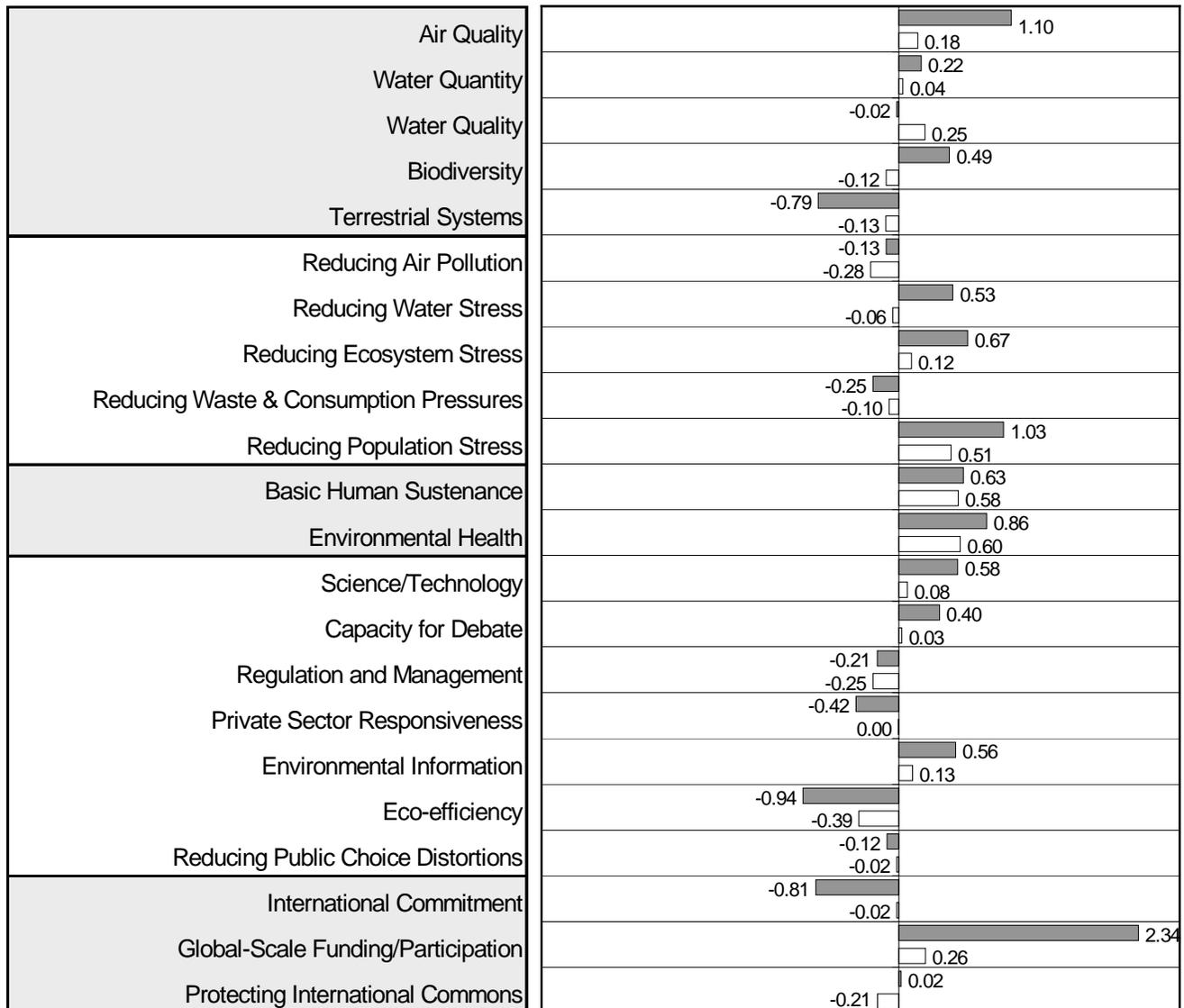
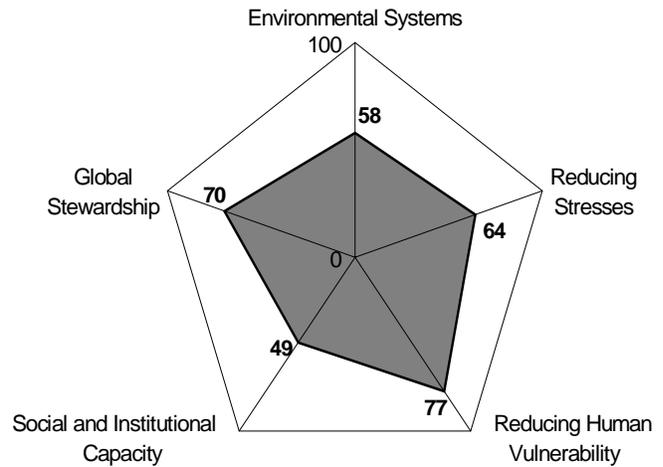


Air Quality	-0.34	-0.27
Water Quantity	-0.63	0.00
Water Quality	-0.33	-0.11
Biodiversity	-0.03	-0.08
Terrestrial Systems	-0.03	1.04
Reducing Air Pollution	-0.49	0.19
Reducing Water Stress	-0.26	-0.07
Reducing Ecosystem Stress	-0.28	0.46
Reducing Waste & Consumption Pressures	-0.03	0.17
Reducing Population Stress	-0.74	0.01
Basic Human Sustenance	0.10	0.09
Environmental Health	0.22	0.21
Science/Technology	-0.50	-0.39
Capacity for Debate	-1.32	0.20
Regulation and Management	-0.88	-0.31
Private Sector Responsiveness	-0.43	-0.29
Environmental Information	-0.91	-0.30
Eco-efficiency	-1.20	-0.15
Reducing Public Choice Distortions	-1.15	-0.52
International Commitment	-1.47	-0.29
Global-Scale Funding/Participation	-1.17	-0.07
Protecting International Commons	-0.64	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Lithuania

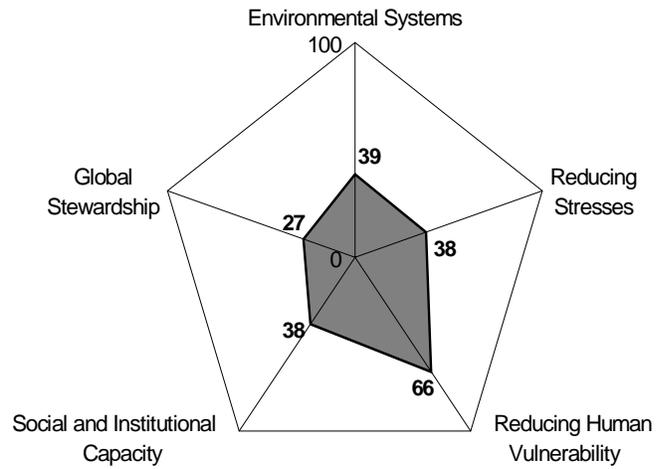
ESI:	60.3
Ranking:	23
GDP/Capita:	\$6,436
Peer group ESI:	52.2
Variable coverage:	54
Missing variables imputed:	6



= Indicator value
 = Reference (average value for peer group)

Macedonia

ESI:	39.2
Ranking:	100
GDP/Capita:	\$4,254
Peer group ESI:	45.7
Variable coverage:	46
Missing variables imputed:	13

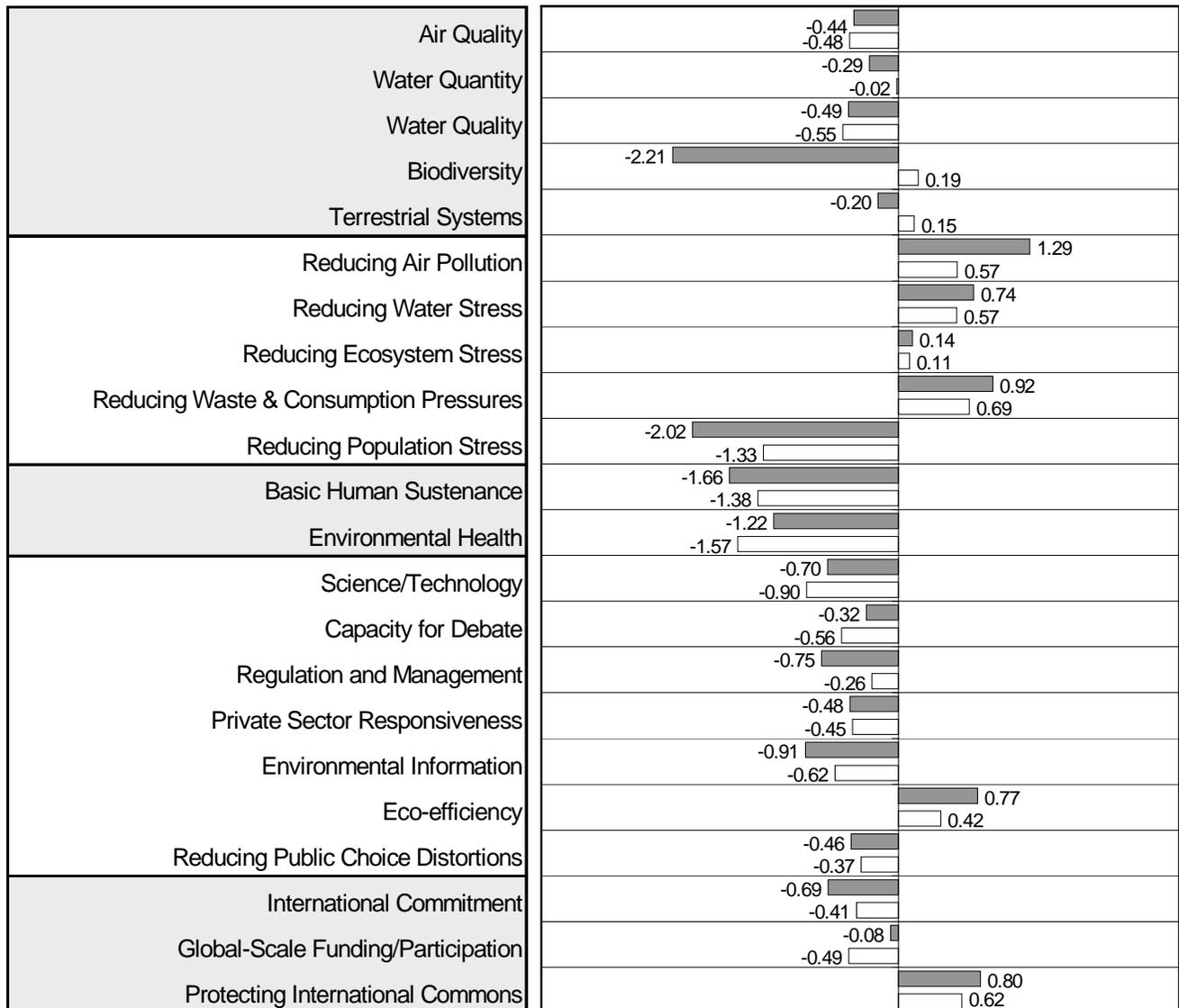
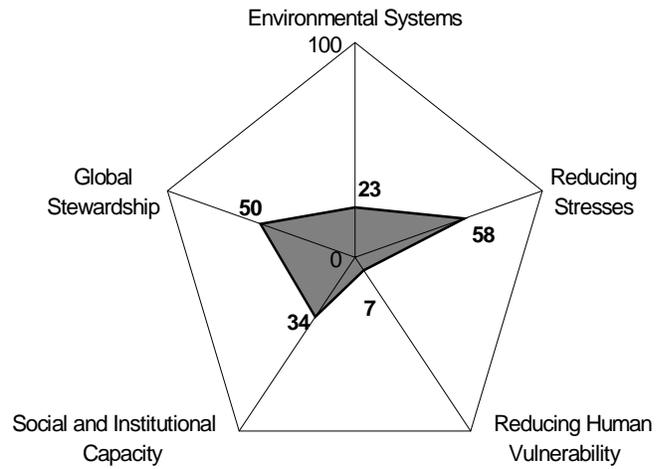


Air Quality	0.22	-0.27
Water Quantity	0.00	-1.05
Water Quality	-0.11	-0.23
Biodiversity	0.17	-0.08
Terrestrial Systems	-0.03	-0.55
Reducing Air Pollution	0.19	-0.36
Reducing Water Stress	-0.07	-0.94
Reducing Ecosystem Stress	-0.28	-1.63
Reducing Waste & Consumption Pressures	0.56	0.17
Reducing Population Stress	0.83	0.01
Basic Human Sustenance	0.52	0.09
Environmental Health	0.30	0.21
Science/Technology	0.05	-0.39
Capacity for Debate	0.20	-0.02
Regulation and Management	-0.41	-0.31
Private Sector Responsiveness	-0.48	-0.29
Environmental Information	-0.18	-0.30
Eco-efficiency	-0.15	-0.96
Reducing Public Choice Distortions	-0.06	-0.52
International Commitment	-0.66	-0.29
Global-Scale Funding/Participation	-0.07	-1.17
Protecting International Commons	0.04	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Madagascar

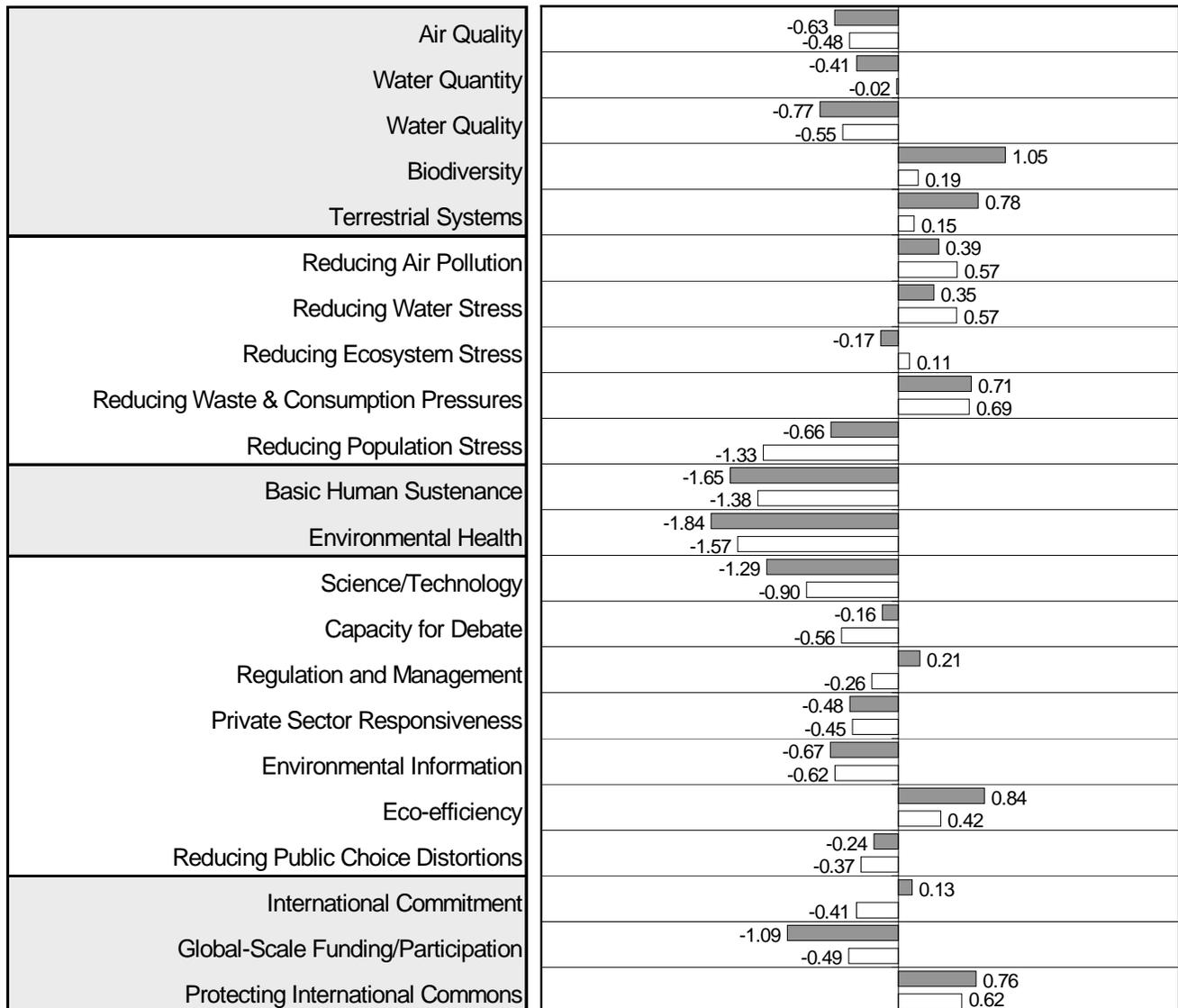
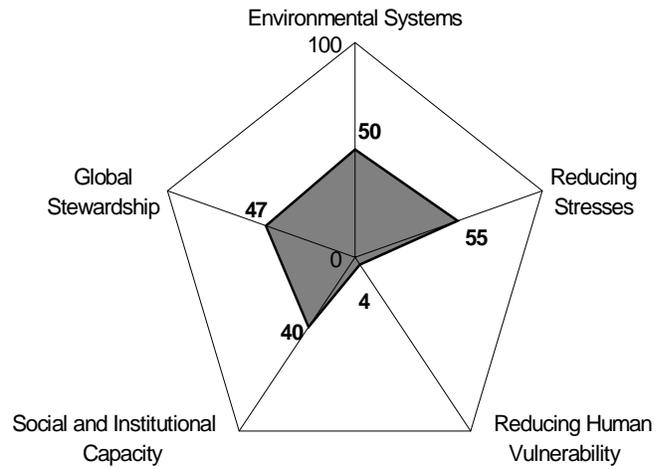
ESI:	35.4
Ranking:	113
GDP/Capita:	\$756
Peer group ESI:	39.3
Variable coverage:	46
Missing variables imputed:	12



= Indicator value
 = Reference (average value for peer group)

Malawi

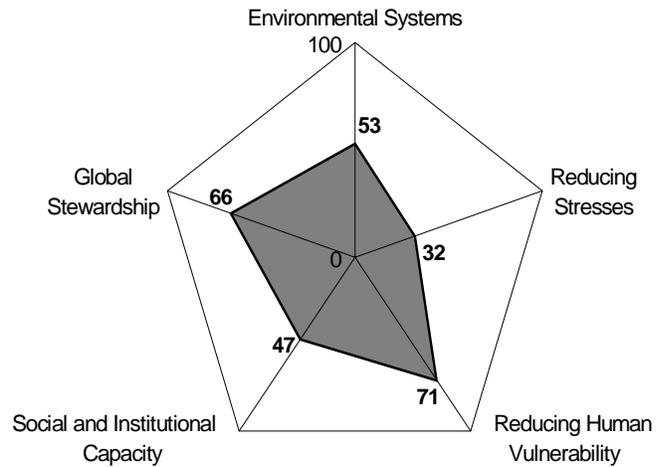
ESI:	41.3
Ranking:	92
GDP/Capita:	\$523
Peer group ESI:	39.3
Variable coverage:	44
Missing variables imputed:	14



■ = Indicator value
 □ = Reference (average value for peer group)

Malaysia

ESI:	49.7
Ranking:	52
GDP/Capita:	\$8,137
Peer group ESI:	52.2
Variable coverage:	63
Missing variables imputed:	4

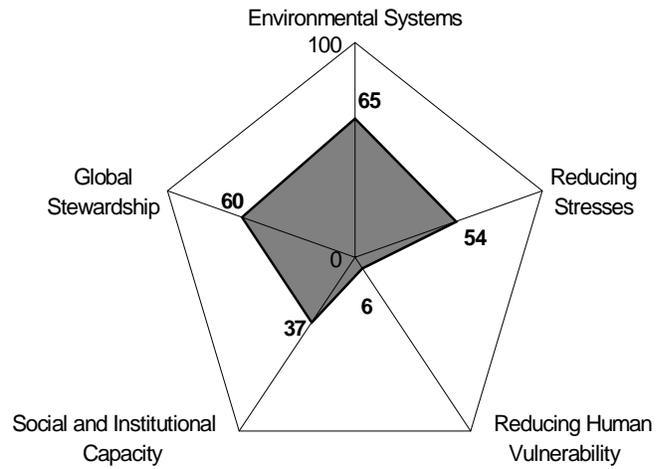


Air Quality	1.36	0.18
Water Quantity	0.41	0.04
Water Quality	-0.35	0.25
Biodiversity	-0.62	-0.12
Terrestrial Systems	-0.44	-0.13
Reducing Air Pollution	-0.28	0.02
Reducing Water Stress	-0.19	-0.06
Reducing Ecosystem Stress	-0.58	0.12
Reducing Waste & Consumption Pressures	-1.14	-0.10
Reducing Population Stress	-0.46	
Basic Human Sustenance	0.51	0.59
Environmental Health	0.58	0.50
Science/Technology	-0.63	0.08
Capacity for Debate	-0.70	0.03
Regulation and Management	-0.25	0.43
Private Sector Responsiveness	-0.10	0.00
Environmental Information	0.84	0.13
Eco-efficiency	-0.17	-0.39
Reducing Public Choice Distortions	-0.18	-0.02
International Commitment	0.24	-0.02
Global-Scale Funding/Participation	1.11	0.26
Protecting International Commons	-0.09	-0.21

■ = Indicator value
 □ = Reference (average value for peer group)

Mali

ESI:	46.2
Ranking:	71
GDP/Capita:	\$681
Peer group ESI:	39.3
Variable coverage:	47
Missing variables imputed:	11

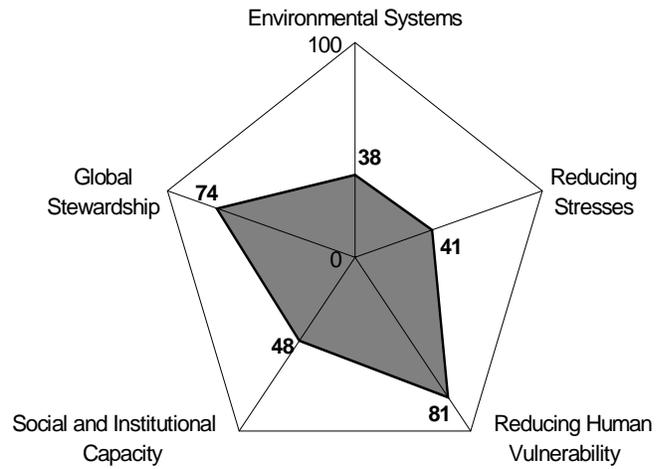


Air Quality	-0.14	0.03
Water Quantity	-0.48	-0.02
Water Quality	-0.55	0.66
Biodiversity	0.37	0.19
Terrestrial Systems	0.95	0.15
Reducing Air Pollution	1.20	0.57
Reducing Water Stress	0.66	0.57
Reducing Ecosystem Stress	0.09	0.11
Reducing Waste & Consumption Pressures	0.68	0.69
Reducing Population Stress	-2.11	-1.33
Basic Human Sustenance	-1.09	-1.38
Environmental Health	-1.96	-1.57
Science/Technology	-1.31	-0.90
Capacity for Debate	-0.56	0.08
Regulation and Management	-0.63	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-0.78	-0.62
Eco-efficiency	0.80	0.42
Reducing Public Choice Distortions	0.09	-0.37
International Commitment	0.09	-0.41
Global-Scale Funding/Participation	-0.14	-0.49
Protecting International Commons	0.82	0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Mauritius

ESI:	51.2
Ranking:	46
GDP/Capita:	\$8,312
Peer group ESI:	52.2
Variable coverage:	50
Missing variables imputed:	13

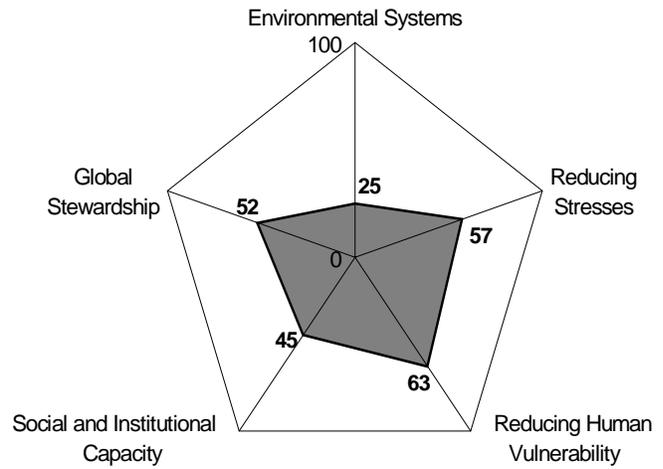


Air Quality	0.11	0.18
Water Quantity	-1.21	0.04
Water Quality	-0.77	0.25
Biodiversity	-0.29	-0.12
Terrestrial Systems	-0.13	0.67
Reducing Air Pollution	-0.45	-0.28
Reducing Water Stress	-1.39	-0.06
Reducing Ecosystem Stress	-0.46	0.12
Reducing Waste & Consumption Pressures	-0.35	-0.10
Reducing Population Stress	0.62	0.51
Basic Human Sustenance	0.92	0.58
Environmental Health	0.80	0.60
Science/Technology	-0.45	0.08
Capacity for Debate	1.32	0.03
Regulation and Management	-0.64	-0.25
Private Sector Responsiveness	-0.37	0.00
Environmental Information	-0.64	0.13
Eco-efficiency	-0.39	0.27
Reducing Public Choice Distortions	0.15	-0.02
International Commitment	-0.03	-0.02
Global-Scale Funding/Participation	1.56	0.26
Protecting International Commons	0.38	-0.21

■ = Indicator value
 □ = Reference (average value for peer group)

Mexico

ESI:	45.3
Ranking:	73
GDP/Capita:	\$7,704
Peer group ESI:	52.2
Variable coverage:	63
Missing variables imputed:	3

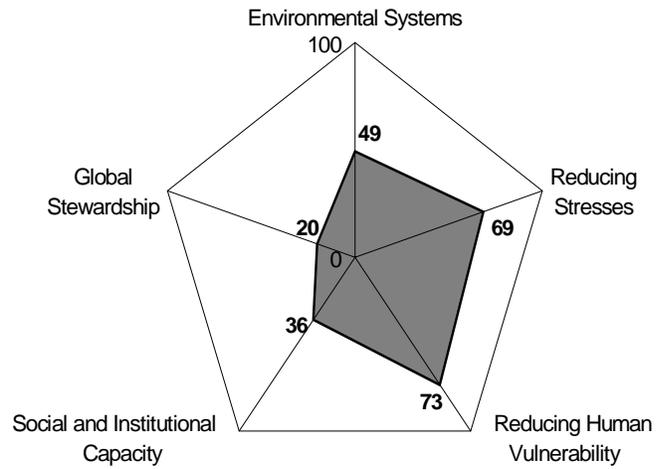


Air Quality	-2.58	0.18
Water Quantity	-0.18	0.04
Water Quality	-0.69	0.25
Biodiversity	-0.29	-0.12
Terrestrial Systems	-0.13	0.36
Reducing Air Pollution	-0.28	0.24
Reducing Water Stress	-0.10	-0.06
Reducing Ecosystem Stress	0.10	0.12
Reducing Waste & Consumption Pressures	-0.10	0.49
Reducing Population Stress	0.18	0.51
Basic Human Sustenance	0.51	0.58
Environmental Health	0.14	0.60
Science/Technology	-0.57	0.08
Capacity for Debate	-0.44	0.03
Regulation and Management	-0.45	-0.25
Private Sector Responsiveness	0.00	0.20
Environmental Information	0.64	0.13
Eco-efficiency	-0.39	0.22
Reducing Public Choice Distortions	-0.55	-0.02
International Commitment	-0.02	0.16
Global-Scale Funding/Participation	0.40	0.26
Protecting International Commons	-0.39	-0.21

= Indicator value
 = Reference (average value for peer group)

Moldova

ESI:	47.4
Ranking:	59
GDP/Capita:	\$1,947
Peer group ESI:	45.2
Variable coverage:	47
Missing variables imputed:	12

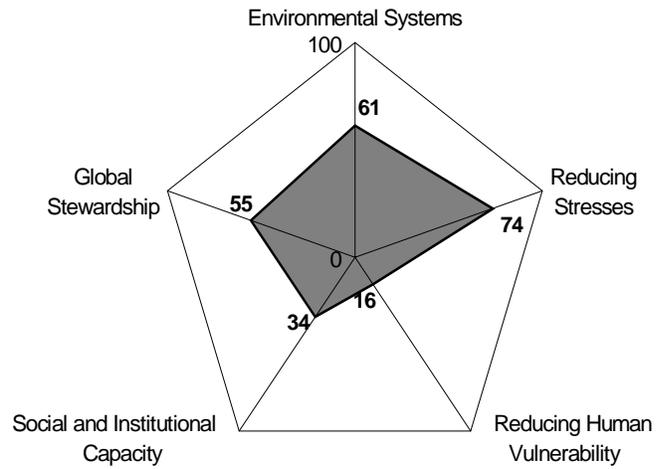


Air Quality	0.16	-0.22
Water Quantity	0.05	0.03
Water Quality	-0.22	-0.35
Biodiversity	0.89	0.06
Terrestrial Systems	-0.96	-0.05
Reducing Air Pollution	-0.51	0.30
Reducing Water Stress	-0.02	0.19
Reducing Ecosystem Stress	0.46	0.14
Reducing Waste & Consumption Pressures	1.31	0.59
Reducing Population Stress	0.98	0.03
Basic Human Sustenance	0.68	-0.20
Environmental Health	0.57	-0.18
Science/Technology	-0.22	-0.29
Capacity for Debate	-0.07	-0.42
Regulation and Management	-0.80	-0.36
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	0.21	-0.04
Eco-efficiency	-0.70	-0.18
Reducing Public Choice Distortions	-0.46	-0.64
International Commitment	-1.73	-0.41
Global-Scale Funding/Participation	-1.00	-0.07
Protecting International Commons	0.22	0.06

= Indicator value
 = Reference (average value for peer group)

Mongolia

ESI:	50.3
Ranking:	50
GDP/Capita:	\$1,541
Peer group ESI:	45.2
Variable coverage:	48
Missing variables imputed:	11

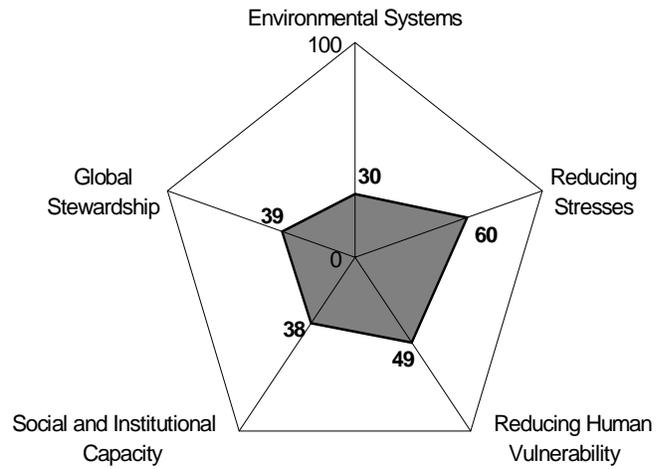


Air Quality	0.17	-0.22
Water Quantity	0.62	0.03
Water Quality	-0.24	-0.35
Biodiversity	0.17	0.06
Terrestrial Systems	0.71	-0.05
Reducing Air Pollution	0.82	0.30
Reducing Water Stress	0.79	-0.02
Reducing Ecosystem Stress	0.46	0.14
Reducing Waste & Consumption Pressures	1.05	0.59
Reducing Population Stress	0.06	0.03
Basic Human Sustenance	-1.19	-0.20
Environmental Health	-0.84	-0.18
Science/Technology	0.01	-0.29
Capacity for Debate	0.07	-0.42
Regulation and Management	-0.19	-0.36
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	0.20	-0.04
Eco-efficiency	-1.71	-0.18
Reducing Public Choice Distortions	-0.73	-0.64
International Commitment	-0.02	-0.41
Global-Scale Funding/Participation	0.04	-0.07
Protecting International Commons	0.40	0.06

= Indicator value
 = Reference (average value for peer group)

Morocco

ESI:	41.9
Ranking:	89
GDP/Capita:	\$3,305
Peer group ESI:	45.2
Variable coverage:	48
Missing variables imputed:	10

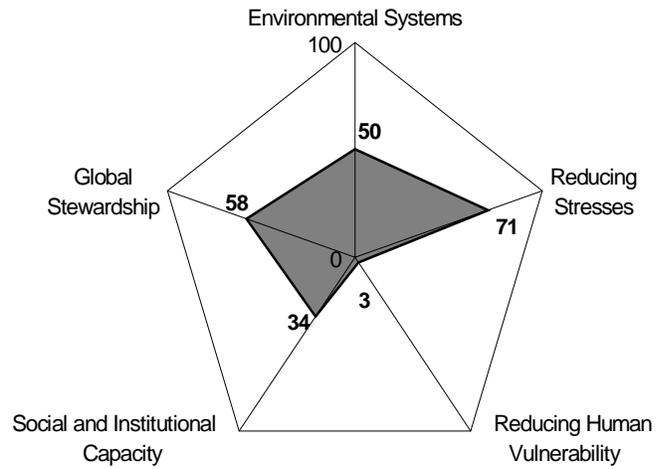


Air Quality	-0.22	0.02
Water Quantity	-1.21	0.03
Water Quality	-1.36	-0.35
Biodiversity	-0.57	0.06
Terrestrial Systems	-0.05	0.43
Reducing Air Pollution	-0.56	0.79
Reducing Water Stress	-0.02	0.30
Reducing Ecosystem Stress	-0.35	0.14
Reducing Waste & Consumption Pressures	-0.69	0.59
Reducing Population Stress	-0.01	0.03
Basic Human Sustenance	-0.20	0.39
Environmental Health	-0.44	-0.18
Science/Technology	-0.45	-0.29
Capacity for Debate	-0.62	-0.42
Regulation and Management	-0.84	-0.36
Private Sector Responsiveness	-0.39	-0.44
Environmental Information	-0.63	-0.04
Eco-efficiency	-0.18	0.32
Reducing Public Choice Distortions	-0.64	0.45
International Commitment	-0.41	0.29
Global-Scale Funding/Participation	-0.87	-0.07
Protecting International Commons	-0.25	0.06

= Indicator value
 = Reference (average value for peer group)

Mozambique

ESI:	44.2
Ranking:	77
GDP/Capita:	\$782
Peer group ESI:	39.3
Variable coverage:	44
Missing variables imputed:	14

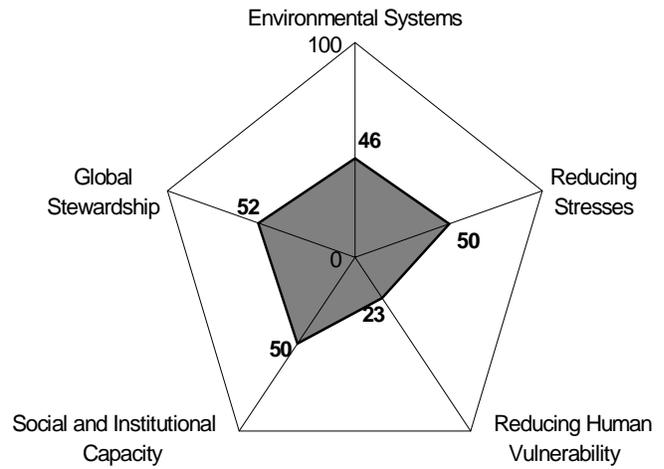


Air Quality	-0.74	-0.48
Water Quantity		0.48
Water Quality	-0.64	-0.55
Biodiversity		0.39
Terrestrial Systems		0.19
		0.56
Reducing Air Pollution		1.11
		0.57
Reducing Water Stress		0.93
		0.57
Reducing Ecosystem Stress		0.20
		0.11
Reducing Waste & Consumption Pressures		0.94
		0.69
Reducing Population Stress	-0.39	
Basic Human Sustenance	-1.33	
	-1.80	-1.38
Environmental Health	-1.96	
	-1.57	
Science/Technology	-1.46	
	-0.90	
Capacity for Debate	-0.37	
	-0.56	
Regulation and Management	-0.31	
	-0.26	
Private Sector Responsiveness	-0.48	
	-0.45	
Environmental Information	-0.62	
	-0.62	
Eco-efficiency		0.71
		0.42
Reducing Public Choice Distortions	-0.35	
	-0.37	
International Commitment	-0.18	
	-0.41	
Global-Scale Funding/Participation	-0.10	
	-0.49	
Protecting International Commons		0.87
		0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Nepal

ESI:	46.7
Ranking:	66
GDP/Capita:	\$1,157
Peer group ESI:	39.3
Variable coverage:	45
Missing variables imputed:	14

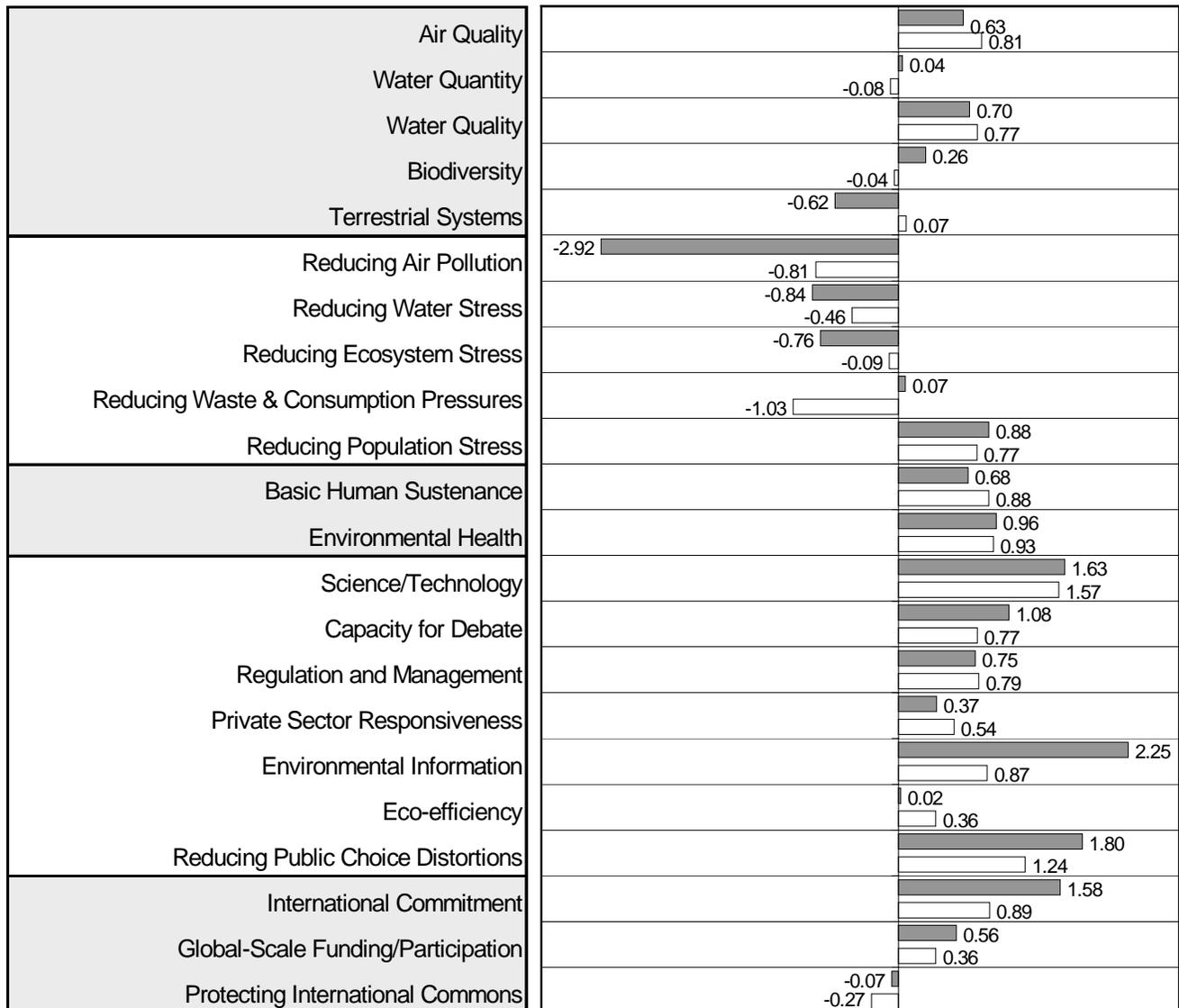
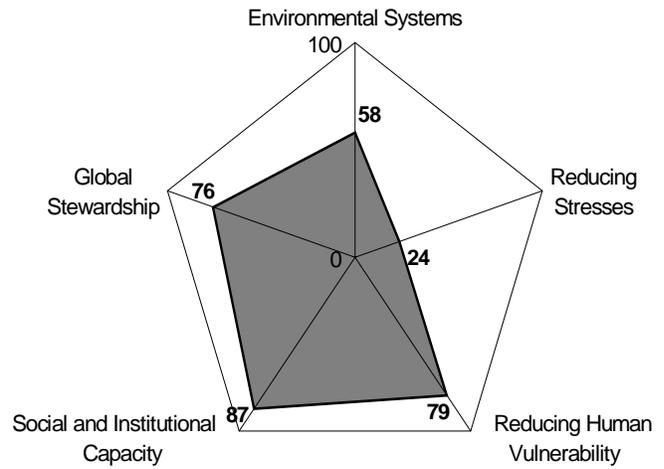


Air Quality	-0.48	-0.03
Water Quantity		0.08
Water Quality	-0.28	-0.02
Biodiversity	-0.55	
Terrestrial Systems	-0.38	0.19
Reducing Air Pollution		0.11
Reducing Water Stress	-0.08	0.15
Reducing Ecosystem Stress		0.17
Reducing Waste & Consumption Pressures		0.57
Reducing Population Stress	-0.86	0.03
Basic Human Sustenance	-1.33	0.11
Environmental Health	-0.45	0.78
Science/Technology	-1.00	0.69
Capacity for Debate	-1.57	
Regulation and Management	-0.92	
Private Sector Responsiveness	-0.90	
Environmental Information	-0.19	0.65
Eco-efficiency	-0.56	
Reducing Public Choice Distortions	-0.26	0.46
International Commitment	-0.48	0.82
Global-Scale Funding/Participation	-0.45	0.42
Protecting International Commons	-0.62	
	-0.39	0.72
	-0.37	0.62
	-0.46	
	-0.41	
	-0.14	
	-0.49	

■ = Indicator value
 □ = Reference (average value for peer group)

Netherlands

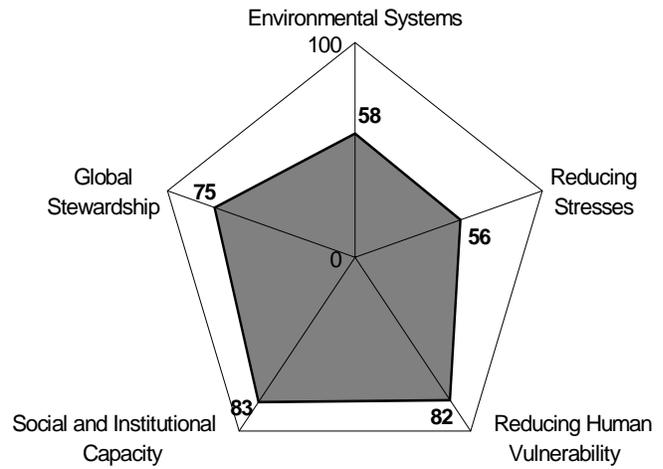
ESI:	66.0
Ranking:	12
GDP/Capita:	\$22,176
Peer group ESI:	65.2
Variable coverage:	66
Missing variables imputed:	1



= Indicator value
 = Reference (average value for peer group)

New Zealand

ESI:	71.3
Ranking:	6
GDP/Capita:	\$17,288
Peer group ESI:	65.2
Variable coverage:	62
Missing variables imputed:	2

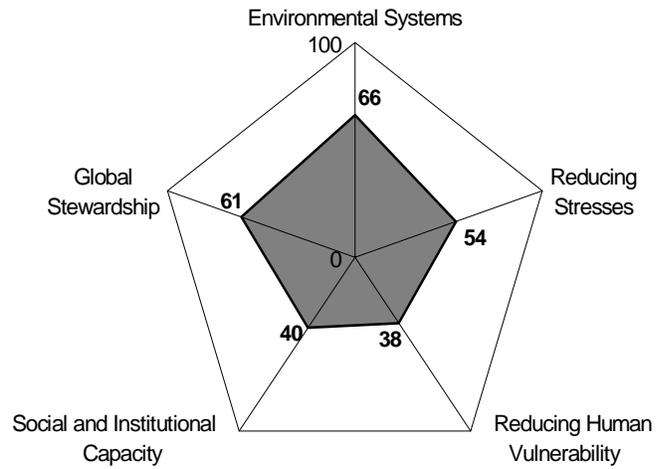


Air Quality	1.62	0.81
Water Quantity	0.45	-0.08
Water Quality	1.53	0.77
Biodiversity	-3.37	-0.04
Terrestrial Systems	0.72	0.07
Reducing Air Pollution	0.34	-0.81
Reducing Water Stress	0.13	-0.46
Reducing Ecosystem Stress	0.67	-0.09
Reducing Waste & Consumption Pressures	-1.03	-1.03
Reducing Population Stress	0.70	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.94	0.93
Science/Technology	1.09	1.57
Capacity for Debate	1.59	0.77
Regulation and Management	1.10	0.79
Private Sector Responsiveness	0.93	0.54
Environmental Information	-0.18	0.87
Eco-efficiency	0.66	0.36
Reducing Public Choice Distortions	1.57	1.24
International Commitment	0.68	0.89
Global-Scale Funding/Participation	0.69	0.36
Protecting International Commons	0.65	-0.27

= Indicator value
 = Reference (average value for peer group)

Nicaragua

ESI:	51.9
Ranking:	43
GDP/Capita:	\$2,142
Peer group ESI:	45.2
Variable coverage:	48
Missing variables imputed:	10

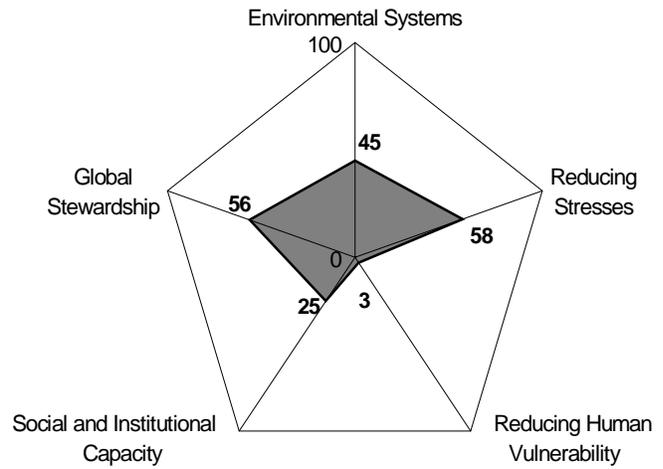


Air Quality	0.11	-0.22
Water Quantity	0.94	0.03
Water Quality	-0.32	-0.35
Biodiversity	1.60	0.06
Terrestrial Systems	-0.25	-0.05
Reducing Air Pollution	0.80	0.30
Reducing Water Stress	0.48	-0.02
Reducing Ecosystem Stress	-0.64	0.14
Reducing Waste & Consumption Pressures	0.85	0.59
Reducing Population Stress	-1.00	0.03
Basic Human Sustenance	-0.55	-0.20
Environmental Health	-0.07	-0.18
Science/Technology	-0.52	-0.29
Capacity for Debate	-0.02	-0.42
Regulation and Management	-0.38	-0.36
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	0.29	-0.04
Eco-efficiency	0.07	-0.18
Reducing Public Choice Distortions	-0.66	-0.64
International Commitment	0.26	-0.41
Global-Scale Funding/Participation	-0.06	-0.07
Protecting International Commons	0.61	0.06

= Indicator value
 = Reference (average value for peer group)

Niger

ESI:	36.5
Ranking:	111
GDP/Capita:	\$739
Peer group ESI:	39.3
Variable coverage:	43
Missing variables imputed:	15

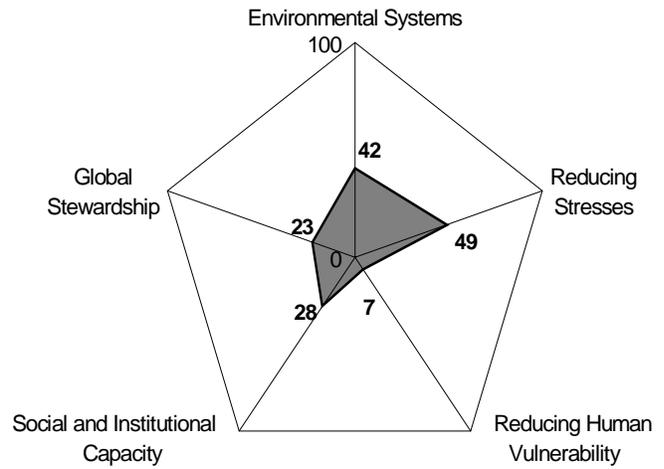


Air Quality	-0.98	-0.48
Water Quantity	-0.03	-0.02
Water Quality	-1.04	-0.55
Biodiversity		0.58
Terrestrial Systems		0.19
		0.85
		0.15
Reducing Air Pollution		1.11
		0.57
Reducing Water Stress		0.52
		0.57
Reducing Ecosystem Stress		0.46
		0.11
Reducing Waste & Consumption Pressures		1.02
		0.69
Reducing Population Stress	-2.17	
	-1.33	
Basic Human Sustenance	-1.30	
	-1.38	
Environmental Health	-2.42	
	-1.57	
Science/Technology	-1.46	
	-0.90	
Capacity for Debate	-0.75	
	-0.56	
Regulation and Management	-0.20	
	-0.26	
Private Sector Responsiveness	-0.48	
	-0.45	
Environmental Information	-0.76	
	-0.62	
Eco-efficiency	-0.77	0.42
Reducing Public Choice Distortions	-0.27	
	-0.37	
International Commitment		0.02
	-0.41	
Global-Scale Funding/Participation		-0.20
	-0.49	
Protecting International Commons		0.65
		0.62

= Indicator value
 = Reference (average value for peer group)

Nigeria

ESI:	31.8
Ranking:	117
GDP/Capita:	\$795
Peer group ESI:	39.3
Variable coverage:	46
Missing variables imputed:	12

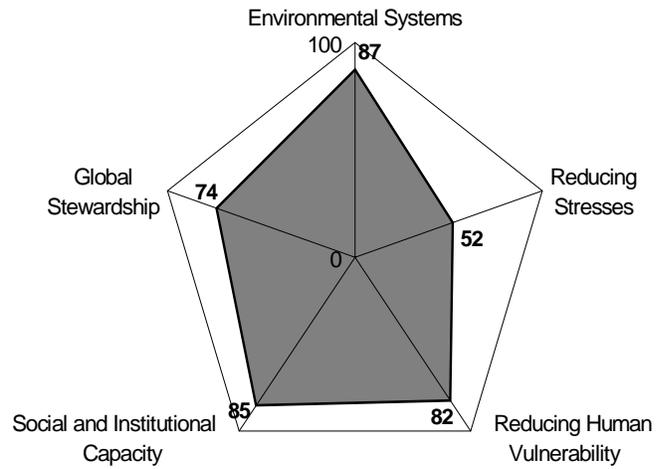


Air Quality	-0.60	-0.48
Water Quantity	-0.22	-0.02
Water Quality	-0.62	-0.55
Biodiversity	0.40	0.19
Terrestrial Systems	-0.02	0.15
Reducing Air Pollution	0.32	0.57
Reducing Water Stress	0.55	0.57
Reducing Ecosystem Stress	0.13	0.11
Reducing Waste & Consumption Pressures	0.53	0.69
Reducing Population Stress	-1.61	-1.33
Basic Human Sustenance	-1.44	-1.38
Environmental Health	-1.52	-1.57
Science/Technology	-0.75	-0.90
Capacity for Debate	-0.49	-0.56
Regulation and Management	-0.49	-0.26
Private Sector Responsiveness	-0.46	-0.45
Environmental Information	-0.56	-0.62
Eco-efficiency	0.07	0.42
Reducing Public Choice Distortions	-1.36	-0.37
International Commitment	-0.67	-0.41
Global-Scale Funding/Participation	-1.06	-0.49
Protecting International Commons	-0.52	0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Norway

ESI:	78.2
Ranking:	2
GDP/Capita:	\$26,342
Peer group ESI:	65.2
Variable coverage:	65
Missing variables imputed:	2

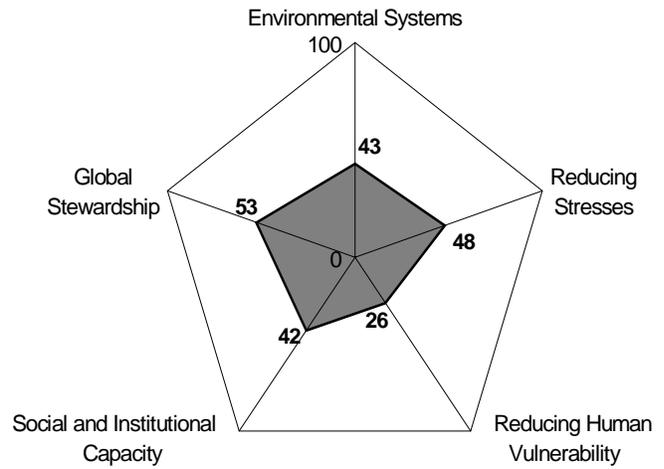


Air Quality	1.02	0.81
Water Quantity	1.33	-0.08
Water Quality	1.31	0.77
Biodiversity	0.59	-0.04
Terrestrial Systems	1.47	0.07
Reducing Air Pollution	0.08	-0.81
Reducing Water Stress	0.30	-0.46
Reducing Ecosystem Stress	0.14	-0.09
Reducing Waste & Consumption Pressures	-1.01	-1.03
Reducing Population Stress	0.78	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.94	0.93
Science/Technology	1.68	1.57
Capacity for Debate	1.13	0.77
Regulation and Management	0.42	0.79
Private Sector Responsiveness	0.03	0.54
Environmental Information	1.88	0.87
Eco-efficiency	0.85	0.36
Reducing Public Choice Distortions	1.35	1.24
International Commitment	1.29	0.89
Global-Scale Funding/Participation	0.63	0.36
Protecting International Commons	0.00	-0.27

= Indicator value
 = Reference (average value for peer group)

Pakistan

ESI:	43.6
Ranking:	85
GDP/Capita:	\$1,715
Peer group ESI:	45.2
Variable coverage:	51
Missing variables imputed:	8

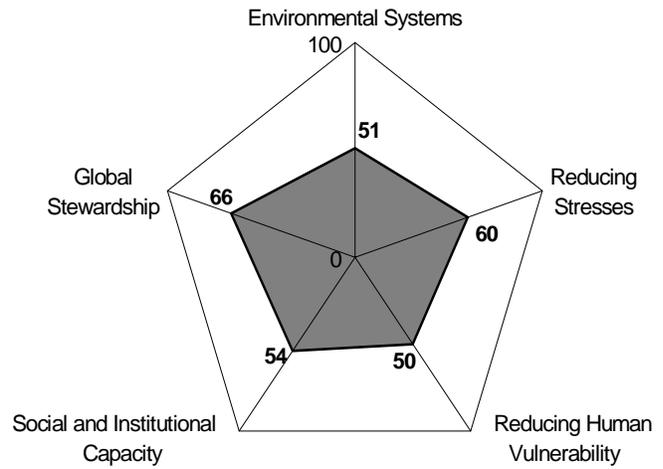


Air Quality	-0.14	-0.22
Water Quantity	-0.42	0.03
Water Quality	-0.30	-0.35
Biodiversity	-0.26	0.06
Terrestrial Systems	-0.05	0.29
Reducing Air Pollution	0.57	0.30
Reducing Water Stress	-0.32	-0.02
Reducing Ecosystem Stress	-0.83	0.14
Reducing Waste & Consumption Pressures	1.31	0.59
Reducing Population Stress	-1.00	0.03
Basic Human Sustenance	-0.28	-0.20
Environmental Health	-0.98	-0.18
Science/Technology	-0.34	-0.29
Capacity for Debate	-1.07	-0.42
Regulation and Management	-0.36	0.78
Private Sector Responsiveness	-0.46	-0.44
Environmental Information	-0.04	0.30
Eco-efficiency	-0.18	0.05
Reducing Public Choice Distortions	-0.65	-0.64
International Commitment	-0.41	0.24
Global-Scale Funding/Participation	-0.07	0.11
Protecting International Commons	-0.17	0.06

= Indicator value
 = Reference (average value for peer group)

Panama

ESI:	55.9
Ranking:	34
GDP/Capita:	\$5,249
Peer group ESI:	45.7
Variable coverage:	48
Missing variables imputed:	10

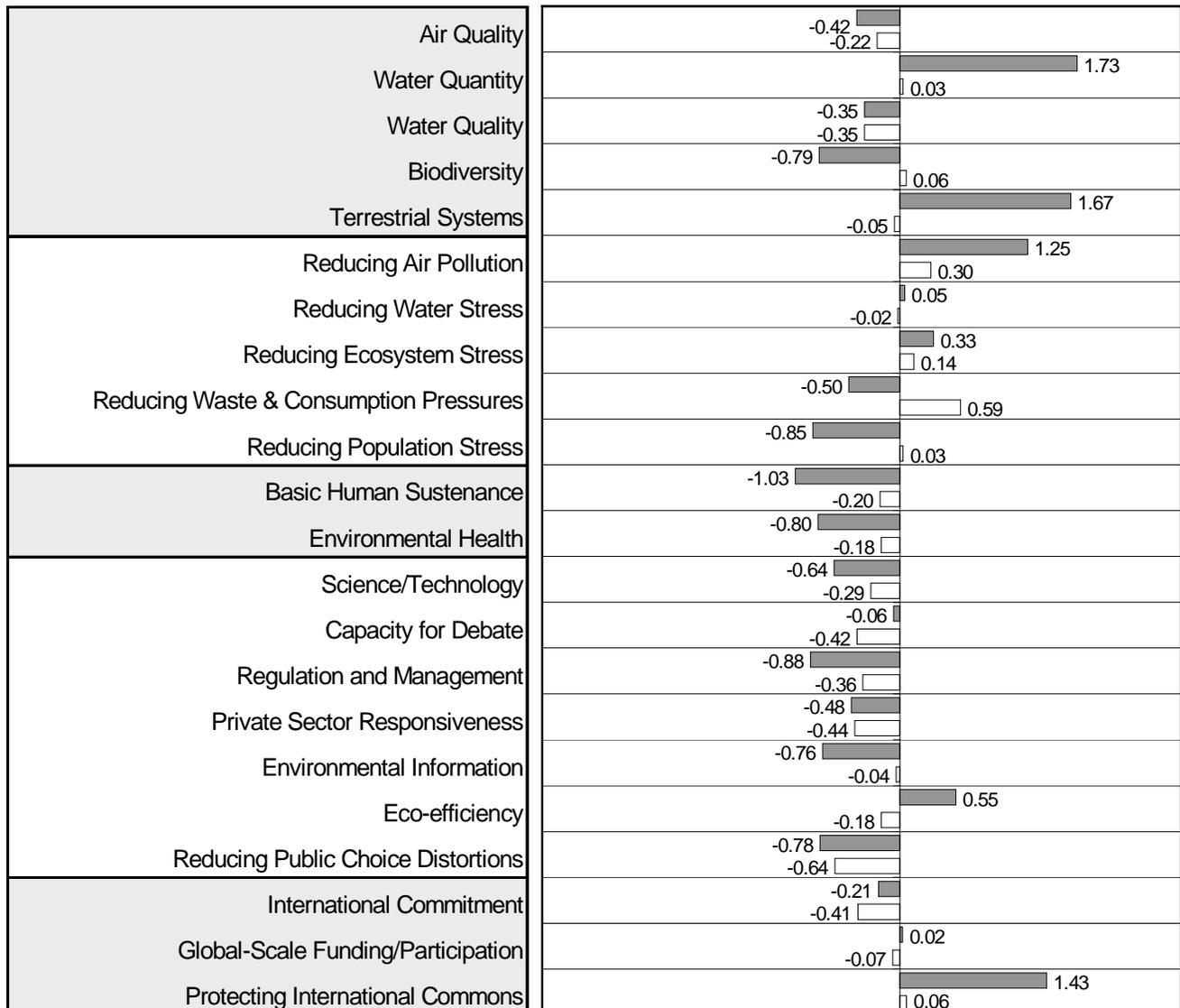
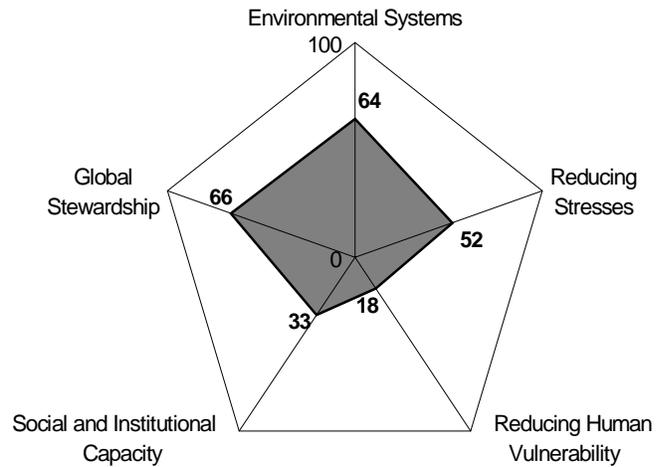


Air Quality	-0.27	0.05
Water Quantity	-0.12	0.00
Water Quality	-0.11	0.11
Biodiversity	-0.08	0.53
Terrestrial Systems	-0.47	-0.03
Reducing Air Pollution		0.63
Reducing Water Stress	-0.07	0.44
Reducing Ecosystem Stress	-0.44	-0.28
Reducing Waste & Consumption Pressures		0.43
Reducing Population Stress		0.23
Basic Human Sustenance	-0.35	0.09
Environmental Health		0.35
Science/Technology	-0.64	-0.39
Capacity for Debate		2.27
Regulation and Management	-0.31	0.40
Private Sector Responsiveness	-0.48	-0.29
Environmental Information	-0.81	-0.30
Eco-efficiency	-0.15	0.48
Reducing Public Choice Distortions	-0.57	-0.52
International Commitment	-0.29	0.52
Global-Scale Funding/Participation	-0.07	0.67
Protecting International Commons	-0.11	0.05

■ = Indicator value
 □ = Reference (average value for peer group)

Papua New Guinea

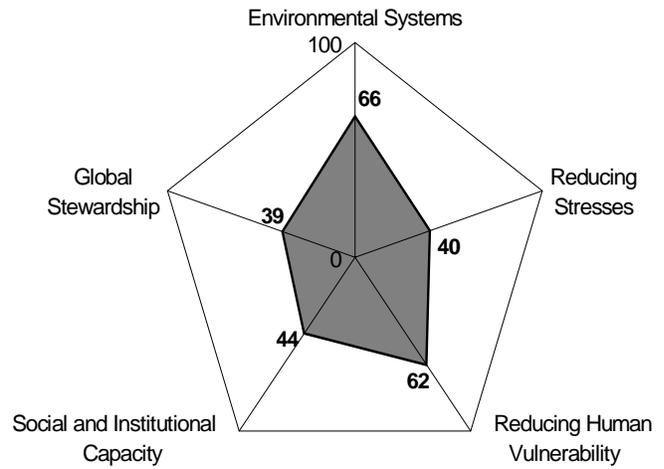
ESI:	47.3
Ranking:	62
GDP/Capita:	\$2,359
Peer group ESI:	45.2
Variable coverage:	44
Missing variables imputed:	14



 = Indicator value
 = Reference (average value for peer group)

Paraguay

ESI:	48.9
Ranking:	54
GDP/Capita:	\$4,288
Peer group ESI:	45.7
Variable coverage:	46
Missing variables imputed:	12

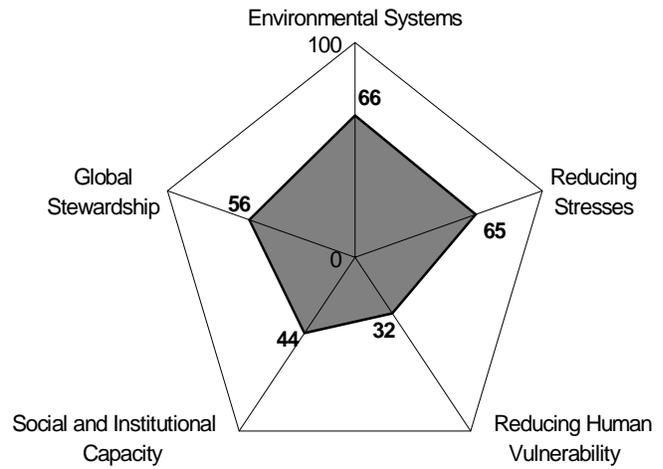


Air Quality	-0.38	-0.27
Water Quantity	0.99	0.00
Water Quality	-0.37	-0.11
Biodiversity	0.71	-0.08
Terrestrial Systems	1.06	-0.03
Reducing Air Pollution	0.46	0.19
Reducing Water Stress	0.44	-0.07
Reducing Ecosystem Stress	-0.69	-0.28
Reducing Waste & Consumption Pressures	-0.51	0.17
Reducing Population Stress	-0.96	0.01
Basic Human Sustenance	0.34	0.09
Environmental Health	0.26	0.21
Science/Technology	-0.58	-0.39
Capacity for Debate	0.13	0.20
Regulation and Management	0.03	-0.31
Private Sector Responsiveness	0.38	-0.29
Environmental Information	-1.15	-0.30
Eco-efficiency	0.83	-0.15
Reducing Public Choice Distortions	-0.73	-0.52
International Commitment	-0.37	-0.29
Global-Scale Funding/Participation	-0.93	-0.07
Protecting International Commons	0.43	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Peru

ESI:	54.3
Ranking:	38
GDP/Capita:	\$4,282
Peer group ESI:	45.7
Variable coverage:	50
Missing variables imputed:	13

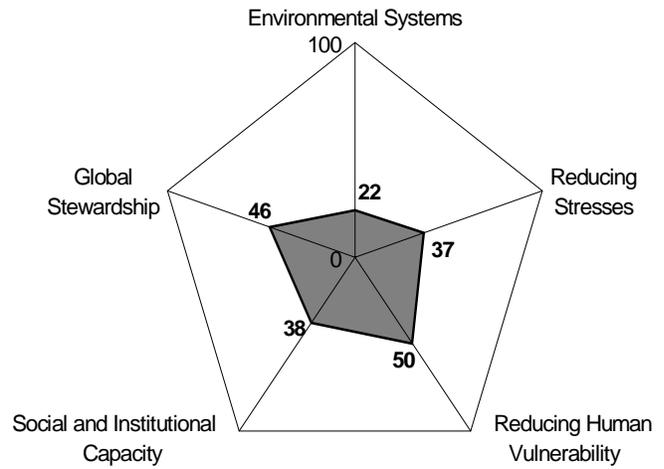


Air Quality	-0.10	-0.27
Water Quantity	1.62	0.00
Water Quality	-0.08	-0.11
Biodiversity	-0.03	-0.08
Terrestrial Systems	0.67	-0.03
Reducing Air Pollution	1.08	0.19
Reducing Water Stress	0.12	-0.07
Reducing Ecosystem Stress	0.34	-0.28
Reducing Waste & Consumption Pressures	0.57	0.17
Reducing Population Stress	0.01	-0.25
Basic Human Sustenance	-1.10	0.09
Environmental Health	0.17	0.21
Science/Technology	-0.55	-0.39
Capacity for Debate	-0.54	0.20
Regulation and Management	-0.31	-0.31
Private Sector Responsiveness	-0.44	-0.29
Environmental Information	-0.34	-0.30
Eco-efficiency	0.70	-0.15
Reducing Public Choice Distortions	0.36	-0.52
International Commitment	-0.18	-0.29
Global-Scale Funding/Participation	0.28	-0.07
Protecting International Commons	0.37	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Philippines

ESI:	35.7
Ranking:	112
GDP/Capita:	\$3,555
Peer group ESI:	45.7
Variable coverage:	61
Missing variables imputed:	4

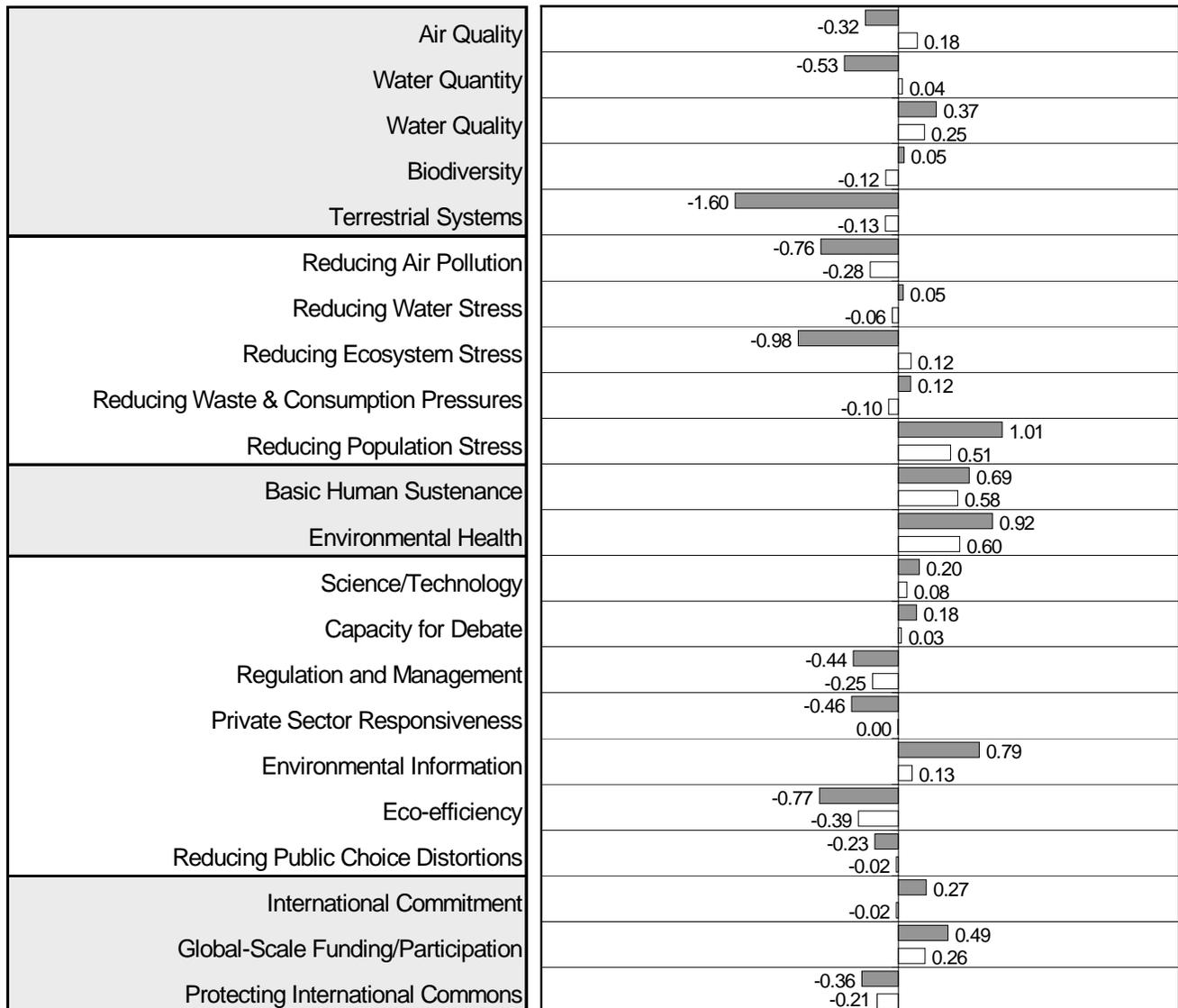
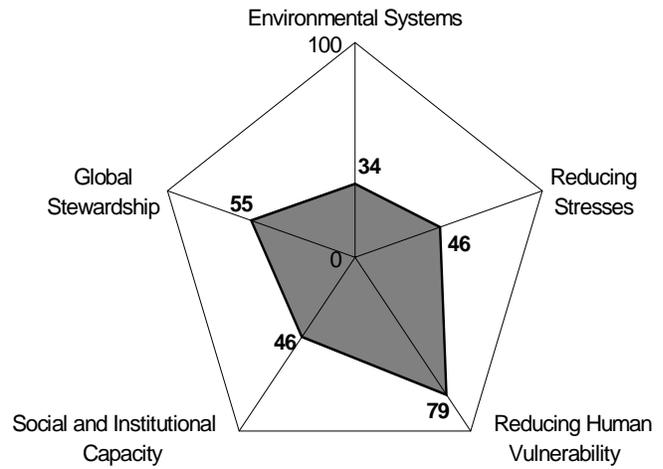


Air Quality	-0.28	-0.27
Water Quantity	-0.97	0.00
Water Quality	-0.11	0.91
Biodiversity	-2.58	-0.08
Terrestrial Systems	-0.94	-0.03
Reducing Air Pollution	-0.10	0.19
Reducing Water Stress	-0.07	0.09
Reducing Ecosystem Stress	-1.19	-0.28
Reducing Waste & Consumption Pressures	-0.18	0.17
Reducing Population Stress	-0.31	0.01
Basic Human Sustenance	-0.11	0.09
Environmental Health	-0.09	0.21
Science/Technology	-0.60	-0.39
Capacity for Debate	-0.21	0.20
Regulation and Management	-0.72	-0.31
Private Sector Responsiveness	-0.49	-0.29
Environmental Information	-0.05	-0.30
Eco-efficiency	-0.15	0.40
Reducing Public Choice Distortions	-0.51	-0.52
International Commitment	-0.25	-0.29
Global-Scale Funding/Participation	-0.07	0.21
Protecting International Commons	-0.30	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Poland

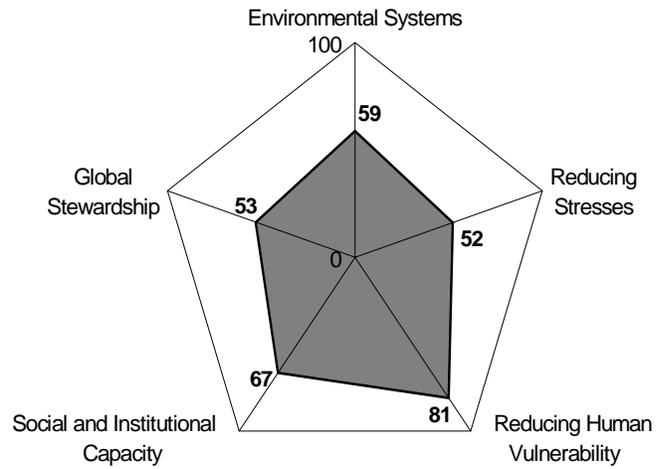
ESI:	47.6
Ranking:	58
GDP/Capita:	\$7,619
Peer group ESI:	52.2
Variable coverage:	63
Missing variables imputed:	2



■ = Indicator value
 □ = Reference (average value for peer group)

Portugal

ESI:	61.4
Ranking:	20
GDP/Capita:	\$14,701
Peer group ESI:	65.2
Variable coverage:	64
Missing variables imputed:	2

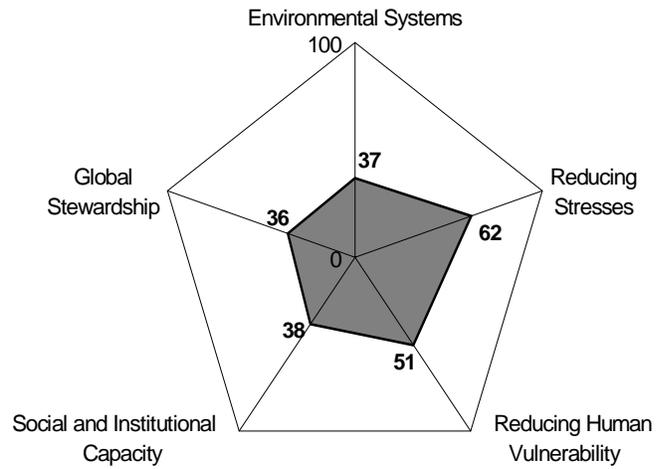


Air Quality	0.78	0.81
Water Quantity	0.06	-0.08
Water Quality	1.09	0.77
Biodiversity	-0.45	-0.04
Terrestrial Systems	-0.37	0.07
Reducing Air Pollution	-0.26	-0.81
Reducing Water Stress	-0.25	-0.46
Reducing Ecosystem Stress	0.68	-0.09
Reducing Waste & Consumption Pressures	-0.88	-1.03
Reducing Population Stress	0.99	0.77
Basic Human Sustenance	0.82	0.88
Environmental Health	0.93	0.93
Science/Technology	-0.03	1.57
Capacity for Debate	0.38	0.77
Regulation and Management	0.35	0.79
Private Sector Responsiveness	-0.18	0.54
Environmental Information	0.97	0.87
Eco-efficiency	0.56	0.36
Reducing Public Choice Distortions	0.95	1.24
International Commitment	0.44	0.89
Global-Scale Funding/Participation	0.25	0.36
Protecting International Commons	-0.48	-0.27

= Indicator value
 = Reference (average value for peer group)

Romania

ESI:	44.1
Ranking:	80
GDP/Capita:	\$5,648
Peer group ESI:	45.7
Variable coverage:	53
Missing variables imputed:	7

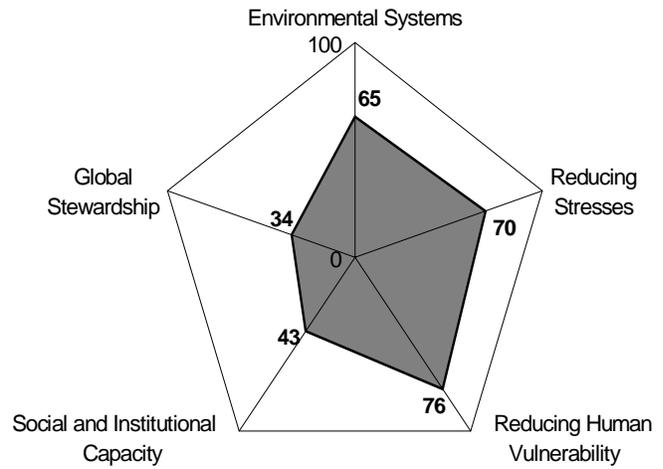


Air Quality	-0.27	0.18
Water Quantity	-0.13	0.17
Water Quality	-0.11	0.00
Biodiversity	-0.53	-0.08
Terrestrial Systems	-1.39	-0.03
Reducing Air Pollution	-0.17	0.19
Reducing Water Stress	-0.07	0.31
Reducing Ecosystem Stress	-0.08	-0.28
Reducing Waste & Consumption Pressures		0.45
Reducing Population Stress		1.03
Basic Human Sustenance	-0.48	0.01
Environmental Health		0.09
Science/Technology	-0.39	0.51
Capacity for Debate	-0.02	0.21
Regulation and Management	-0.57	0.25
Private Sector Responsiveness	-0.31	-0.29
Environmental Information	-0.47	-0.23
Eco-efficiency	-0.29	-0.30
Reducing Public Choice Distortions	-0.69	-0.15
International Commitment	-0.35	-0.52
Global-Scale Funding/Participation	-0.52	-0.43
Protecting International Commons	-0.29	-0.14
	-0.07	-0.51
	-0.11	

■ = Indicator value
 □ = Reference (average value for peer group)

Russian Federation

ESI:	56.2
Ranking:	33
GDP/Capita:	\$6,460
Peer group ESI:	52.2
Variable coverage:	60
Missing variables imputed:	4

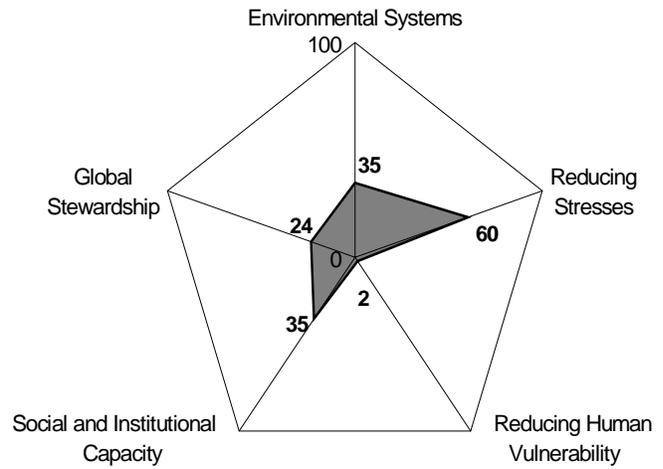


Air Quality	-0.03	0.18
Water Quantity		0.69
Water Quality		1.30
Biodiversity	-0.39	0.25
Terrestrial Systems	-0.12	0.41
Reducing Air Pollution	-0.13	0.22
Reducing Water Stress	-0.28	0.71
Reducing Ecosystem Stress	-0.06	0.46
Reducing Waste & Consumption Pressures		0.12
Reducing Population Stress	-0.10	0.13
Basic Human Sustenance		1.07
Environmental Health		0.51
Science/Technology		0.87
Capacity for Debate	-0.75	0.58
Regulation and Management	-0.39	0.54
Private Sector Responsiveness	-0.25	0.60
Environmental Information	0.00	0.91
Eco-efficiency		0.08
Reducing Public Choice Distortions	-0.73	0.03
International Commitment	-0.02	0.61
Global-Scale Funding/Participation	-0.39	0.23
Protecting International Commons	-1.19	0.13
	-0.73	
	-0.02	
	-0.02	0.08
	-0.17	
	-0.02	0.26
	-1.16	
	-0.21	

■ = Indicator value
 □ = Reference (average value for peer group)

Rwanda

ESI:	33.5
Ranking:	115
GDP/Capita:	
Peer group ESI:	39.3
Variable coverage:	41
Missing variables imputed:	16

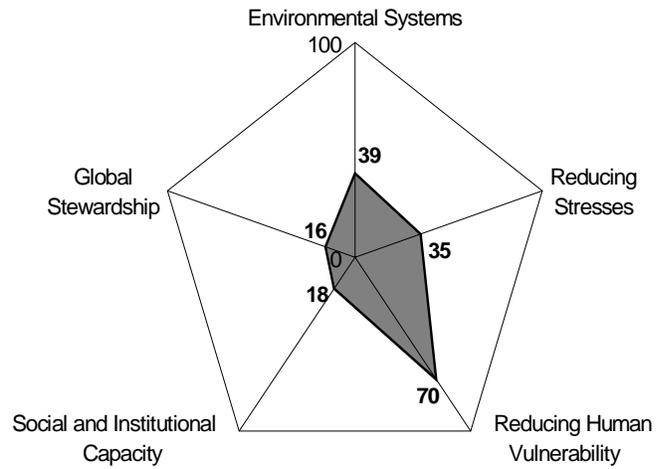


Air Quality	-0.49	-0.48
Water Quantity	-0.29	-0.02
Water Quality	-0.78	-0.55
Biodiversity	0.76	0.19
Terrestrial Systems	-1.16	0.15
Reducing Air Pollution	-0.44	0.57
Reducing Water Stress	1.05	0.57
Reducing Ecosystem Stress	0.40	0.11
Reducing Waste & Consumption Pressures	0.98	0.69
Reducing Population Stress	-0.67	
Basic Human Sustenance	-2.33	-1.38
Environmental Health	-1.65	-1.57
Science/Technology	-0.74	-0.90
Capacity for Debate	-1.00	-0.56
Regulation and Management	0.10	-0.26
Private Sector Responsiveness	-0.43	-0.45
Environmental Information	-0.90	-0.62
Eco-efficiency	0.67	0.42
Reducing Public Choice Distortions	-0.32	-0.37
International Commitment	-1.57	-0.41
Global-Scale Funding/Participation	-1.17	-0.49
Protecting International Commons	0.57	0.62

= Indicator value
 = Reference (average value for peer group)

Saudi Arabia

ESI:	29.8
Ranking:	121
GDP/Capita:	\$10,158
Peer group ESI:	52.2
Variable coverage:	42
Missing variables imputed:	16

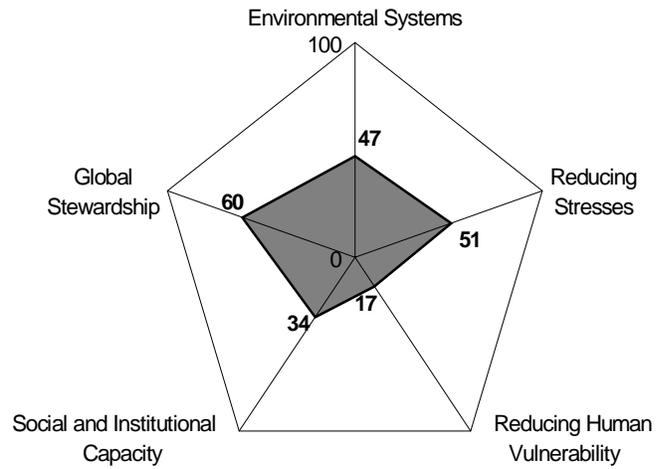


Air Quality	-0.20	0.18
Water Quantity	-1.23	0.04
Water Quality	-0.18	0.25
Biodiversity	-0.54	-0.12
Terrestrial Systems	-0.13	0.77
Reducing Air Pollution	-0.28	0.32
Reducing Water Stress	-0.51	-0.06
Reducing Ecosystem Stress	-0.16	0.12
Reducing Waste & Consumption Pressures	-0.12	-0.10
Reducing Population Stress	-1.77	0.51
Basic Human Sustenance	0.78	0.58
Environmental Health	0.29	0.60
Science/Technology	-0.32	0.08
Capacity for Debate	-1.34	0.03
Regulation and Management	-0.73	-0.25
Private Sector Responsiveness	-0.43	0.00
Environmental Information	-0.98	0.13
Eco-efficiency	-1.48	-0.39
Reducing Public Choice Distortions	-1.10	-0.02
International Commitment	-0.81	-0.02
Global-Scale Funding/Participation	-1.17	0.26
Protecting International Commons	-1.03	-0.21

■ = Indicator value
 □ = Reference (average value for peer group)

Senegal

ESI:	42.5
Ranking:	87
GDP/Capita:	\$1,307
Peer group ESI:	39.3
Variable coverage:	48
Missing variables imputed:	10

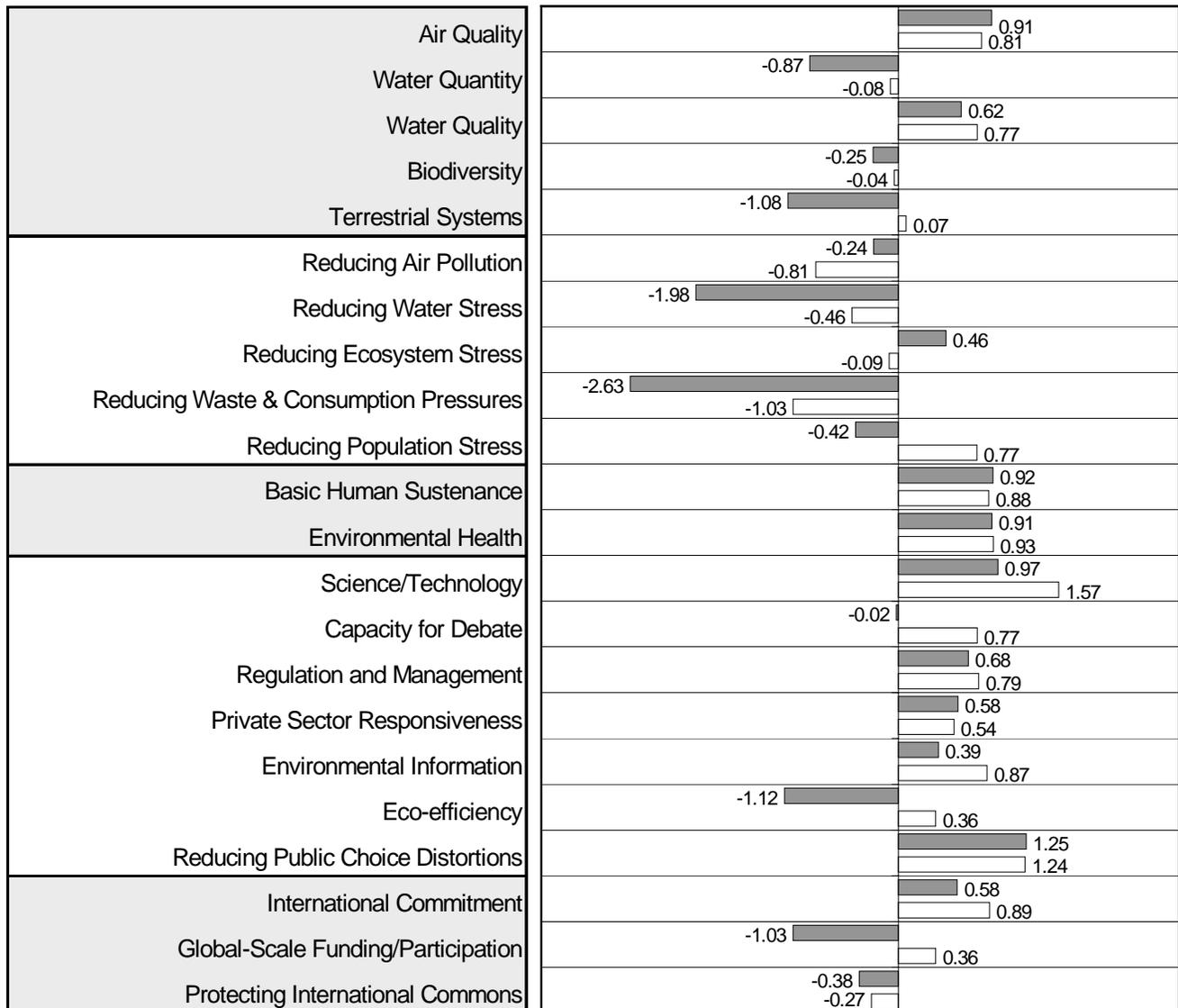
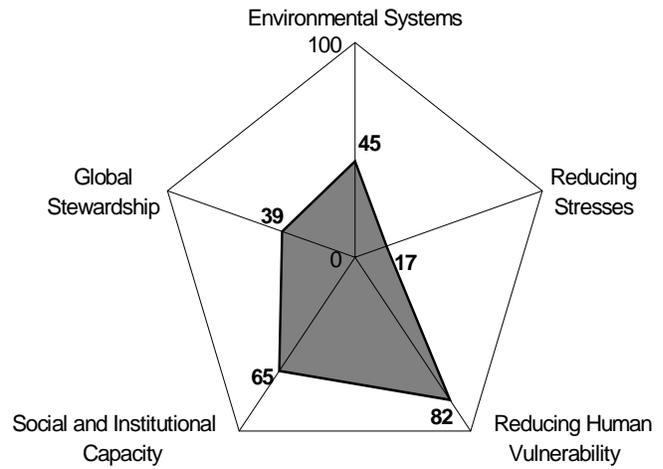


Air Quality	-0.56	-0.48
Water Quantity	-0.17	-0.02
Water Quality	-0.42	-0.55
Biodiversity		0.61
Terrestrial Systems		0.19
		0.18
		0.15
Reducing Air Pollution		0.59
		0.57
Reducing Water Stress		0.74
		0.57
Reducing Ecosystem Stress		0.21
		0.11
Reducing Waste & Consumption Pressures		0.15
		0.69
Reducing Population Stress	-1.51	-1.33
Basic Human Sustenance		-0.62
Environmental Health	-1.38	-1.30
	-1.57	
Science/Technology	-0.77	-0.90
Capacity for Debate	-0.28	-0.56
Regulation and Management	-0.12	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-0.46	-0.62
Eco-efficiency	-0.81	0.42
Reducing Public Choice Distortions		0.11
	-0.37	
International Commitment		0.53
Global-Scale Funding/Participation	-0.41	-0.12
Protecting International Commons	-0.49	0.35
		0.62

= Indicator value
 = Reference (average value for peer group)

Singapore

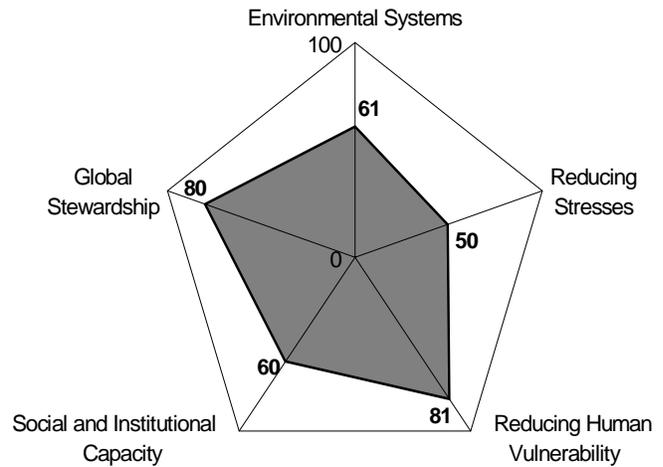
ESI:	46.8
Ranking:	65
GDP/Capita:	\$24,210
Peer group ESI:	65.2
Variable coverage:	53
Missing variables imputed:	11



= Indicator value
 = Reference (average value for peer group)

Slovak Republic

ESI:	63.2
Ranking:	18
GDP/Capita:	\$9,699
Peer group ESI:	52.2
Variable coverage:	58
Missing variables imputed:	7

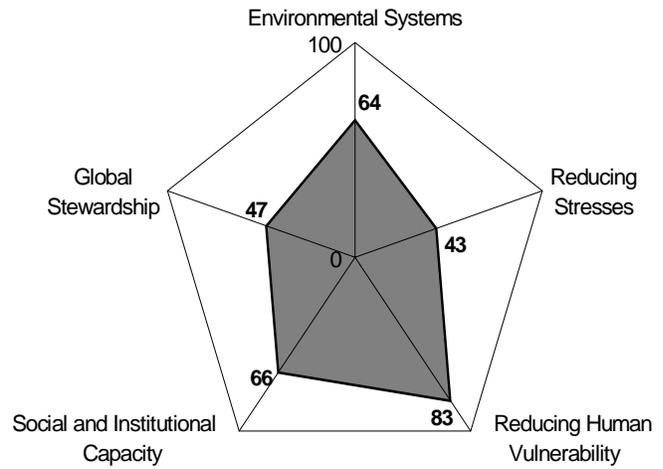


Air Quality	Indicator value: 1.00 Reference: 0.18
Water Quantity	Indicator value: 0.33 Reference: 0.04
Water Quality	Indicator value: 0.10 Reference: 0.25
Biodiversity	Indicator value: 0.32 Reference: 0.32
Terrestrial Systems	Indicator value: -0.12 Reference: -0.37
Reducing Air Pollution	Indicator value: -0.13 Reference: -1.19
Reducing Water Stress	Indicator value: -0.28 Reference: -0.06
Reducing Ecosystem Stress	Indicator value: 0.03 Reference: -0.25
Reducing Waste & Consumption Pressures	Indicator value: 0.12 Reference: 0.34
Reducing Population Stress	Indicator value: -0.10 Reference: 1.02
Basic Human Sustenance	Indicator value: 0.51 Reference: 0.92
Environmental Health	Indicator value: 0.58 Reference: 0.87
Science/Technology	Indicator value: 0.60 Reference: 0.56
Capacity for Debate	Indicator value: 0.08 Reference: 0.42
Regulation and Management	Indicator value: 0.03 Reference: 0.89
Private Sector Responsiveness	Indicator value: -0.25 Reference: 0.25
Environmental Information	Indicator value: 0.00 Reference: 1.04
Eco-efficiency	Indicator value: 0.13 Reference: -0.97
Reducing Public Choice Distortions	Indicator value: -0.39 Reference: -0.40
International Commitment	Indicator value: -0.02 Reference: -0.02
Global-Scale Funding/Participation	Indicator value: 0.30 Reference: 1.97
Protecting International Commons	Indicator value: 0.26 Reference: 0.26

■ = Indicator value
□ = Reference (average value for peer group)

Slovenia

ESI:	59.9
Ranking:	24
GDP/Capita:	\$14,293
Peer group ESI:	52.2
Variable coverage:	51
Missing variables imputed:	9

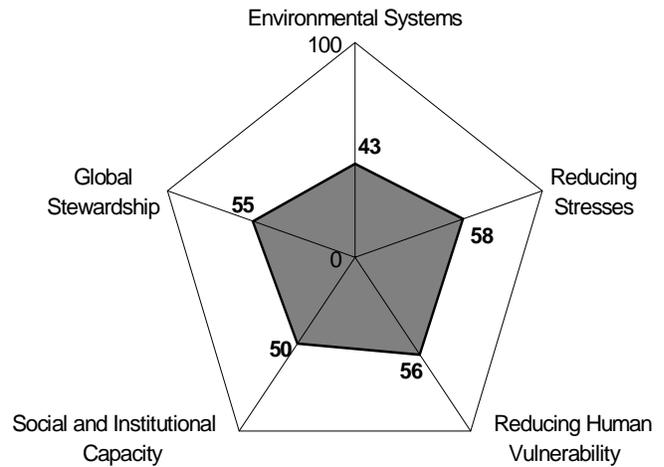


Air Quality	0.52	0.18
Water Quantity	0.52	0.04
Water Quality	0.63	0.25
Biodiversity	0.13	-0.12
Terrestrial Systems	-0.04	-0.13
Reducing Air Pollution	-0.99	-0.28
Reducing Water Stress	-0.15	-0.06
Reducing Ecosystem Stress	-0.66	0.12
Reducing Waste & Consumption Pressures	-0.08	-0.10
Reducing Population Stress	1.06	0.51
Basic Human Sustenance	0.92	0.58
Environmental Health	0.95	0.60
Science/Technology	0.90	0.08
Capacity for Debate	0.39	0.03
Regulation and Management	-0.50	-0.25
Private Sector Responsiveness	0.68	0.00
Environmental Information	0.26	0.13
Eco-efficiency	0.51	-0.39
Reducing Public Choice Distortions	0.70	-0.02
International Commitment	-0.40	-0.02
Global-Scale Funding/Participation	0.12	0.26
Protecting International Commons	0.08	-0.21

= Indicator value
 = Reference (average value for peer group)

South Africa

ESI:	51.3
Ranking:	45
GDP/Capita:	\$8,488
Peer group ESI:	52.2
Variable coverage:	60
Missing variables imputed:	5

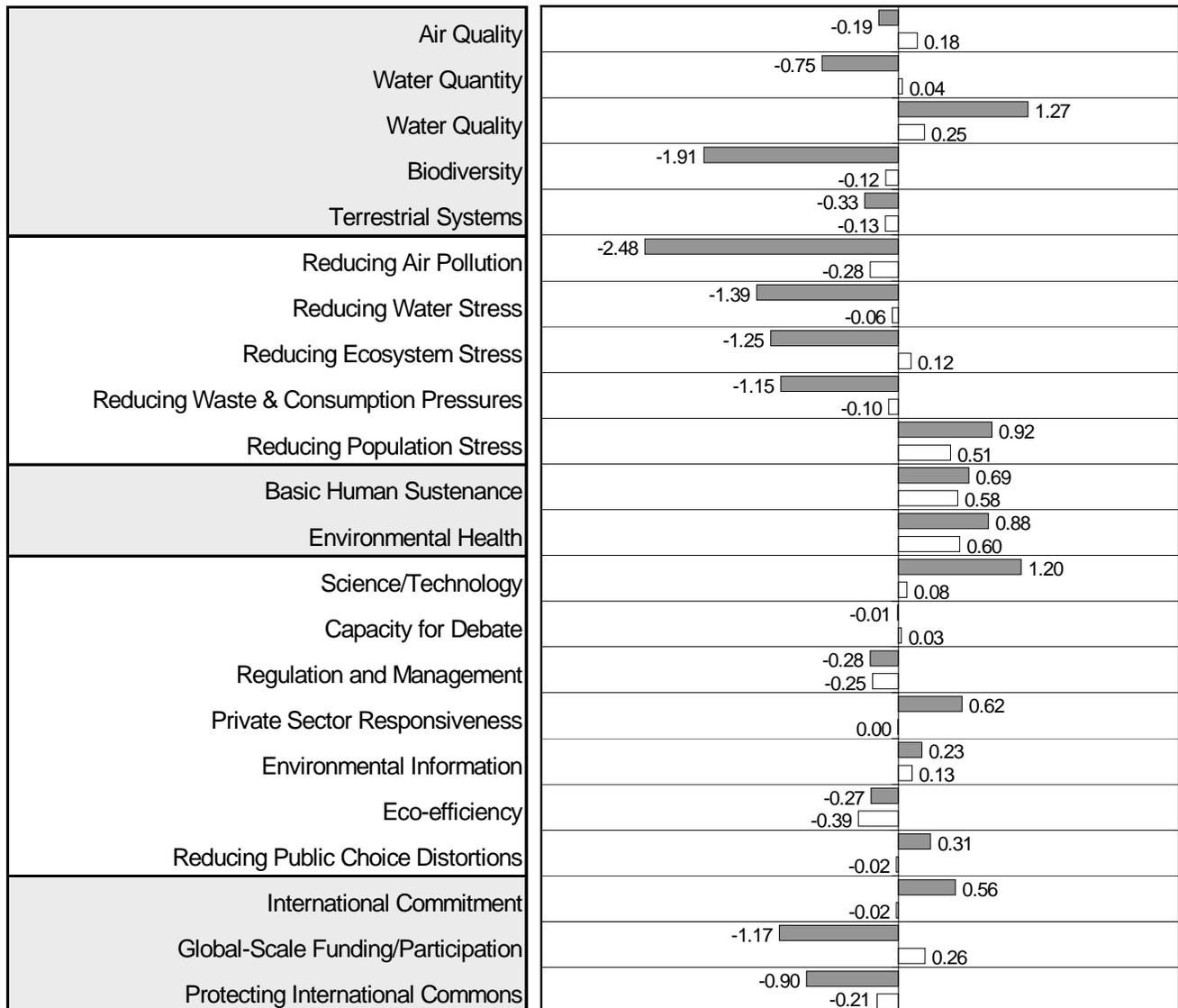
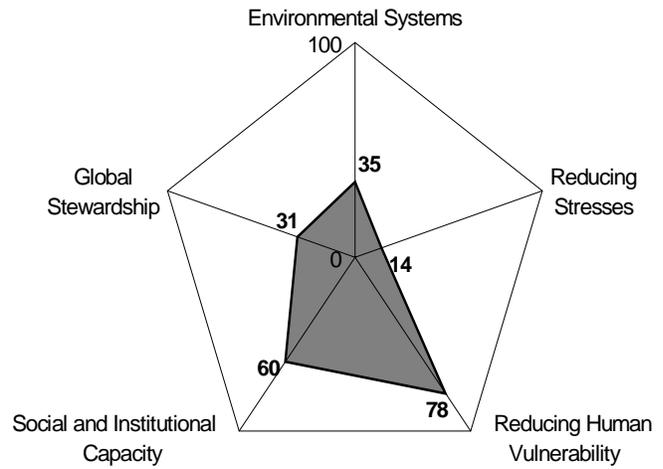


Air Quality	0.29	0.18
Water Quantity	-0.70	0.04
Water Quality	0.09	0.25
Biodiversity	-0.01	-0.12
Terrestrial Systems	-0.50	-0.13
Reducing Air Pollution	-0.13	-0.28
Reducing Water Stress	-0.17	-0.06
Reducing Ecosystem Stress	0.40	0.12
Reducing Waste & Consumption Pressures	0.30	-0.10
Reducing Population Stress	0.58	0.51
Basic Human Sustenance	0.51	0.58
Environmental Health	-0.20	0.60
Science/Technology	-0.12	0.08
Capacity for Debate	0.47	0.03
Regulation and Management	0.36	-0.25
Private Sector Responsiveness	-0.07	0.00
Environmental Information	0.20	0.13
Eco-efficiency	-0.88	-0.39
Reducing Public Choice Distortions	-0.02	-0.02
International Commitment	-0.02	-0.02
Global-Scale Funding/Participation	0.34	0.26
Protecting International Commons	0.03	-0.21

= Indicator value
 = Reference (average value for peer group)

South Korea

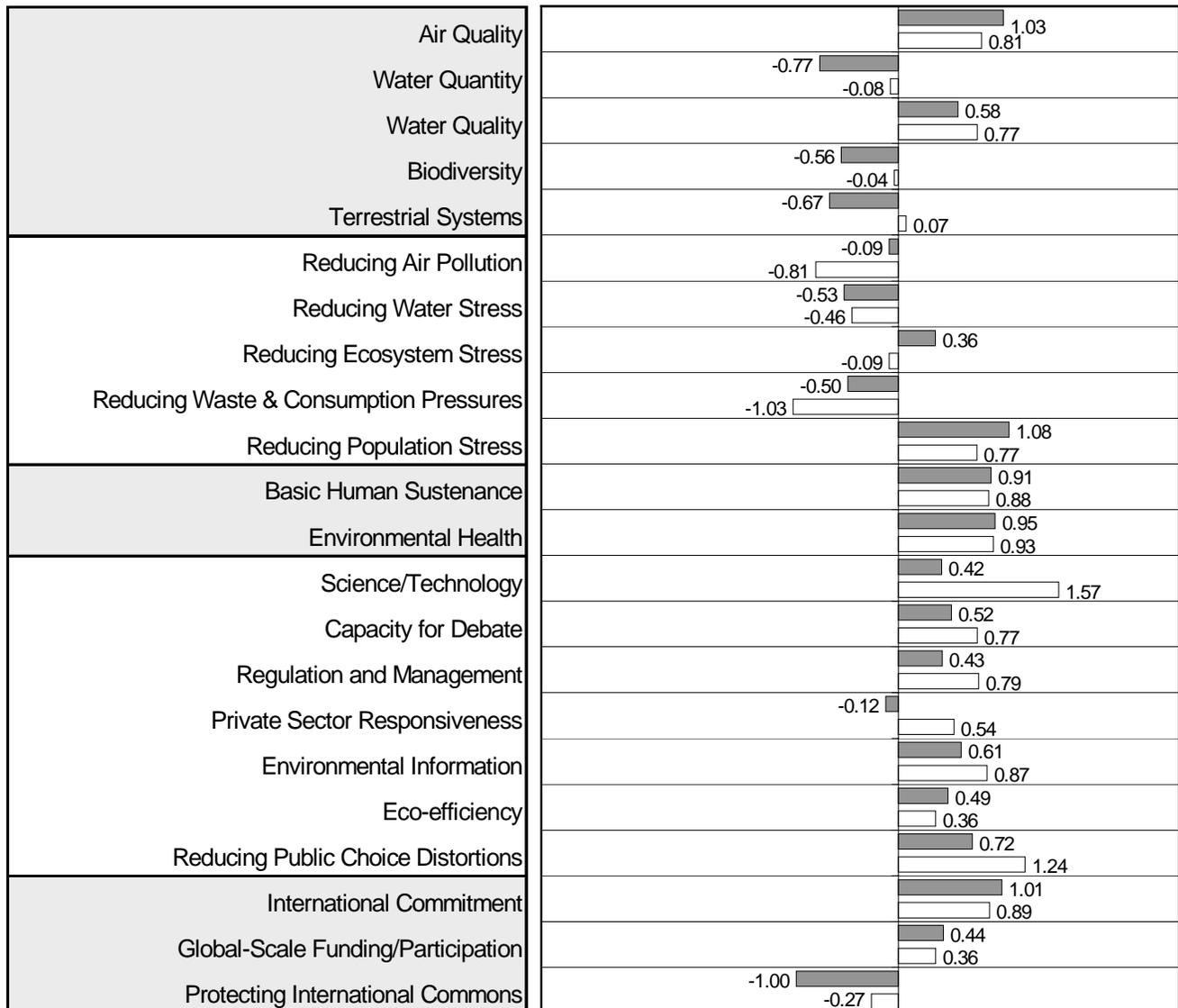
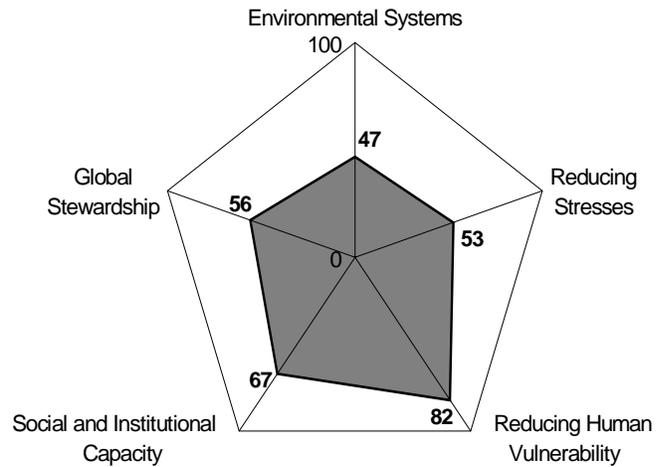
ESI:	40.3
Ranking:	95
GDP/Capita:	\$13,478
Peer group ESI:	52.2
Variable coverage:	64
Missing variables imputed:	2



■ = Indicator value
 □ = Reference (average value for peer group)

Spain

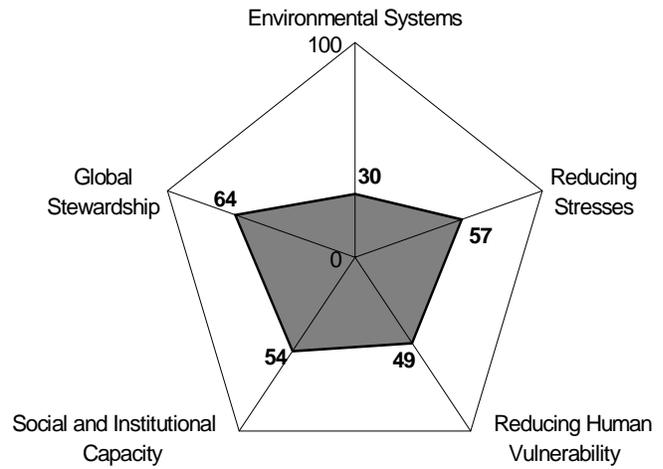
ESI:	59.5
Ranking:	25
GDP/Capita:	\$16,212
Peer group ESI:	65.2
Variable coverage:	60
Missing variables imputed:	7



■ = Indicator value
 □ = Reference (average value for peer group)

Sri Lanka

ESI:	49.8
Ranking:	51
GDP/Capita:	\$2,979
Peer group ESI:	45.2
Variable coverage:	47
Missing variables imputed:	12

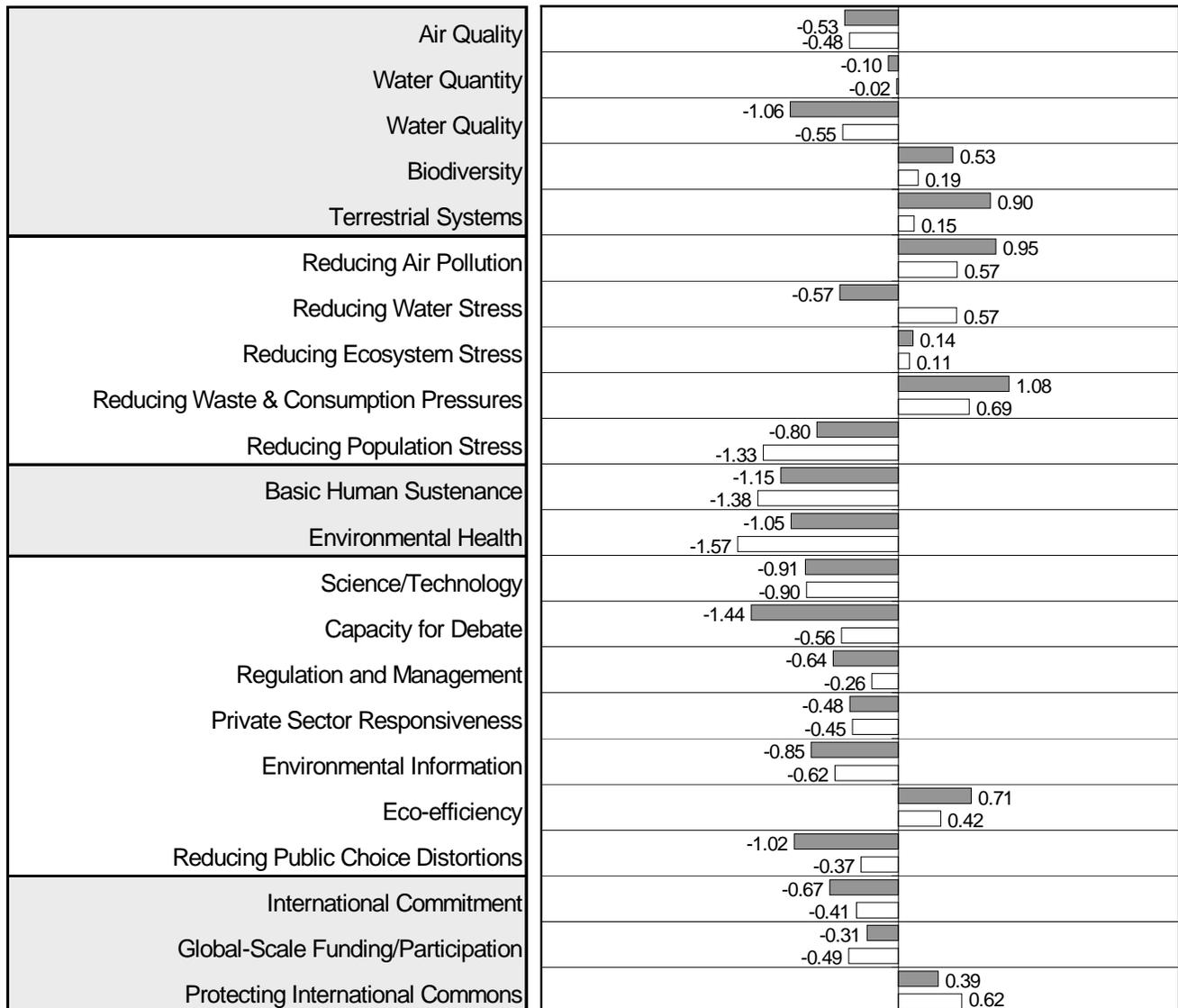
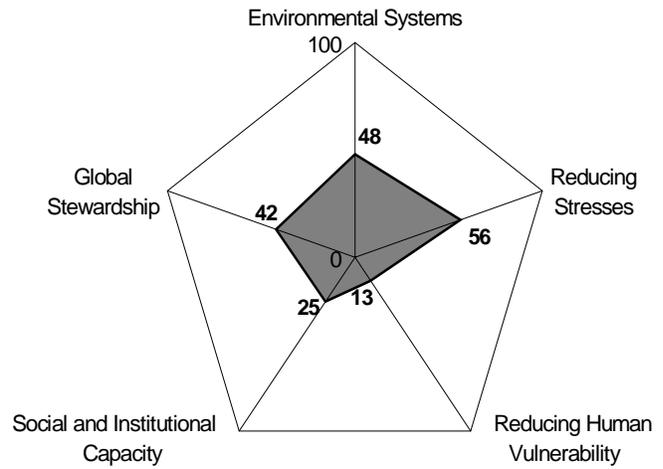


Air Quality	0.21	-0.22
Water Quantity	0.03	-1.12
Water Quality	0.06	-0.16
Biodiversity	0.06	-0.35
Terrestrial Systems	0.06	-0.40
Reducing Air Pollution	0.23	-1.23
Reducing Water Stress	0.30	-0.05
Reducing Ecosystem Stress	0.03	-0.54
Reducing Waste & Consumption Pressures	0.64	-0.02
Reducing Population Stress	0.59	0.03
Basic Human Sustenance	0.51	-0.35
Environmental Health	0.03	-0.20
Science/Technology	0.32	-0.18
Capacity for Debate	0.35	-0.60
Regulation and Management	0.38	-0.29
Private Sector Responsiveness	0.60	-0.03
Environmental Information	0.41	-0.42
Eco-efficiency	0.42	-0.36
Reducing Public Choice Distortions	0.41	-0.42
International Commitment	0.42	-0.44
Global-Scale Funding/Participation	0.12	-0.04
Protecting International Commons	0.53	-0.18
	0.06	-0.64

■ = Indicator value
 □ = Reference (average value for peer group)

Sudan

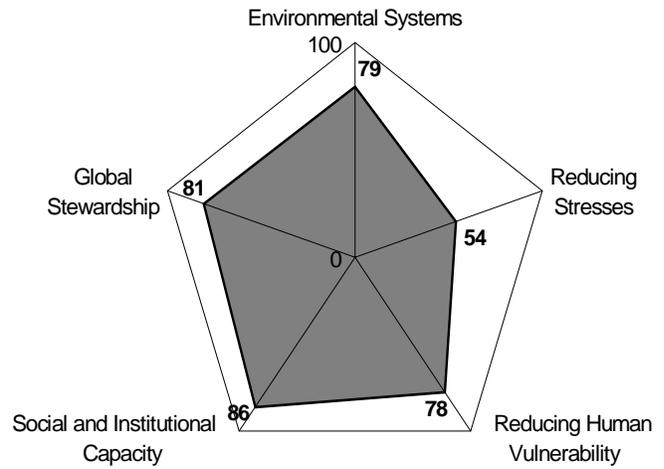
ESI:	37.7
Ranking:	107
GDP/Capita:	\$1,394
Peer group ESI:	39.3
Variable coverage:	47
Missing variables imputed:	11



■ = Indicator value
 □ = Reference (average value for peer group)

Sweden

ESI:	77.1
Ranking:	4
GDP/Capita:	\$20,659
Peer group ESI:	65.2
Variable coverage:	62
Missing variables imputed:	5

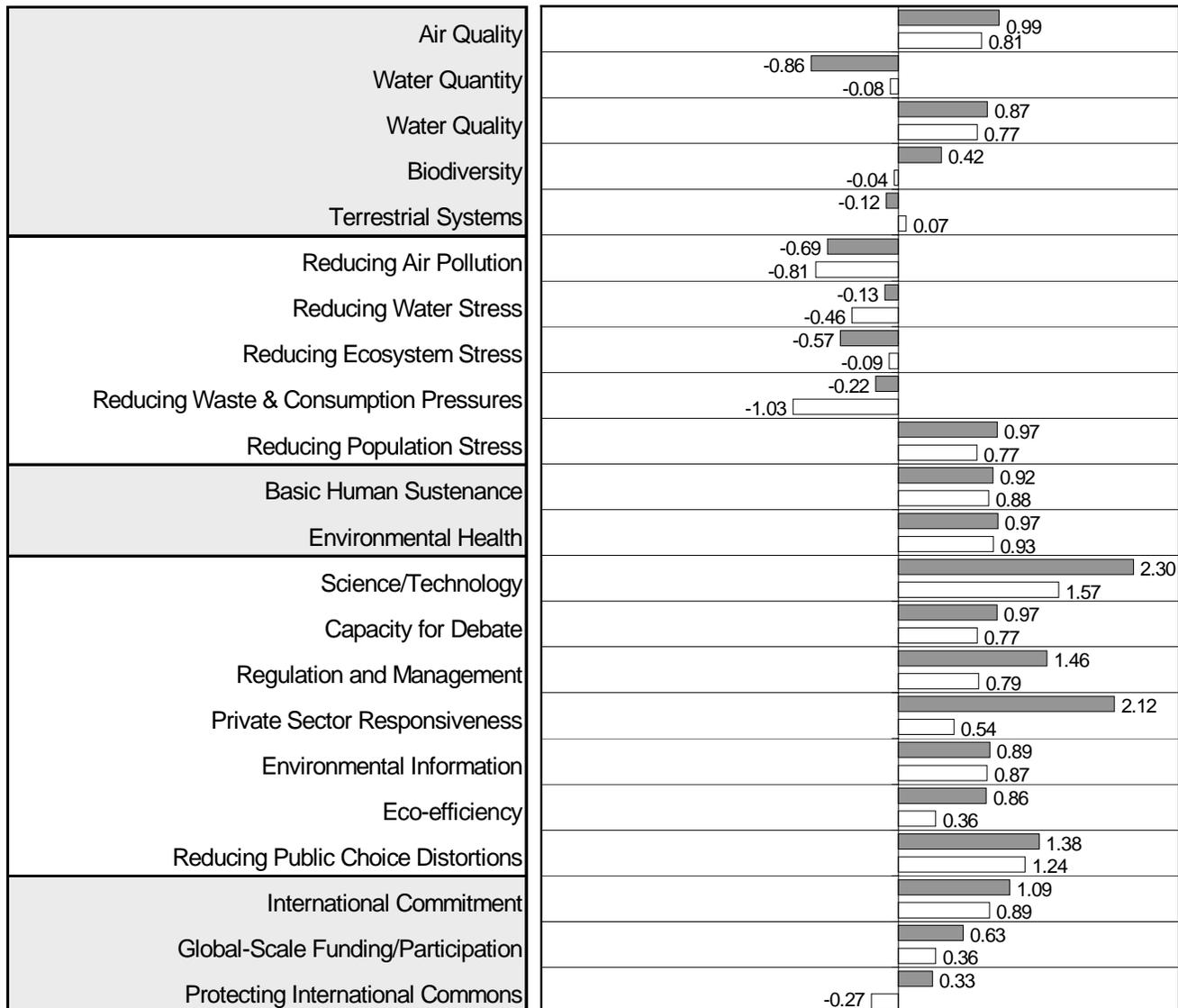
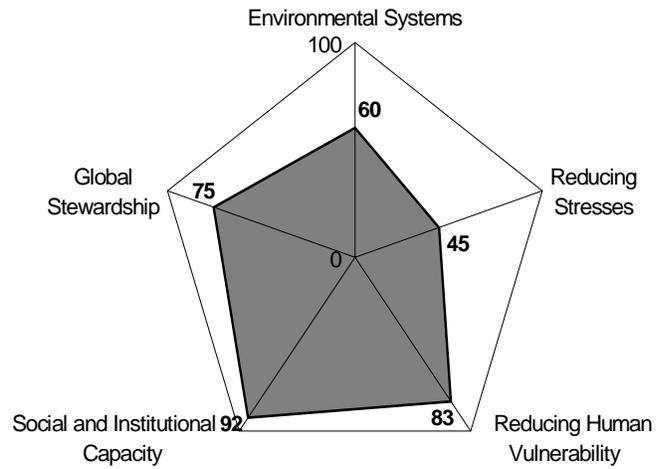


Air Quality	1.45	0.81
Water Quantity	0.41	-0.08
Water Quality	1.19	0.77
Biodiversity	0.45	-0.04
Terrestrial Systems	0.59	0.07
Reducing Air Pollution	0.18	-0.81
Reducing Water Stress	0.41	-0.46
Reducing Ecosystem Stress	-0.09	-0.50
Reducing Waste & Consumption Pressures	-0.54	-1.03
Reducing Population Stress	0.95	0.77
Basic Human Sustenance	0.56	0.88
Environmental Health	0.96	0.93
Science/Technology	2.61	1.57
Capacity for Debate	0.73	0.77
Regulation and Management	0.84	0.79
Private Sector Responsiveness	0.67	0.54
Environmental Information	0.51	0.87
Eco-efficiency	0.80	0.36
Reducing Public Choice Distortions	1.48	1.24
International Commitment	1.50	0.89
Global-Scale Funding/Participation	0.75	0.36
Protecting International Commons	0.34	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Switzerland

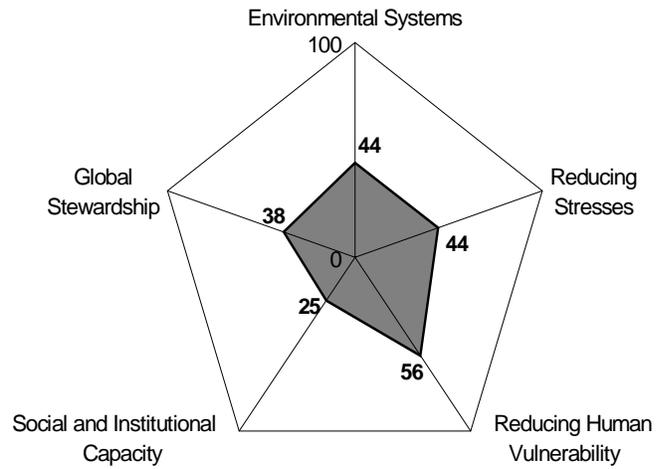
ESI:	74.6
Ranking:	5
GDP/Capita:	\$25,512
Peer group ESI:	65.2
Variable coverage:	64
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= Indicator value
 = Reference (average value for peer group)

Syria

ESI:	37.9
Ranking:	106
GDP/Capita:	\$2,892
Peer group ESI:	45.2
Variable coverage:	46
Missing variables imputed:	12

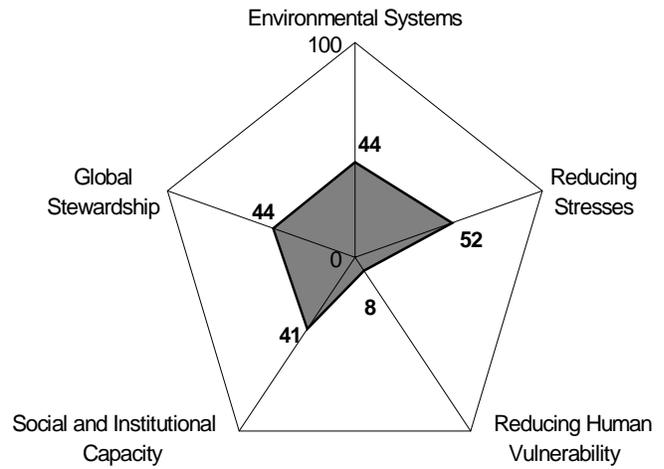


Air Quality	-0.30	0.03
Water Quantity	-0.22	0.03
Water Quality	-0.21	0.03
Biodiversity	-0.29	0.40
Terrestrial Systems	-0.35	0.06
Reducing Air Pollution	-0.37	0.36
Reducing Water Stress	-0.54	0.30
Reducing Ecosystem Stress	-0.49	0.02
Reducing Waste & Consumption Pressures	-0.49	0.14
Reducing Population Stress	-0.95	0.91
Basic Human Sustenance	-0.20	0.59
Environmental Health	-0.01	0.03
Science/Technology	-0.18	0.33
Capacity for Debate	-0.68	0.03
Regulation and Management	-1.42	0.36
Private Sector Responsiveness	-0.88	0.30
Environmental Information	-0.42	0.14
Eco-efficiency	-0.36	0.91
Reducing Public Choice Distortions	-0.40	0.59
International Commitment	-0.44	0.03
Global-Scale Funding/Participation	-0.95	0.33
Protecting International Commons	-0.04	0.25
	-0.18	0.06
	-0.67	0.06
	-0.64	0.06
	-0.20	0.06
	-0.41	0.06
	-0.17	0.06
	-0.07	0.06
	-0.55	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Tanzania

ESI:	40.3
Ranking:	94
GDP/Capita:	\$480
Peer group ESI:	39.3
Variable coverage:	45
Missing variables imputed:	13

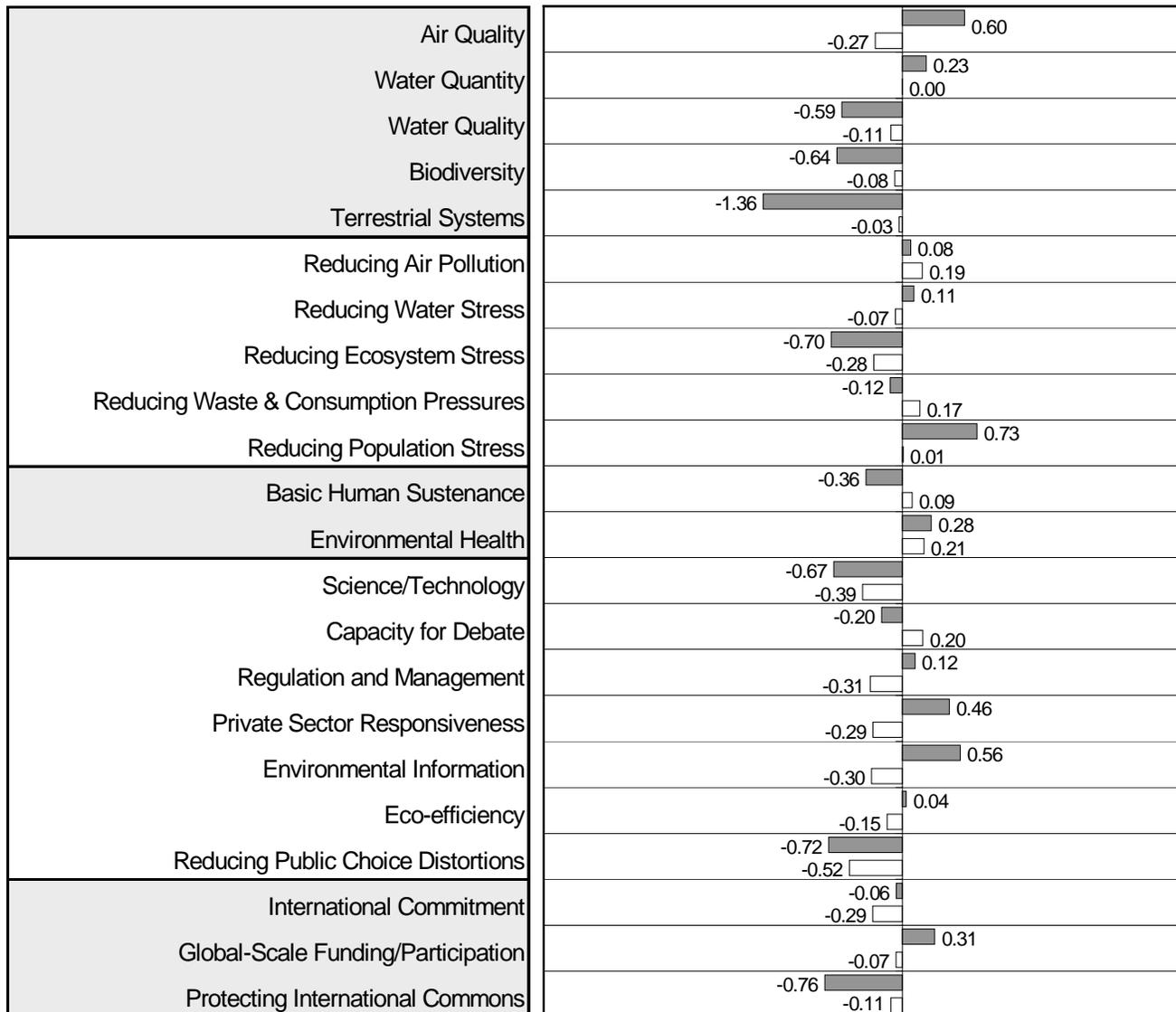
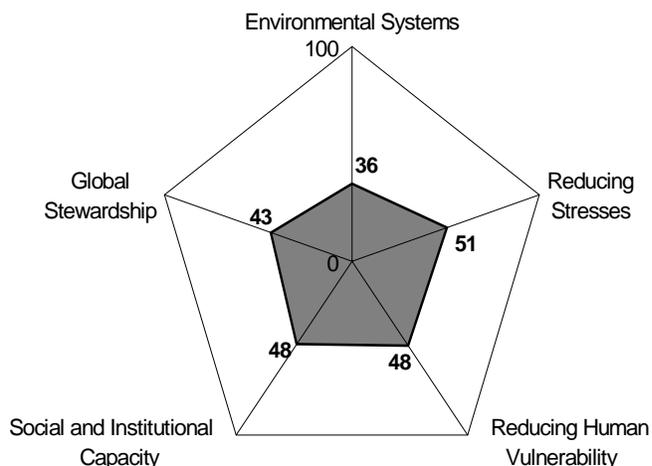


Air Quality	-0.63	-0.48
Water Quantity	-0.05	-0.02
Water Quality	-0.22	-0.55
Biodiversity	0.01	0.19
Terrestrial Systems	0.16	0.15
Reducing Air Pollution	0.86	0.57
Reducing Water Stress	0.47	0.57
Reducing Ecosystem Stress	0.09	0.11
Reducing Waste & Consumption Pressures	0.37	0.69
Reducing Population Stress	-1.54	-1.33
Basic Human Sustenance	-1.45	-1.38
Environmental Health	-1.40	-1.57
Science/Technology	-1.17	-0.90
Capacity for Debate	-0.57	-0.56
Regulation and Management	0.34	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-0.04	-0.62
Eco-efficiency	0.77	0.42
Reducing Public Choice Distortions	-0.41	-0.37
International Commitment	0.15	-0.41
Global-Scale Funding/Participation	-1.15	-0.49
Protecting International Commons	0.52	0.62

■ = Indicator value
 □ = Reference (average value for peer group)

Thailand

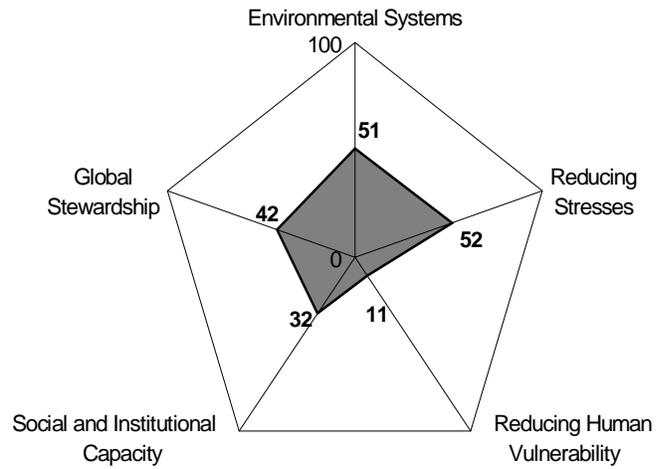
ESI:	45.2
Ranking:	74
GDP/Capita:	\$5,456
Peer group ESI:	45.7
Variable coverage:	61
Missing variables imputed:	4



■ = Indicator value
 □ = Reference (average value for peer group)

Togo

ESI:	39.1
Ranking:	101
GDP/Capita:	\$1,372
Peer group ESI:	39.3
Variable coverage:	44
Missing variables imputed:	14

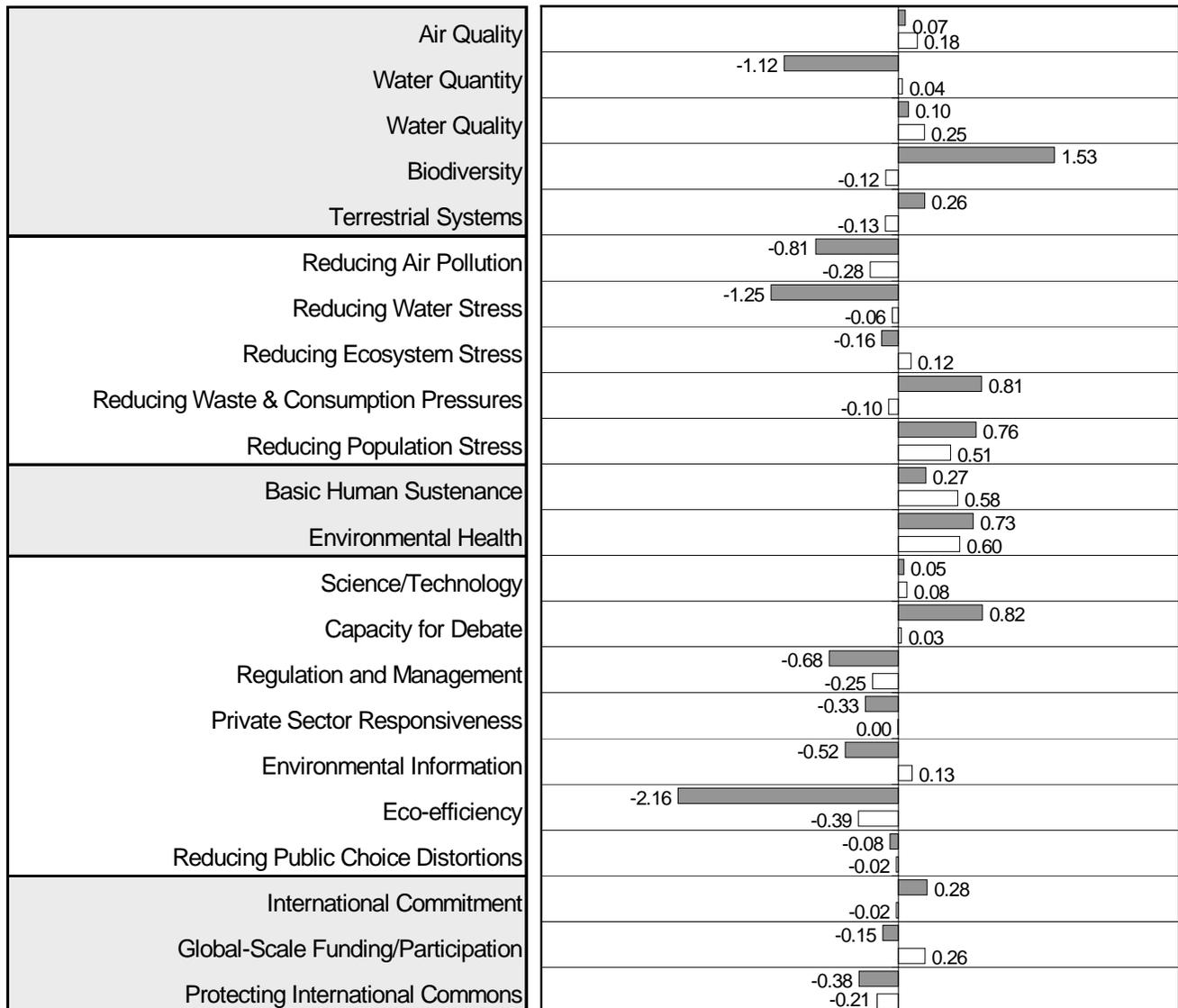
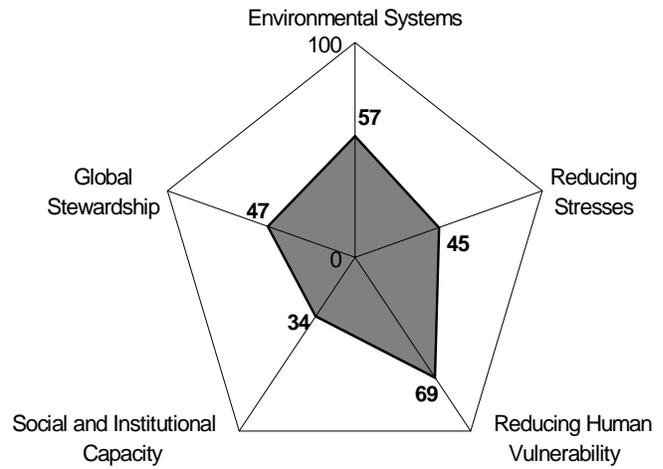


Air Quality	-0.45	-0.48
Water Quantity	-0.15	-0.02
Water Quality	-0.53	-0.55
Biodiversity	1.16	0.19
Terrestrial Systems	0.04	0.15
Reducing Air Pollution	0.22	0.57
Reducing Water Stress	0.66	0.57
Reducing Ecosystem Stress	-0.12	0.11
Reducing Waste & Consumption Pressures	0.66	0.69
Reducing Population Stress	-1.19	-1.33
Basic Human Sustenance	-1.29	-1.38
Environmental Health	-1.21	-1.57
Science/Technology	-0.52	-0.90
Capacity for Debate	-0.73	-0.56
Regulation and Management	-0.35	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	-0.65	-0.62
Eco-efficiency	-0.09	0.42
Reducing Public Choice Distortions	-0.43	-0.37
International Commitment	0.16	-0.41
Global-Scale Funding/Participation	-1.17	-0.49
Protecting International Commons	0.37	0.62

 = Indicator value
 = Reference (average value for peer group)

Trinidad and Tobago

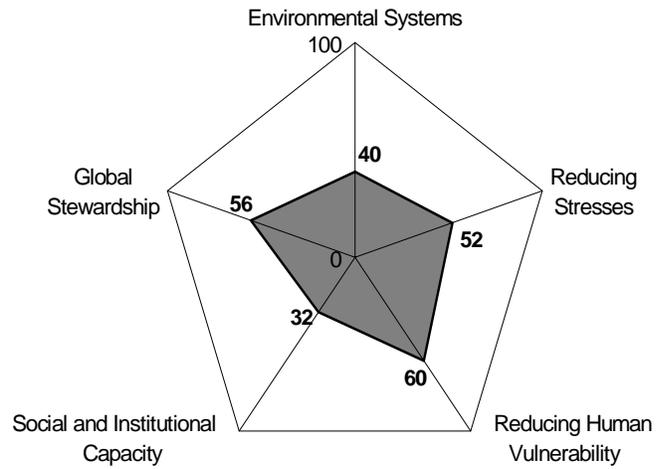
ESI:	46.4
Ranking:	68
GDP/Capita:	\$7,485
Peer group ESI:	52.2
Variable coverage:	44
Missing variables imputed:	14



■ = Indicator value
 □ = Reference (average value for peer group)

Tunisia

ESI:	43.7
Ranking:	83
GDP/Capita:	\$5,404
Peer group ESI:	45.7
Variable coverage:	48
Missing variables imputed:	11

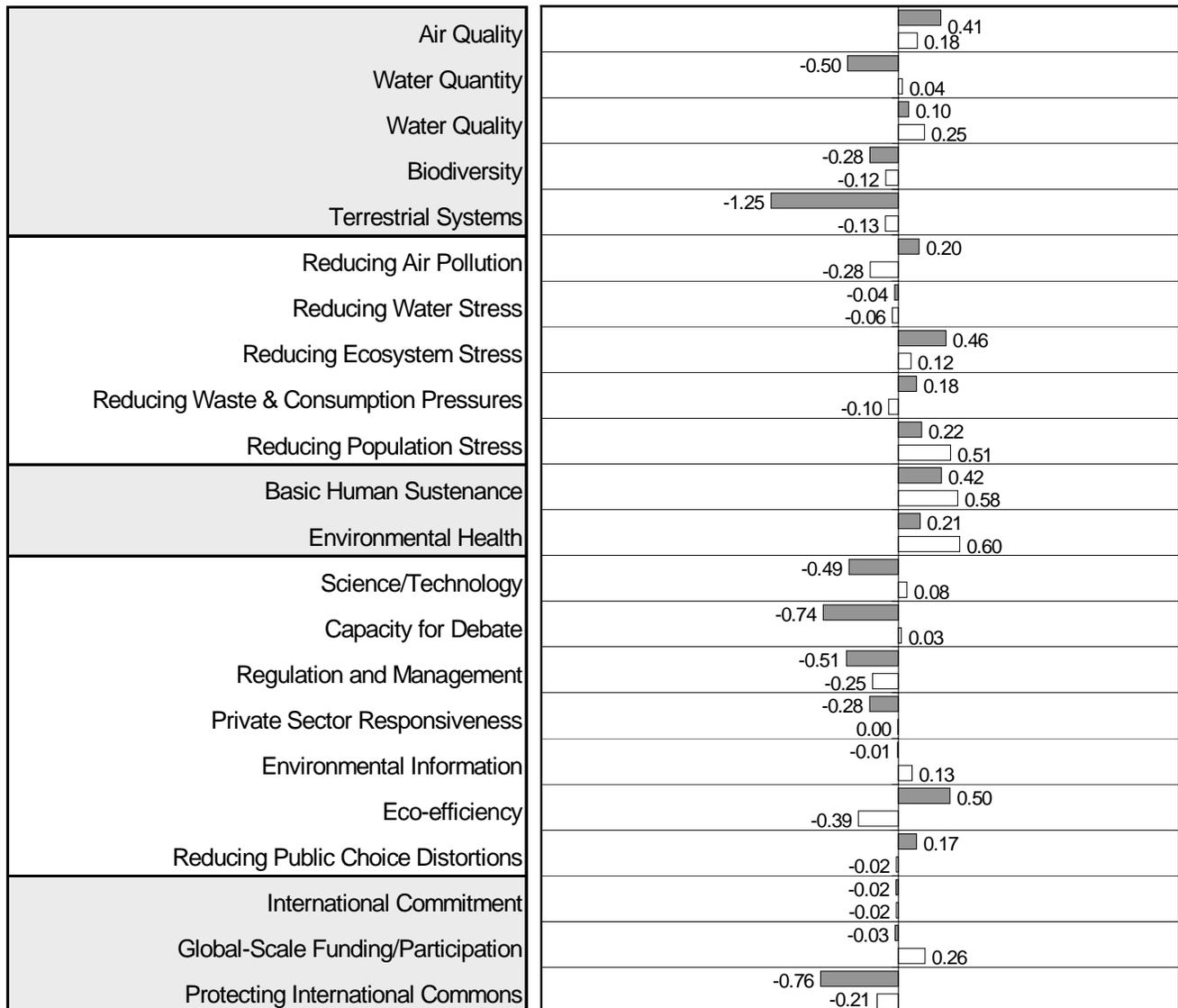
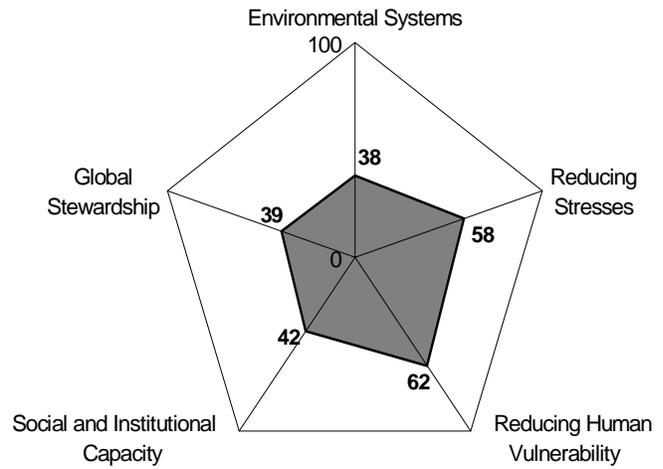


Air Quality	-0.03	0.00
Water Quantity	-0.27	0.00
Water Quality	-0.64	0.00
Biodiversity	-0.54	-0.11
Terrestrial Systems	-0.18	-0.08
Reducing Air Pollution	-0.03	0.12
Reducing Water Stress	-0.87	0.48
Reducing Ecosystem Stress	-0.07	0.19
Reducing Waste & Consumption Pressures	-0.28	0.26
Reducing Population Stress	0.29	0.17
Basic Human Sustenance	0.10	0.01
Environmental Health	0.33	0.09
Science/Technology	-0.59	0.15
Capacity for Debate	-0.39	0.21
Regulation and Management	-0.64	0.20
Private Sector Responsiveness	-0.86	-0.31
Environmental Information	-0.45	-0.29
Eco-efficiency	-0.30	-0.30
Reducing Public Choice Distortions	-0.56	-0.15
International Commitment	-0.52	0.04
Global-Scale Funding/Participation	-0.29	0.80
Protecting International Commons	-0.13	-0.07
	-0.26	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Turkey

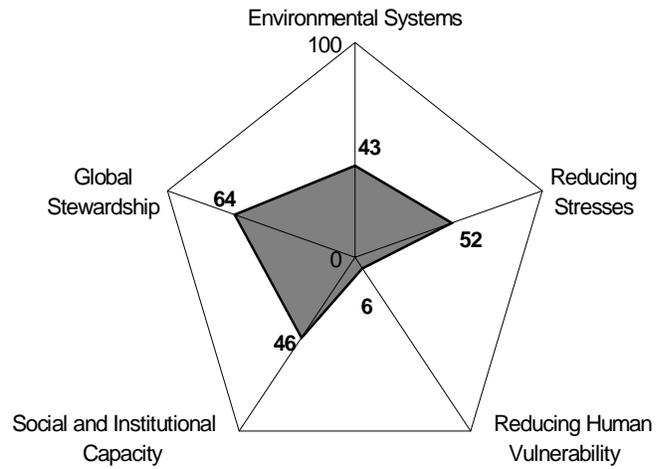
ESI:	46.3
Ranking:	70
GDP/Capita:	\$6,422
Peer group ESI:	52.2
Variable coverage:	59
Missing variables imputed:	6



= Indicator value
 = Reference (average value for peer group)

Uganda

ESI:	44.0
Ranking:	81
GDP/Capita:	\$1,074
Peer group ESI:	39.3
Variable coverage:	46
Missing variables imputed:	12

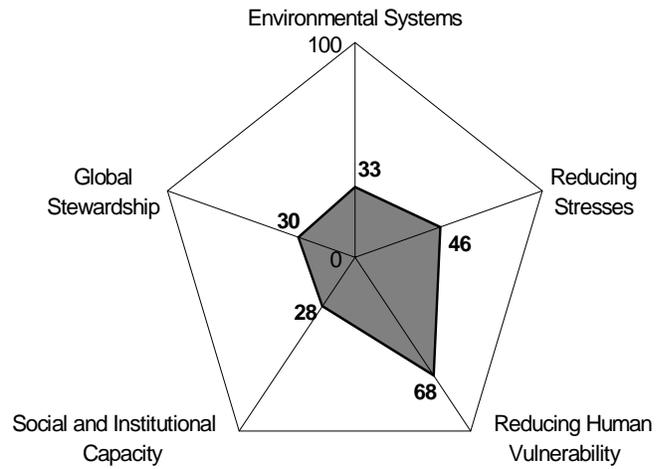


Air Quality	-0.59	-0.48
Water Quantity	-0.24	-0.02
Water Quality	-0.70	-0.55
Biodiversity	0.83	0.19
Terrestrial Systems	-0.22	0.15
Reducing Air Pollution	0.52	0.57
Reducing Water Stress	1.05	0.57
Reducing Ecosystem Stress	0.09	0.11
Reducing Waste & Consumption Pressures	0.82	0.69
Reducing Population Stress	-2.26	-1.33
Basic Human Sustenance	-1.65	-1.38
Environmental Health	-1.39	-1.57
Science/Technology	-0.52	-0.90
Capacity for Debate	-0.72	-0.56
Regulation and Management	-0.24	-0.26
Private Sector Responsiveness	-0.48	-0.45
Environmental Information	0.08	-0.62
Eco-efficiency	0.95	0.42
Reducing Public Choice Distortions	0.26	-0.37
International Commitment	0.17	-0.41
Global-Scale Funding/Participation	-0.07	-0.49
Protecting International Commons	0.99	0.62

= Indicator value
 = Reference (average value for peer group)

Ukraine

ESI:	36.8
Ranking:	110
GDP/Capita:	\$3,194
Peer group ESI:	45.2
Variable coverage:	53
Missing variables imputed:	12

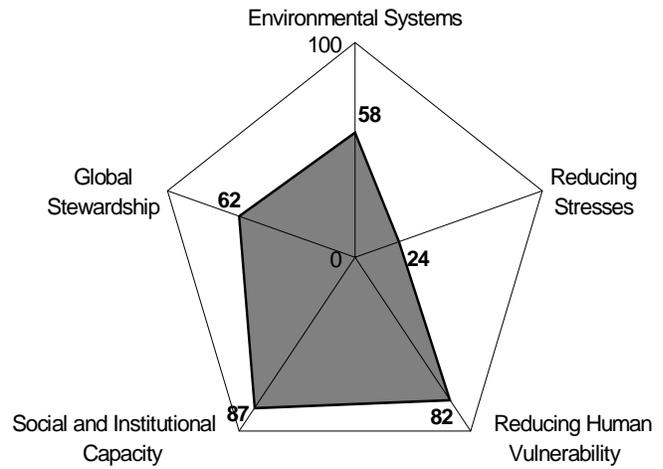


Air Quality	-0.27	-0.22
Water Quantity	-0.37	0.03
Water Quality	-0.47	-0.35
Biodiversity	-0.22	0.06
Terrestrial Systems	-0.90	-0.05
Reducing Air Pollution	-0.28	0.30
Reducing Water Stress	-0.02	0.03
Reducing Ecosystem Stress	0.37	0.14
Reducing Waste & Consumption Pressures	-1.70	0.59
Reducing Population Stress	1.05	0.03
Basic Human Sustenance	0.41	-0.20
Environmental Health	0.52	-0.18
Science/Technology	0.55	-0.29
Capacity for Debate	-0.47	-0.42
Regulation and Management	-0.93	-0.36
Private Sector Responsiveness	-0.89	-0.44
Environmental Information	0.36	-0.04
Eco-efficiency	-1.77	-0.18
Reducing Public Choice Distortions	-0.89	-0.64
International Commitment	-1.03	-0.41
Global-Scale Funding/Participation	-0.04	-0.07
Protecting International Commons	-0.49	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

United Kingdom

ESI:	64.1
Ranking:	16
GDP/Capita:	\$20,336
Peer group ESI:	65.2
Variable coverage:	65
Missing variables imputed:	2

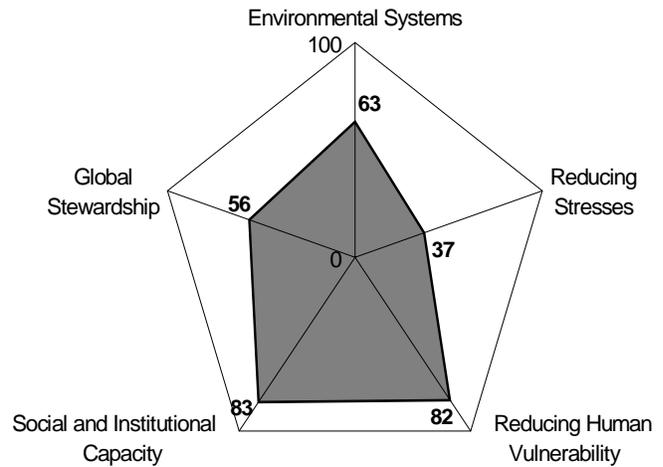


Air Quality	0.41	0.81
Water Quantity	-0.80	-0.08
Water Quality	1.42	0.77
Biodiversity	0.58	-0.04
Terrestrial Systems	-0.60	0.07
Reducing Air Pollution	-1.45	-0.81
Reducing Water Stress	-0.38	-0.46
Reducing Ecosystem Stress	-0.62	-0.09
Reducing Waste & Consumption Pressures	-1.99	-1.03
Reducing Population Stress	0.86	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.93	0.93
Science/Technology	1.62	1.57
Capacity for Debate	0.55	0.77
Regulation and Management	1.54	0.79
Private Sector Responsiveness	1.02	0.54
Environmental Information	1.31	0.87
Eco-efficiency	0.10	0.36
Reducing Public Choice Distortions	1.60	1.24
International Commitment	1.12	0.89
Global-Scale Funding/Participation	0.43	0.36
Protecting International Commons	-0.65	-0.27

= Indicator value
 = Reference (average value for peer group)

United States

ESI:	66.1
Ranking:	11
GDP/Capita:	\$29,605
Peer group ESI:	65.2
Variable coverage:	62
Missing variables imputed:	4

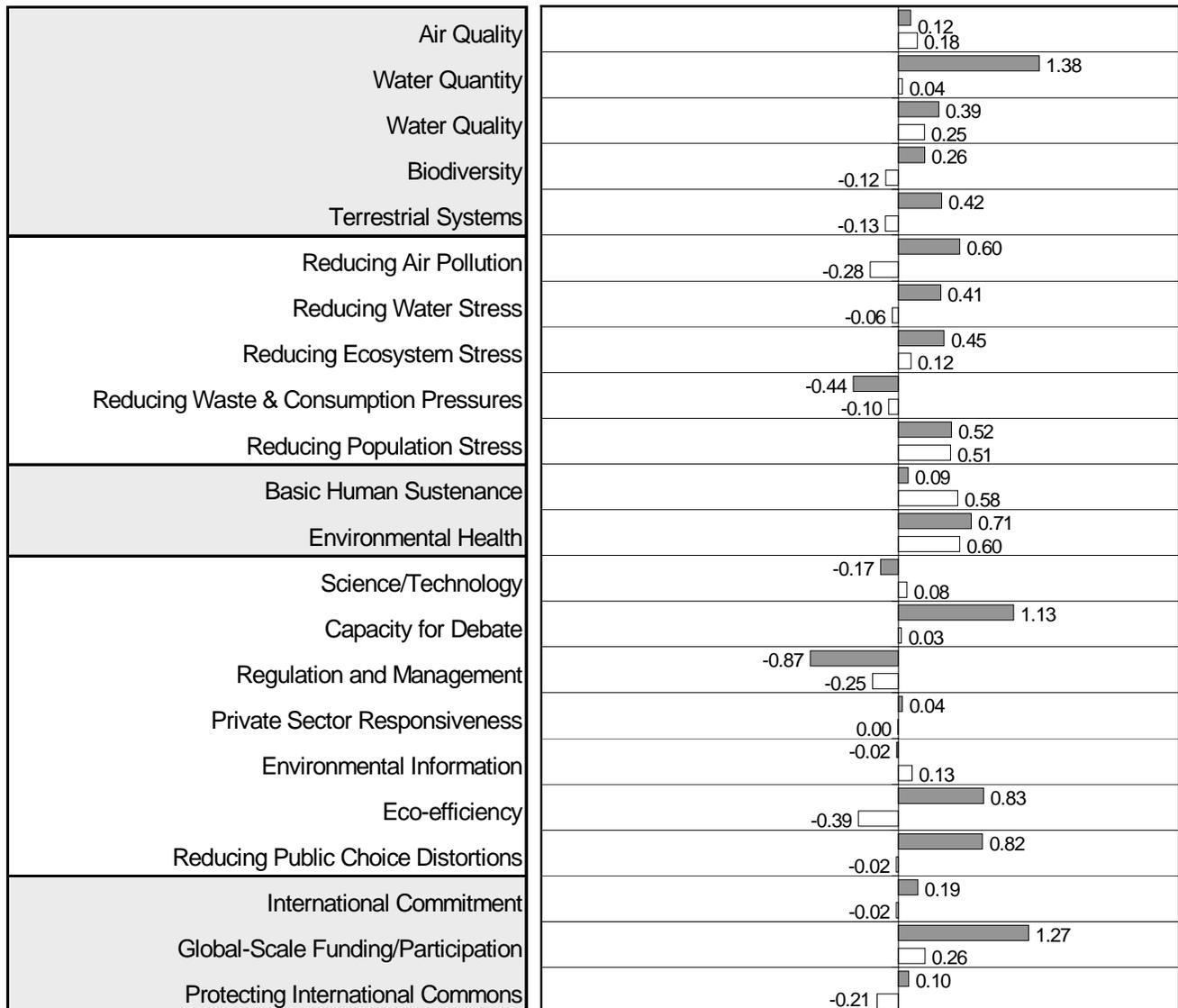
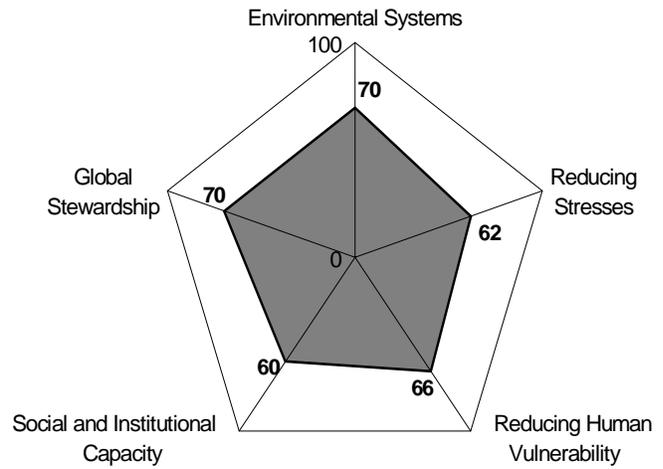


Air Quality	0.61	0.81
Water Quantity	0.16	-0.08
Water Quality	1.04	0.77
Biodiversity	-0.36	-0.04
Terrestrial Systems	0.22	0.07
Reducing Air Pollution	-0.64	-0.81
Reducing Water Stress	0.07	-0.46
Reducing Ecosystem Stress	0.18	-0.09
Reducing Waste & Consumption Pressures	-1.68	-1.03
Reducing Population Stress	0.40	0.77
Basic Human Sustenance	0.92	0.88
Environmental Health	0.93	0.93
Science/Technology	2.27	1.57
Capacity for Debate	0.31	0.77
Regulation and Management	1.30	0.79
Private Sector Responsiveness	0.84	0.54
Environmental Information	1.57	0.87
Eco-efficiency	0.26	0.36
Reducing Public Choice Distortions	0.24	1.24
International Commitment	0.78	0.89
Global-Scale Funding/Participation	0.49	0.36
Protecting International Commons	-0.79	-0.27

■ = Indicator value
 □ = Reference (average value for peer group)

Uruguay

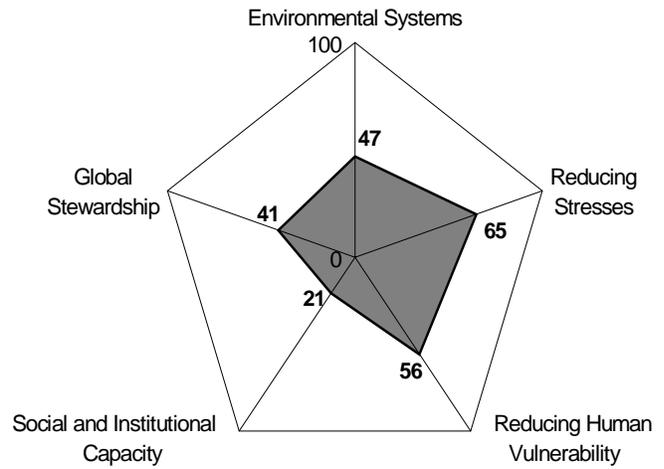
ESI:	64.6
Ranking:	14
GDP/Capita:	\$8,623
Peer group ESI:	52.2
Variable coverage:	48
Missing variables imputed:	10



= Indicator value
 = Reference (average value for peer group)

Uzbekistan

ESI:	41.6
Ranking:	90
GDP/Capita:	\$2,053
Peer group ESI:	45.2
Variable coverage:	43
Missing variables imputed:	16

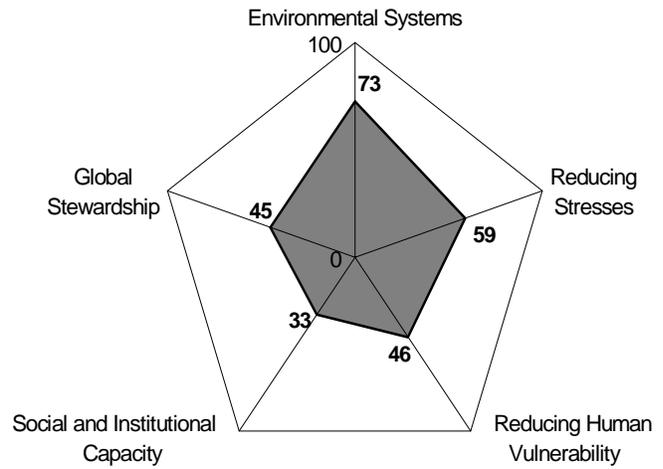


Air Quality	-0.38	-0.22
Water Quantity	-0.15	0.03
Water Quality	-0.37	-0.35
Biodiversity	0.35	0.06
Terrestrial Systems	0.16	-0.05
Reducing Air Pollution	0.17	0.30
Reducing Water Stress	-0.57	-0.02
Reducing Ecosystem Stress	1.33	0.14
Reducing Waste & Consumption Pressures	0.71	0.59
Reducing Population Stress	0.27	0.03
Basic Human Sustenance	0.20	-0.20
Environmental Health	0.09	-0.18
Science/Technology	0.64	-0.29
Capacity for Debate	-1.30	-0.42
Regulation and Management	-0.75	-0.36
Private Sector Responsiveness	-0.48	-0.44
Environmental Information	-0.87	-0.04
Eco-efficiency	-1.64	-0.18
Reducing Public Choice Distortions	-1.36	-0.64
International Commitment	-0.50	-0.41
Global-Scale Funding/Participation	0.04	-0.07
Protecting International Commons	-0.24	0.06

= Indicator value
 = Reference (average value for peer group)

Venezuela

ESI:	50.8
Ranking:	47
GDP/Capita:	\$5,808
Peer group ESI:	45.7
Variable coverage:	58
Missing variables imputed:	6

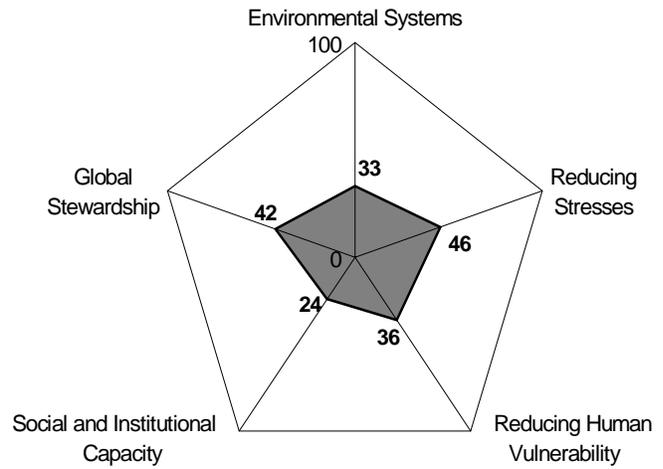


Air Quality	0.19	-0.27
Water Quantity	1.49	0.00
Water Quality	-0.01	-0.11
Biodiversity	0.53	-0.08
Terrestrial Systems	0.81	-0.03
Reducing Air Pollution	0.19	0.19
Reducing Water Stress	0.37	-0.07
Reducing Ecosystem Stress	0.03	-0.28
Reducing Waste & Consumption Pressures	0.62	0.17
Reducing Population Stress	0.01	-0.08
Basic Human Sustenance	0.09	-0.40
Environmental Health	0.20	0.21
Science/Technology	-0.46	-0.39
Capacity for Debate	-0.41	0.20
Regulation and Management	0.28	-0.31
Private Sector Responsiveness	-0.79	-0.29
Environmental Information	-0.35	-0.30
Eco-efficiency	-0.18	-0.15
Reducing Public Choice Distortions	-1.21	-0.52
International Commitment	-0.16	-0.29
Global-Scale Funding/Participation	0.39	-0.07
Protecting International Commons	-0.59	-0.11

■ = Indicator value
 □ = Reference (average value for peer group)

Vietnam

ESI:	34.2
Ranking:	114
GDP/Capita:	\$1,689
Peer group ESI:	45.2
Variable coverage:	49
Missing variables imputed:	15

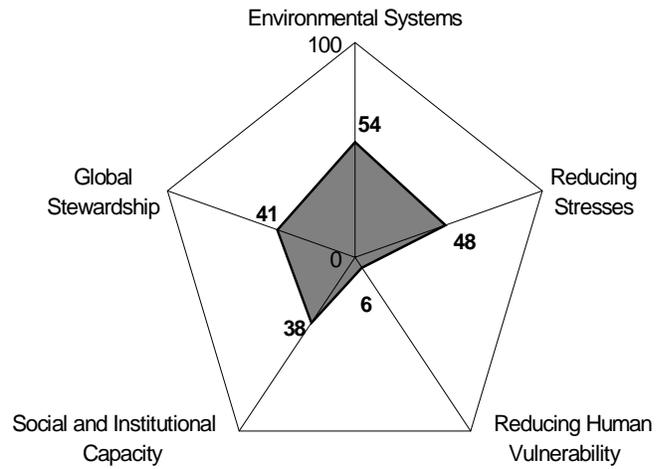


Air Quality	-0.22	0.15
Water Quantity	-0.23	0.22
Water Quality	-0.35	0.03
Biodiversity	-1.08	0.06
Terrestrial Systems	-1.23	-0.05
Reducing Air Pollution	-0.09	0.30
Reducing Water Stress	-0.26	-0.02
Reducing Ecosystem Stress	-1.01	0.14
Reducing Waste & Consumption Pressures	-0.64	0.59
Reducing Population Stress	-0.19	0.03
Basic Human Sustenance	-0.70	-0.20
Environmental Health	-0.01	-0.18
Science/Technology	-0.42	-0.29
Capacity for Debate	-1.44	-0.42
Regulation and Management	-0.81	-0.36
Private Sector Responsiveness	-0.70	-0.44
Environmental Information	-0.18	-0.04
Eco-efficiency	-0.65	-0.18
Reducing Public Choice Distortions	-0.77	-0.64
International Commitment	-0.42	-0.41
Global-Scale Funding/Participation	-0.17	-0.07
Protecting International Commons	0.02	0.06

■ = Indicator value
 □ = Reference (average value for peer group)

Zambia

ESI:	39.8
Ranking:	97
GDP/Capita:	\$719
Peer group ESI:	39.3
Variable coverage:	44
Missing variables imputed:	14

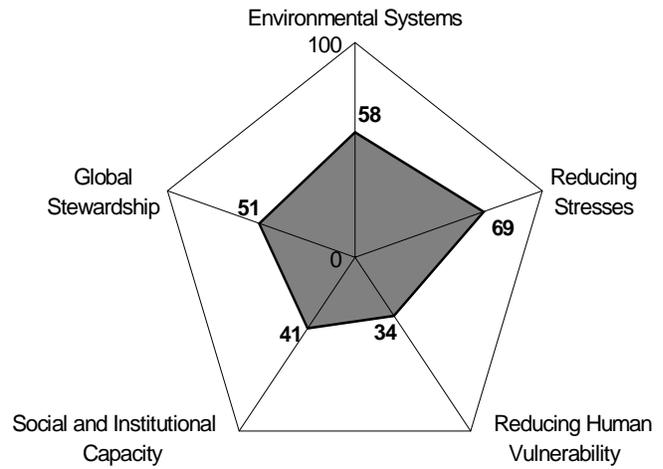


Air Quality	-0.58	-0.48
Water Quantity	0.58	-0.02
Water Quality	-0.67	-0.55
Biodiversity	0.86	0.19
Terrestrial Systems	0.27	0.15
Reducing Air Pollution	0.57	0.57
Reducing Water Stress	0.57	0.57
Reducing Ecosystem Stress	0.00	0.11
Reducing Waste & Consumption Pressures	0.00	0.69
Reducing Population Stress	-1.33	-1.33
Basic Human Sustenance	-1.48	-1.38
Environmental Health	-1.66	-1.57
Science/Technology	-1.15	-0.90
Capacity for Debate	-0.13	-0.56
Regulation and Management	-0.31	-0.26
Private Sector Responsiveness	0.05	-0.45
Environmental Information	-0.72	-0.62
Eco-efficiency	0.50	0.42
Reducing Public Choice Distortions	-0.43	-0.37
International Commitment	-0.28	-0.41
Global-Scale Funding/Participation	-1.13	-0.49
Protecting International Commons	0.75	0.62

= Indicator value
 = Reference (average value for peer group)

Zimbabwe

ESI:	52.0
Ranking:	42
GDP/Capita:	\$2,669
Peer group ESI:	45.2
Variable coverage:	53
Missing variables imputed:	10



Air Quality	-0.29	0.17
Water Quantity	-0.22	0.03
Water Quality	-0.08	-0.35
Biodiversity		1.11
Terrestrial Systems		0.06
Reducing Air Pollution		0.75
Reducing Water Stress		0.30
Reducing Ecosystem Stress		0.40
Reducing Waste & Consumption Pressures		0.80
Reducing Population Stress		0.26
Basic Human Sustenance	-0.57	0.03
Environmental Health	-0.20	
Science/Technology	-0.26	
Capacity for Debate	-0.18	0.32
Regulation and Management	-0.59	0.12
Private Sector Responsiveness	-0.29	
Environmental Information	-0.42	
Eco-efficiency	-0.36	0.13
Reducing Public Choice Distortions	-0.39	
International Commitment	-0.44	
Global-Scale Funding/Participation	-0.30	
Protecting International Commons	-0.04	0.30
	-0.18	0.06
	-0.92	
	-0.64	
	-0.19	
	-0.41	
	-0.01	
	-0.07	

■ = Indicator value
 □ = Reference (average value for peer group)



2001 Environmental Sustainability Index

Annex 6: Variable Descriptions and Data

An Initiative of the
Global Leaders of Tomorrow Environment Task Force,
World Economic Forum

Annual Meeting 2001
Davos, Switzerland

In collaboration with:

*Yale Center for Environmental Law and Policy (YCELP)
Yale University
Center for International Earth Science Information Network (CIESIN)
Columbia University*

Annex 6. Variable Descriptions and Data

This section contains complete variable descriptions along with the original data used to produce the 2001 Environmental Sustainability Index. Each page contains the following information:

- The component and indicator in which the variable is located.
- The variable name.
- The variable code and number.
- The units for the data shown in the data table.
- The reference year (MRYA = Most Recent Year Available for the stated range).
- Data source.

- The logic for including the variable in the ESI.
- A details section summarizing the methodology used to create the variable.
- The median, minimum, and maximum data values for that variable.
- A data table containing the original data for the variable, sorted in alphabetical order by country.

Additional information on the methodology used to create several of the more innovative variables can be found in the section of the 2001 ESI Report entitled “Challenges in Measuring Environmental Sustainability”.

Environmental Systems

Air Quality

Variable Name: Urban SO₂ Concentration

Variable Code: SO₂ **Variable Number:** 1

Units: Thousand Metric Tons

Reference Year: MRYA 1990-1996

Source: World Bank, World Development Indicators 2000, and WHO, Air Management Information System-AMIS 2.0, 1998.

Logic: Indicator of Urban Air Quality.

Details: The values were originally collected at the city level. The number of cities with data provided by each country varied. Within each country the values have been normalized by city population for the year 1995, then summed to give the total concentration for the given country.

Median: 20.49 **Minimum:** 1 **Maximum:** 209

Albania		Greece	34.00	Norway	5.47
Algeria		Guatemala		Pakistan	
Argentina	1.02	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	13.17	Hungary	37.33	Paraguay	
Austria	13.21	Iceland	5.00	Peru	
Azerbaijan		India	27.55	Philippines	33.00
Bangladesh		Indonesia		Poland	54.72
Belarus		Iran	209.00	Portugal	9.22
Belgium	21.02	Ireland	18.89	Romania	10.00
Benin		Israel		Russian Federation	97.55
Bhutan		Italy	15.55	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	24.33	Senegal	
Brazil	75.78	Jordan		Singapore	20.00
Bulgaria	52.45	Kazakhstan		Slovak Republic	22.66
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	52.41	South Africa	22.37
Cameroon		Kuwait		Spain	11.00
Canada	12.87	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia	5.36	Sudan	
Chile	29.00	Lebanon		Sweden	5.23
China	97.07	Libya		Switzerland	11.34
Colombia		Lithuania	2.10	Syria	
Costa Rica	38.84	Macedonia		Tanzania	
Croatia	31.00	Madagascar		Thailand	11.00
Cuba	1.00	Malawi		Togo	
Czech Republic	27.34	Malaysia	20.49	Trinidad and Tobago	
Denmark	7.00	Mali		Tunisia	
Dominican Republic		Mauritius		Turkey	87.02
Ecuador	21.52	Mexico	74.00	Uganda	
Egypt	69.00	Moldova		Ukraine	
El Salvador		Mongolia		United Kingdom	21.96
Estonia		Morocco		United States	15.43
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	4.38	Netherlands	10.00	Venezuela	33.00
France	13.89	New Zealand	3.49	Vietnam	
Gabon		Nicaragua		Zambia	
Germany	12.80	Niger		Zimbabwe	
Ghana		Nigeria			

Environmental Systems

Air Quality

Variable Name: Urban NO2 Concentration

Variable Code: NO2 **Variable Number:** 2

Units: Thousand Metric Tons

Reference Year: MRYA 1990-1996

Source: World Bank, World Development Indicators 2000, and WHO, Air Management Information System-AMIS2.0,1998

Logic: Indicator of Urban Air Quality.

Details: The values were originally collected at the city level. The number of cities with data provided by each country varied. Within each country the values have been normalized by city population for the year 1995, then summed to give the total concentration for the given country.

Median: 45.11 **Minimum:** 0 **Maximum:** 130

Albania	
Algeria	
Argentina	56.79
Armenia	
Australia	16.47
Austria	39.75
Azerbaijan	
Bangladesh	
Belarus	42.60
Belgium	46.79
Benin	
Bhutan	
Bolivia	
Botswana	
Brazil	51.37
Bulgaria	111.14
Burkina Faso	
Burundi	
Cameroon	
Canada	41.24
Central African Republic	
Chile	81.00
China	71.72
Colombia	
Costa Rica	45.75
Croatia	
Cuba	5.00
Czech Republic	28.59
Denmark	54.00
Dominican Republic	
Ecuador	
Egypt	
El Salvador	70.50
Estonia	
Ethiopia	
Fiji	
Finland	30.69
France	56.61
Gabon	
Germany	40.07
Ghana	

Greece	64.00
Guatemala	69.33
Haiti	
Honduras	29.50
Hungary	45.11
Iceland	42.00
India	29.68
Indonesia	
Iran	
Ireland	
Israel	
Italy	124.38
Jamaica	
Japan	62.01
Jordan	
Kazakhstan	
Kenya	
Korea, Rep.	52.86
Kuwait	
Kyrgyz Republic	
Latvia	63.74
Lebanon	
Libya	
Lithuania	28.31
Macedonia	
Madagascar	
Malawi	
Malaysia	0.00
Mali	
Mauritius	
Mexico	130.00
Moldova	
Mongolia	
Morocco	
Mozambique	
Nepal	
Netherlands	58.00
New Zealand	19.51
Nicaragua	32.00
Niger	
Nigeria	

Norway	49.65
Pakistan	
Panama	42.00
Papua New Guinea	
Paraguay	
Peru	
Philippines	
Poland	58.14
Portugal	49.57
Romania	71.00
Russian Federation	3.44
Rwanda	
Saudi Arabia	
Senegal	
Singapore	30.00
Slovak Republic	25.62
Slovenia	
South Africa	44.03
Spain	32.36
Sri Lanka	
Sudan	
Sweden	29.68
Switzerland	42.20
Syria	
Tanzania	
Thailand	23.00
Togo	
Trinidad and Tobago	
Tunisia	
Turkey	9.45
Uganda	
Ukraine	
United Kingdom	64.47
United States	60.57
Uruguay	
Uzbekistan	
Venezuela	57.00
Vietnam	
Zambia	
Zimbabwe	

Environmental Systems

Air Quality

Variable Name: Urban Total Suspended Particulate Concentration

Variable Code: TSP **Variable Number:** 3

Units: Thousand Metric Tons

Reference Year: MRYA 1990-1996

Source: World Bank, World Development Indicators 2000, and WHO, Air Management Information System-AMIS 2.0, 1998.

Logic: Indicator of Urban Air Quality.

Details: The values were originally collected at the city level. The number of cities with data provided by each country varied. Within each country the values have been normalized by city population for the year 1995, then summed to give the total concentration for the given country.

Median: 72.68 **Minimum:** 9.00 **Maximum:** 320.00

Albania TSP		Greece	178.00	Norway	10.25
Algeria		Guatemala	272.33	Pakistan	
Argentina	50.01	Haiti		Panama	
Armenia		Honduras	320.00	Papua New Guinea	
Australia	43.22	Hungary	63.74	Paraguay	
Austria	45.70	Iceland	24.00	Peru	
Azerbaijan		India	277.45	Philippines	200.00
Bangladesh		Indonesia	271.00	Poland	
Belarus	18.40	Iran	248.00	Portugal	50.40
Belgium	77.91	Ireland		Romania	82.00
Benin		Israel		Russian Federation	100.00
Bhutan		Italy	86.91	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	43.63	Senegal	
Brazil	106.20	Jordan		Singapore	
Bulgaria	199.25	Kazakhstan		Slovak Republic	64.49
Burkina Faso		Kenya	69.00	Slovenia	
Burundi		Korea, South	83.79	South Africa	
Cameroon		Kuwait		Spain	72.68
Canada	31.26	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia	100.00	Sudan	
Chile		Lebanon		Sweden	9.00
China	310.82	Libya		Switzerland	30.66
Colombia	120.00	Lithuania	114.27	Syria	
Costa Rica	244.48	Macedonia		Tanzania	
Croatia	71.00	Madagascar		Thailand	223.00
Cuba		Malawi		Togo	
Czech Republic	58.39	Malaysia	91.58	Trinidad and Tobago	
Denmark	61.00	Mali		Tunisia	
Dominican Republic		Mauritius		Turkey	11.35
Ecuador	125.73	Mexico	279.00	Uganda	
Egypt		Moldova		Ukraine	
El Salvador		Mongolia		United Kingdom	
Estonia		Morocco		United States	
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	49.90	Netherlands	40.00	Venezuela	53.00
France	14.16	New Zealand	27.32	Vietnam	
Gabon		Nicaragua		Zambia	
Germany	43.27	Niger		Zimbabwe	
Ghana	137.00	Nigeria			

Environmental Systems

Water Quantity

Variable Name: Internal Renewable Water Resources Per Capita

Variable Code: WATCAP **Variable Number:** 4

Units: Thousands Cubic meters/person

Reference Year: 1961-1990 (avg.)

Source: Center for Environmental Systems Research, University of Kassel, WaterGAP 2.1B, 2001

Logic: The per capita volume of internal renewable water resources in a country is important for a variety of environmental services and to support the needs of the population.

Details: This variable measures internal renewable water (average annual surface runoff and groundwater recharge generated from endogenous precipitation, taking into account evaporation from lakes and wetlands) per capita. These data are derived from the WaterGAP 2.1 gridded hydrological model developed by the Center for Environmental Systems Research, University of Kassel, Germany. A special run of the model was performed in order to derive country-level estimates of internal renewable water resources. A logarithmic transformation of this variable was used in calculating the ESI. More details can be found in the main report.

Albania	4.09	Greece	2.96	Norway	57.71
Algeria	0.39	Guatemala	14.03	Pakistan	0.23
Argentina	7.65	Haiti	0.93	Panama	30.79
Armenia	1.12	Honduras	13.09	Papua New Guinea	154.61
Australia	27.81	Hungary	1.17	Paraguay	10.77
Austria	6.37	Iceland	294.34	Peru	47.55
Azerbaijan	0.79	India	1.56	Philippines	3.79
Bangladesh	0.60	Indonesia	10.96	Poland	1.48
Belarus	2.79	Iran	0.63	Portugal	3.25
Belgium	1.19	Ireland	12.47	Romania	1.45
Benin	2.25	Israel	0.36	Russian Federation	22.82
Bhutan	14.08	Italy	2.04	Rwanda	0.95
Bolivia	51.39	Jamaica	3.24	Saudi Arabia	0.22
Botswana	-7.46	Japan	2.60	Senegal	0.96
Brazil	37.25	Jordan	0.07	Singapore	
Bulgaria	2.00	Kazakhstan	3.63	Slovak Republic	2.24
Burkina Faso	0.86	Kenya	1.51	Slovenia	8.04
Burundi	0.65	Korea, South	1.16	South Africa	1.25
Cameroon	17.30	Kuwait	-0.20	Spain	2.33
Canada	84.51	Kyrgyz Republic	5.47	Sri Lanka	1.62
Central African Republic	37.41	Latvia	6.31	Sudan	-0.53
Chile	19.56	Lebanon	0.66	Sweden	15.91
China	1.72	Libya	0.60	Switzerland	5.74
Colombia	45.56	Lithuania	5.10	Syria	0.35
Costa Rica	23.35	Macedonia	2.55	Tanzania	3.64
Croatia	6.01	Madagascar	22.55	Thailand	3.50
Cuba	2.01	Malawi	1.55	Togo	2.71
Czech Republic	1.45	Malaysia	20.24	Trinidad and Tobago	1.58
Denmark	2.49	Mali	0.40	Tunisia	0.22
Dominican Republic	1.92	Mauritius	0.50	Turkey	2.59
Ecuador	30.37	Mexico	3.47	Uganda	1.00
Egypt	-0.24	Moldova	1.83	Ukraine	1.26
El Salvador	1.59	Mongolia	16.32	United Kingdom	3.10
Estonia	7.40	Morocco	0.42	United States	7.09
Ethiopia	2.17	Mozambique	5.81	Uruguay	24.24
Fiji	26.05	Nepal	5.97	Uzbekistan	0.31
Finland	18.01	Netherlands	0.65	Venezuela	33.83
France	3.26	New Zealand	79.81	Vietnam	2.80
Gabon	176.37	Nicaragua	29.15	Zambia	10.01
Germany	1.35	Niger	-0.33	Zimbabwe	3.40
Ghana	1.87	Nigeria	2.26		

Environmental Systems

Water Quantity

Variable Name: Water Inflow from Other Countries per Capita

Variable Code: WATINC **Variable Number:** 5

Units: Thousands Cubic meters/person

Reference Year: 1961-1990 (avg.)

Source: Center for Environmental Systems Research, University of Kassel, WaterGAP 2.1B, 2001

Logic: The sum of per capita internal water availability and the per capita volume of water flowing into a country provides a more complete assessment of a country's water resources, which are important for a variety of environmental services and to support the needs of the population.

Details: These data are derived from the WaterGAP 2.1 gridded hydrological model developed by the Center for Environmental Systems Research, University of Kassel, Germany. A special run of the model was performed in order to derive country-level estimates of inflow from other countries. There are some problems, in that the size of the grid cells (0.5 x 0.5 degree) do not accurately capture small countries. A logarithmic transformation of this variable was used in calculating the ESI. More details can be found in the main report.

Median: 1.18 **Minimum:** 0 **Maximum:** 235.85

Albania	2.83	Greece	1.24	Norway	2.53
Algeria	0.04	Guatemala	1.40	Pakistan	0.68
Argentina	18.72	Haiti	0.13	Panama	0.00
Armenia	0.56	Honduras	5.66	Papua New Guinea	0.93
Australia	0.00	Hungary	10.56	Paraguay	99.41
Austria	4.75	Iceland	0.00	Peru	19.17
Azerbaijan	2.25	India	0.39	Philippines	0.00
Bangladesh	9.36	Indonesia	0.32	Poland	0.23
Belarus	2.02	Iran	0.42	Portugal	2.33
Belgium	0.59	Ireland	1.39	Romania	7.74
Benin	6.93	Israel	0.00	Russian Federation	1.48
Bhutan	5.96	Italy	0.05	Rwanda	0.95
Bolivia	29.54	Jamaica	0.00	Saudi Arabia	0.00
Botswana	23.74	Japan	0.00	Senegal	1.68
Brazil	16.44	Jordan	0.17	Singapore	
Bulgaria	21.88	Kazakhstan	4.30	Slovak Republic	12.70
Burkina Faso	0.10	Kenya	0.81	Slovenia	6.53
Burundi	0.97	Korea, South	0.09	South Africa	0.11
Cameroon	2.88	Kuwait	0.00	Spain	0.05
Canada	4.73	Kyrgyz Republic	0.00	Sri Lanka	0.00
Central African Republic	21.29	Latvia	7.10	Sudan	4.28
Chile	1.13	Lebanon	0.00	Sweden	0.91
China	0.12	Libya	0.20	Switzerland	0.00
Colombia	39.23	Lithuania	2.95	Syria	1.83
Costa Rica	2.25	Macedonia	0.00	Tanzania	1.20
Croatia	27.60	Madagascar	0.00	Thailand	5.02
Cuba	0.00	Malawi	0.41	Togo	0.99
Czech Republic	0.58	Malaysia	0.50	Trinidad and Tobago	0.00
Denmark	0.00	Mali	5.93	Tunisia	0.22
Dominican Republic	0.13	Mauritius	0.00	Turkey	0.18
Ecuador	1.22	Mexico	0.67	Uganda	1.16
Egypt	1.25	Moldova	3.66	Ukraine	0.56
El Salvador	1.59	Mongolia	2.45	United Kingdom	0.03
Estonia	5.38	Morocco	0.00	United States	1.36
Ethiopia	0.04	Mozambique	8.97	Uruguay	235.85
Fiji	0.00	Nepal	1.18	Uzbekistan	2.54
Finland	2.35	Netherlands	5.50	Venezuela	27.47
France	0.79	New Zealand	0.00	Vietnam	6.07
Gabon	22.28	Nicaragua	2.71	Zambia	5.74
Germany	1.21	Niger	5.90	Zimbabwe	3.77
Ghana	1.02	Nigeria	0.83		

Environmental Systems

Water Quality

Variable Name: Dissolved Oxygen Concentration

Variable Code: GMS_DO **Variable Number:** 6

Units: Mg/Liter

Reference Year: 1994-96 or MRYA

Source: United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System. <http://www.cciw.ca/gems/>

Logic: A measure of eutrophication, which has an important impact on the health of aquatic resources and ecosystems. High levels correspond to low eutrophication.

Details: The country values represent averages of the station-level values for the three year time period 1994-96. The number of stations per country varies depending on country size, number of water bodies, and level of participation in the GEMS monitoring system.

Albania	
Algeria	
Argentina	10.00
Armenia	
Australia	
Austria	
Azerbaijan	
Bangladesh	
Belarus	
Belgium	5.62
Benin	
Bhutan	
Bolivia	
Botswana	
Brazil	7.27
Bulgaria	
Burkina Faso	
Burundi	
Cameroon	
Canada	10.85
Central African Republic	
Chile	
China	7.99
Colombia	5.55
Costa Rica	
Croatia	
Cuba	8.10
Czech Republic	
Denmark	
Dominican Republic	
Ecuador	
Egypt	
El Salvador	
Estonia	
Ethiopia	
Fiji	8.01
Finland	11.19
France	10.33
Gabon	
Germany	
Ghana	6.80
Greece	
Guatemala	
Haiti	
Honduras	
Hungary	10.82
Iceland	
India	6.38
Indonesia	3.31
Iran	10.57
Ireland	
Israel	
Italy	
Jamaica	
Japan	10.18
Jordan	
Kazakhstan	
Kenya	
Korea, South	10.32
Kuwait	
Kyrgyz Republic	
Latvia	
Lebanon	
Libya	
Lithuania	5.68
Macedonia	
Madagascar	
Malawi	
Malaysia	4.54
Mali	8.46
Mauritius	
Mexico	6.10
Moldova	
Mongolia	
Morocco	6.25
Mozambique	
Nepal	
Netherlands	9.78
New Zealand	9.87
Nicaragua	
Niger	
Nigeria	
Norway	
Pakistan	7.11
Panama	
Papua New Guinea	
Paraguay	
Peru	
Philippines	8.24
Poland	9.86
Portugal	7.65
Romania	
Russian Federation	9.69
Rwanda	
Saudi Arabia	
Senegal	4.42
Singapore	
Slovak Republic	
Slovenia	
South Africa	
Spain	
Sri Lanka	
Sudan	7.84
Sweden	
Switzerland	
Syria	
Tanzania	6.87
Thailand	2.98
Togo	
Trinidad and Tobago	
Tunisia	
Turkey	
Uganda	
Ukraine	
United Kingdom	10.40
United States	9.26
Uruguay	
Uzbekistan	
Venezuela	
Vietnam	
Zambia	
Zimbabwe	

Environmental Systems

Water Quality

Variable Name: Phosphorus Concentration

Variable Code: GMS_PH **Variable Number:** 7

Units: Mg/Liter

Reference Year: 1994-96 or MRYA

Source: United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System. <http://www.cciw.ca/gems/>

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

Details: The country values represent averages of the station-level values for the three year time period 1994-96. The number of stations per country varies depending on country size, number of water bodies, and level of participation in the GEMS monitoring system.

Median: 0.14 **Minimum:** 0.003 **Maximum:** 1.75

Albania					
Algeria					
Argentina	0.04				
Armenia					
Australia					
Austria					
Azerbaijan					
Bangladesh					
Belarus					
Belgium	1.63				
Benin					
Bhutan					
Bolivia					
Botswana					
Brazil	0.09				
Bulgaria					
Burkina Faso					
Burundi					
Cameroon					
Canada					
Central African Republic					
Chile					
China	0.28				
Colombia					
Costa Rica					
Croatia					
Cuba	0.01				
Czech Republic					
Denmark					
Dominican Republic					
Ecuador					
Egypt					
El Salvador					
Estonia					
Ethiopia					
Fiji					
Finland	0.01				
France	0.17				
Gabon					
Germany	0.32				
Ghana					
Greece					
Guatemala					
Haiti					
Honduras					
Hungary	0.21				
Iceland					
India					
Indonesia	0.56				
Iran					
Ireland					
Israel					
Italy					
Jamaica					
Japan	0.06				
Jordan	1.01				
Kazakhstan					
Kenya					
Korea, South					
Kuwait					
Kyrgyz Republic					
Latvia					
Lebanon					
Libya					
Lithuania	0.08				
Macedonia					
Madagascar					
Malawi					
Malaysia	0.04				
Mali	0.15				
Mauritius					
Mexico					
Moldova					
Mongolia					
Morocco	0.26				
Mozambique					
Nepal					
Netherlands	0.27				
New Zealand	0.04				
Nicaragua					
Niger					
Nigeria					
Norway				0.01	
Pakistan				0.20	
Panama					
Papua New Guinea					
Paraguay					
Peru					
Philippines					
Poland				0.33	
Portugal				0.13	
Romania					
Russian Federation					
Rwanda					
Saudi Arabia					
Senegal					
Singapore					
Slovak Republic					
Slovenia					
South Africa					
Spain					
Sri Lanka					
Sudan				1.75	
Sweden					
Switzerland				0.07	
Syria					
Tanzania					
Thailand				0.31	
Togo					
Trinidad and Tobago					
Tunisia					
Turkey					
Uganda					
Ukraine					
United Kingdom				0.09	
United States				0.08	
Uruguay					
Uzbekistan					
Venezuela					
Vietnam					
Zambia					
Zimbabwe					

Environmental Systems

Water Quality

Variable Name: Suspended Solids

Variable Code: GMS_SS Variable Number: 8

Units: Mg/Liter

Reference Year: 1994-96 or MRYA

Source: United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System. <http://www.cciw.ca/gems/>

Logic: A measure of water quality and turbidity.

Details: The country values represent averages of the station-level values for the three year time period 1994-96. The number of stations per country varies depending on country size, number of water bodies, and level of participation in the GEMS monitoring system.

Median: 4.03 Minimum: 1.17 Maximum: 7.97

Albania					
Algeria					
Argentina	4.77				
Armenia					
Australia					
Austria					
Azerbaijan					
Bangladesh	4.08				
Belarus					
Belgium	3.53				
Benin					
Bhutan					
Bolivia					
Botswana					
Brazil	4.08				
Bulgaria					
Burkina Faso					
Burundi					
Cameroon					
Canada	2.84				
Central African Republic					
Chile	5.10				
China	7.97				
Colombia	4.77				
Costa Rica					
Croatia					
Cuba					
Czech Republic					
Denmark					
Dominican Republic					
Ecuador					
Egypt					
El Salvador					
Estonia					
Ethiopia					
Fiji					
Finland	1.17				
France	3.24				
Gabon					
Germany	3.06				
Ghana	4.55				
Greece					
Guatemala					
Haiti					
Honduras					
Hungary	3.42				
Iceland					
India					
Indonesia	5.37				
Iran					
Ireland					
Israel					
Italy					
Jamaica					
Japan	3.27				
Jordan	4.50				
Kazakhstan					
Kenya					
Korea, South	1.69				
Kuwait					
Kyrgyz Republic					
Latvia					
Lebanon					
Libya					
Lithuania					
Macedonia					
Madagascar					
Malawi					
Malaysia	5.70				
Mali	4.55				
Mauritius					
Mexico	5.17				
Moldova					
Mongolia					
Morocco	4.40				
Mozambique					
Nepal					
Netherlands	3.26				
New Zealand	2.32				
Nicaragua					
Niger					
Nigeria					
Norway					
Pakistan	6.76				
Panama					
Papua New Guinea					
Paraguay					
Peru					
Philippines	3.62				
Poland	3.24				
Portugal	1.94				
Romania					
Russian Federation	3.23				
Rwanda					
Saudi Arabia					
Senegal					
Singapore					
Slovak Republic					
Slovenia					
South Africa					
Spain					
Sri Lanka					
Sudan	6.38				
Sweden					
Switzerland	3.98				
Syria					
Tanzania					
Thailand	5.60				
Togo					
Trinidad and Tobago					
Tunisia					
Turkey					
Uganda					
Ukraine					
United Kingdom	2.26				
United States					
Uruguay					
Uzbekistan					
Venezuela					
Vietnam					
Zambia					
Zimbabwe					

Environmental Systems

Water Quality

Variable Name: Electrical Conductivity

Variable Code: GMS_EC **Variable Number:** 9

Units: Usie/Centimeter

Reference Year: 1994-96 or MRYA

Source: United Nations Environment Programme (UNEP), Global Environmental Monitoring System/Water Quality Monitoring System. <http://www.cciw.ca/gems/>

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

Details: The country values represent averages of the station-level values for the three year time period 1994-96. The number of stations per country varies depending on country size, number of water bodies, and level of participation in the GEMS monitoring system.

Albania		Greece		Norway	0.61
Algeria		Guatemala		Pakistan	410.13
Argentina	113.68	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia		Hungary	579.26	Paraguay	
Austria		Iceland		Peru	
Azerbaijan		India	4,520.19	Philippines	136.70
Bangladesh	231.60	Indonesia	167.13	Poland	1,043.77
Belarus		Iran	419.64	Portugal	191.13
Belgium	2,626.19	Ireland		Romania	
Benin		Israel		Russian Federation	0.00
Bhutan		Italy		Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	179.29	Senegal	380.80
Brazil	145.65	Jordan	1,014.42	Singapore	
Bulgaria		Kazakhstan		Slovak Republic	
Burkina Faso		Kenya	504.00	Slovenia	
Burundi		Korea, South	141.33	South Africa	
Cameroon		Kuwait		Spain	
Canada	237.44	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	259.33
Chile	667.94	Lebanon		Sweden	77.56
China	522.77	Libya		Switzerland	301.06
Colombia	85.80	Lithuania	598.75	Syria	
Costa Rica		Macedonia		Tanzania	363.21
Croatia		Madagascar		Thailand	348.33
Cuba	515.00	Malawi		Togo	
Czech Republic		Malaysia	508.01	Trinidad and Tobago	
Denmark		Mali	120.77	Tunisia	
Dominican Republic		Mauritius		Turkey	
Ecuador		Mexico	1,239.62	Uganda	
Egypt		Moldova		Ukraine	
El Salvador		Mongolia		United Kingdom	368.06
Estonia		Morocco	3,300.63	United States	375.65
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	50.49	Netherlands	623.12	Venezuela	
France	299.38	New Zealand	125.84	Vietnam	
Gabon		Nicaragua		Zambia	
Germany	1,566.07	Niger		Zimbabwe	
Ghana	185.59	Nigeria			

Environmental Systems

Biodiversity

Variable Name: Percentage of Mammals Threatened

Variable Code: PRTMAM **Variable Number:** 10

Units: Percent of Mammals

Reference Year: 1996

Source: World Resources Institute, *World Resources 2000-2001*, Washington, DC: WRI, 2000. Original sources: World Conservation Monitoring Center, IUCN-The World Conservation Union, Food and Agriculture Organization of the United Nations and other sources.

Logic: The percent of mammals threatened gives an estimate of a country's success at preserving its biodiversity.

Details: Number of mammal species threatened divided by known mammal species in the country, expressed as a percentage. A logarithmic transformation of this variable was used in calculating the ESI.

Median: 9.49 **Minimum:** 1.00 **Maximum:** 100

Albania	2.94	Greece	13.68	Norway	7.41
Algeria	16.30	Guatemala	3.20	Pakistan	8.61
Argentina	8.44	Haiti	100.00	Panama	7.80
Armenia	4.76	Honduras	4.05	Papua New Guinea	25.68
Australia	22.31	Hungary	9.64	Paraguay	3.28
Austria	8.43	Iceland	9.09	Peru	10.00
Azerbaijan	11.11	India	23.73	Philippines	31.01
Bangladesh	16.51	Indonesia	28.01	Poland	11.90
Belarus	5.41	Iran	14.29	Portugal	20.63
Belgium	10.34	Ireland	8.00	Romania	19.05
Benin	4.79	Israel	11.21	Russian Federation	11.52
Bhutan	20.20	Italy	11.11	Rwanda	5.96
Bolivia	7.59	Jamaica	16.67	Saudi Arabia	11.69
Botswana	3.05	Japan	15.43	Senegal	6.77
Brazil	17.03	Jordan	9.86	Singapore	7.06
Bulgaria	16.05	Kazakhstan	8.43	Slovak Republic	9.41
Burkina Faso	4.08	Kenya	11.98	Slovenia	13.33
Burundi	4.67	Korea, South	12.24	South Africa	12.94
Cameroon	7.82	Kuwait	4.76	Spain	23.17
Canada	3.63	Kyrgyz Republic	7.23	Sri Lanka	15.91
Central African Republic	5.26	Latvia	4.82	Sudan	7.87
Chile	17.58	Lebanon	8.77	Sweden	8.33
China	18.75	Libya	14.47	Switzerland	8.00
Colombia	9.75	Lithuania	7.35	Syria	6.35
Costa Rica	6.83	Macedonia	12.82	Tanzania	10.44
Croatia	13.16	Madagascar	32.62	Thailand	12.83
Cuba	29.03	Malawi	3.59	Togo	4.08
Czech Republic	8.64	Malaysia	14.00	Trinidad and Tobago	1.00
Denmark	6.98	Mali	9.49	Tunisia	14.10
Dominican Republic	20.00	Mauritius		Turkey	12.93
Ecuador	9.27	Mexico	13.03	Uganda	5.33
Egypt	15.31	Moldova	2.94	Ukraine	13.89
El Salvador	1.48	Mongolia	9.02	United Kingdom	8.00
Estonia	6.15	Morocco	17.14	United States	8.10
Ethiopia	13.73	Mozambique	7.26	Uruguay	6.17
Fiji	100.00	Nepal	15.47	Uzbekistan	7.22
Finland	6.67	Netherlands	10.91	Venezuela	7.43
France	13.98	New Zealand	100.00	Vietnam	17.84
Gabon	6.32	Nicaragua	2.00	Zambia	4.72
Germany	10.53	Niger	8.40	Zimbabwe	3.33
Ghana	5.86	Nigeria	9.49		

Environmental Systems

Biodiversity

Variable Name: Percentage of Breeding Birds Threatened

Variable Code: PRTBRD **Variable Number:** 11

Units: Percent of Breeding Birds

Reference Year: 1996

Source: World Resources Institute, *World Resources 2000-2001*, Washington, DC: WRI, 2000. Original sources: World Conservation Monitoring Center, IUCN-The World Conservation Union, Food and Agriculture Organization of the United Nations and other sources.

Logic: The percent of breeding birds threatened gives an estimate of a country's success at preserving its biodiversity.

Details: Number of bird species threatened divided by known bird species in the country, expressed as a percentage.

Median: 3.08 **Minimum:** 0.00 **Maximum:** 43.88

Albania	3.04	Greece	3.98	Norway	1.23
Algeria	4.17	Guatemala	0.87	Pakistan	6.67
Argentina	4.57	Haiti	14.67	Panama	1.37
Armenia	2.07	Honduras	0.95	Papua New Guinea	4.75
Australia	6.93	Hungary	4.88	Paraguay	4.68
Austria	2.35	Iceland	0.00	Peru	4.15
Azerbaijan	3.23	India	7.88	Philippines	43.88
Bangladesh	10.17	Indonesia	6.80	Poland	2.64
Belarus	1.81	Iran	4.33	Portugal	3.38
Belgium	1.67	Ireland	0.70	Romania	4.45
Benin	0.33	Israel	4.44	Russian Federation	6.05
Bhutan	3.13	Italy	2.99	Rwanda	1.17
Bolivia		Jamaica	6.19	Saudi Arabia	7.10
Botswana	1.81	Japan	13.20	Senegal	1.56
Brazil	6.87	Jordan	2.84	Singapore	7.63
Bulgaria	5.00	Kazakhstan	3.79	Slovak Republic	1.91
Burkina Faso	0.30	Kenya	2.83	Slovenia	1.45
Burundi	1.33	Korea, South	16.96	South Africa	2.68
Cameroon	2.03	Kuwait	15.00	Spain	3.60
Canada	1.17	Kyrgyz Republic		Sri Lanka	4.40
Central African Republic	0.37	Latvia	2.76	Sudan	1.32
Chile	6.08	Lebanon	3.25	Sweden	1.61
China	8.16	Libya	2.20	Switzerland	2.07
Colombia	3.76	Lithuania	1.98	Syria	3.43
Costa Rica	2.17	Macedonia	1.43	Tanzania	3.63
Croatia	1.79	Madagascar	13.86	Thailand	7.31
Cuba	9.49	Malawi	1.73	Togo	0.26
Czech Republic	3.02	Malaysia	6.69	Trinidad and Tobago	1.15
Denmark	1.02	Mali	1.51	Tunisia	3.47
Dominican Republic	8.09	Mauritius		Turkey	4.64
Ecuador	3.82	Mexico	4.66	Uganda	1.20
Egypt	7.19	Moldova	3.95	Ukraine	3.80
El Salvador	0.00	Mongolia	3.29	United Kingdom	0.87
Estonia	0.94	Morocco	5.24	United States	7.69
Ethiopia	3.19	Mozambique	2.81	Uruguay	4.64
Fiji	12.16	Nepal	4.42	Uzbekistan	
Finland	1.61	Netherlands	1.57	Venezuela	1.64
France	2.60	New Zealand	29.33	Vietnam	8.79
Gabon	0.86	Nicaragua	0.62	Zambia	1.65
Germany	2.09	Niger	0.67	Zimbabwe	1.69
Ghana	1.89	Nigeria	1.32		

Environmental Systems

Terrestrial Systems

Variable Name: Severity of Human Induced Soil Degradation

Variable Code: SOIL **Variable Number:** 12

Units: Index Ranging from 0 (Low Levels of Degradation) to 3.66 (High Levels)

Reference Year: 1990

Source: UNEP, Global Assessment of Human Induced Soil Degradation (GLASOD), database, 1990.

Logic: A measure of the degree of soil degradation within a country, which affects biological productivity and sedimentation of water bodies.

Details: The original data classify countries' territories into 4 classes of degradation. We calculated the fraction of each country's territory falling into each class, and then computed a single weighted composite, using the degradation class as the weight.

Median: 1.75 **Minimum:** 0.00 **Maximum:** 3.66

Albania	3.66	Greece	1.94	Norway	0.34
Algeria	1.06	Guatemala	2.26	Pakistan	1.66
Argentina	1.65	Haiti	3.10	Panama	2.66
Armenia		Honduras	2.62	Papua New Guinea	0.22
Australia	1.22	Hungary	2.51	Paraguay	0.94
Austria	2.37	Iceland		Peru	1.67
Azerbaijan		India	1.92	Philippines	2.04
Bangladesh	2.06	Indonesia	1.90	Poland	2.86
Belarus		Iran	2.52	Portugal	1.91
Belgium	2.57	Ireland	0.28	Romania	3.07
Benin	1.74	Israel	0.44	Russian Federation	
Bhutan	1.42	Italy	2.17	Rwanda	3.35
Bolivia	1.19	Jamaica	2.39	Saudi Arabia	1.63
Botswana	1.13	Japan	0.16	Senegal	2.12
Brazil	1.62	Jordan	2.43	Singapore	1.99
Bulgaria	2.94	Kazakhstan		Slovak Republic	
Burkina Faso	2.77	Kenya	1.84	Slovenia	
Burundi	3.21	Korea, South	2.23	South Africa	2.54
Cameroon	1.73	Kuwait	1.86	Spain	2.09
Canada	0.52	Kyrgyz Republic		Sri Lanka	2.51
Central African Republic	0.64	Latvia		Sudan	1.40
Chile	1.05	Lebanon	1.48	Sweden	1.57
China	1.83	Libya	1.28	Switzerland	1.73
Colombia	1.43	Lithuania		Syria	2.70
Costa Rica	3.42	Macedonia		Tanzania	1.63
Croatia		Madagascar	2.80	Thailand	3.22
Cuba	1.79	Malawi	0.97	Togo	2.49
Czech Republic		Malaysia	2.76	Trinidad and Tobago	1.59
Denmark	0.47	Mali	1.40	Tunisia	2.27
Dominican Republic	2.16	Mauritius	0.79	Turkey	3.21
Ecuador	1.30	Mexico	1.76	Uganda	2.27
Egypt	0.58	Moldova		Ukraine	
El Salvador	2.39	Mongolia	1.75	United Kingdom	1.48
Estonia		Morocco	2.06	United States	1.72
Ethiopia	2.30	Mozambique	1.08	Uruguay	0.75
Fiji	0.00	Nepal	1.51	Uzbekistan	
Finland	1.26	Netherlands	1.40	Venezuela	1.32
France	1.47	New Zealand	1.51	Vietnam	3.20
Gabon	0.39	Nicaragua	2.31	Zambia	1.59
Germany		Niger	1.55	Zimbabwe	1.29
Ghana	1.67	Nigeria	2.36		

Environmental Systems

Terrestrial Systems

Variable Name: Land Area Impacted by Human Activities as a Percentage of Total Land Area

Variable Code: ANTHRO **Variable Number:** 13

Units: Percent of Land Area

Reference Year: 1992/93 (agriculture) and October 1994 to March 1995 (lit area)

Source: NOAA/NGDC World Stable Lights Images - October 1994 to March 1995. Derived from DMSP OLS Nighttime Imagery during the dark half of each lunar cycle. 30 Arc Second Grid and USGS EDCDAAC Version 2.0 Global Land Cover Characteristics Data Base (USGS legend)

Logic: Agricultural activities and the built environment have high impacts on the natural environment. The clearing of natural vegetation for anthropogenic activity has important ecological implications.

Details: This variable measures urbanized (as indicated by lights at night) and agricultural area as a percentage of a country's total area. A complete description of the methodology is included in the main report.

Median: 33.91 **Minimum:** 0.98 **Maximum:** 100

Albania	81.19	Greece	65.65	Norway	14.82
Algeria	2.23	Guatemala	35.70	Pakistan	30.03
Argentina	32.90	Haiti	43.29	Panama	34.32
Armenia	57.09	Honduras	37.39	Papua New Guinea	7.65
Australia	7.07	Hungary	88.47	Paraguay	14.65
Austria	46.41	Iceland	2.81	Peru	8.12
Azerbaijan	67.35	India	69.56	Philippines	85.03
Bangladesh	74.77	Indonesia	29.56	Poland	91.20
Belarus	95.81	Iran	13.78	Portugal	57.92
Belgium	97.88	Ireland	92.47	Romania	70.61
Benin	4.02	Israel	50.77	Russian Federation	16.02
Bhutan	5.76	Italy	65.62	Rwanda	47.42
Bolivia	9.31	Jamaica	31.34	Saudi Arabia	4.14
Botswana	20.46	Japan	41.93	Senegal	18.20
Brazil	26.44	Jordan	7.84	Singapore	100.00
Bulgaria	74.55	Kazakhstan	29.26	Slovak Republic	63.93
Burkina Faso	14.52	Kenya	20.49	Slovenia	47.03
Burundi	60.83	Korea, South	43.24	South Africa	40.69
Cameroon	20.97	Kuwait	27.61	Spain	68.37
Canada	8.51	Kyrgyz Republic	27.89	Sri Lanka	83.54
Central African Republic	12.82	Latvia	75.31	Sudan	5.39
Chile	10.27	Lebanon	64.15	Sweden	16.52
China	30.06	Libya	0.98	Switzerland	51.01
Colombia	18.90	Lithuania	87.90	Syria	27.03
Costa Rica	33.47	Macedonia	71.22	Tanzania	38.79
Croatia	57.28	Madagascar	13.48	Thailand	62.99
Cuba	46.56	Malawi	29.09	Togo	12.11
Czech Republic	79.98	Malaysia	28.70	Trinidad and Tobago	34.82
Denmark	91.28	Mali	2.90	Tunisia	15.82
Dominican Republic	29.98	Mauritius		Turkey	57.16
Ecuador	27.35	Mexico	21.94	Uganda	35.26
Egypt	4.72	Moldova	94.14	Ukraine	89.43
El Salvador	70.09	Mongolia	2.47	United Kingdom	87.75
Estonia	71.89	Morocco	6.63	United States	31.86
Ethiopia	15.75	Mozambique	37.80	Uruguay	58.18
Fiji	5.66	Nepal	46.17	Uzbekistan	28.46
Finland	14.61	Netherlands	92.41	Venezuela	14.25
France	82.83	New Zealand	11.60	Vietnam	56.63
Gabon	8.84	Nicaragua	35.54	Zambia	33.91
Germany	85.01	Niger	1.46	Zimbabwe	54.87
Ghana	23.37	Nigeria	20.62		

Reducing Stresses

Variable Name: NOx Emissions per Populated Land Area

Variable Code: NOXKM **Variable Number:** 14

Units: Metric Tons/Populated Land Area

Reference Year: 1990

Source: RIVM, Emission Database for Global Atmospheric Research (EDGAR)-version 2.0, 1996

Logic: Indicator of air pollution: emissions contribute to declines in air quality.

Details: The gridded emissions data, originally available as 1by1 degree cells (approximately 100 km by 100 km at the equator, decreasing to approximately 100 km by 50 km at a latitude of 60 degrees), were summarized at the country level to give the total emissions for each country. Air pollution is generally greatest in densely populated areas. To take this into account, we used the Gridded Population of the World dataset available from CIESIN and calculated the total land area in each country inhabited with a population density of greater than 5 persons per sq. km. We then utilized this land area as the denominator for the emissions data. A logarithmic transformation of this variable was used in calculating the ESI.

Median: 0.51 **Minimum:** 0.03 **Maximum:** 12.06

Albania	0.76
Algeria	0.22
Argentina	0.12
Armenia	3.43
Australia	2.09
Austria	2.13
Azerbaijan	1.38
Bangladesh	1.68
Belarus	0.79
Belgium	10.42
Benin	0.42
Bhutan	0.06
Bolivia	0.18
Botswana	1.98
Brazil	0.32
Bulgaria	1.11
Burkina Faso	0.15
Burundi	1.43
Cameroon	0.22
Canada	1.39
Central African Republic	0.49
Chile	0.19
China	0.49
Colombia	0.24
Costa Rica	0.23
Croatia	2.94
Cuba	0.32
Czech Republic	2.50
Denmark	7.19
Dominican Republic	0.26
Ecuador	0.35
Egypt	1.18
El Salvador	0.47
Estonia	0.74
Ethiopia	0.15
Fiji	0.09
Finland	0.86
France	1.77
Gabon	0.15
Germany	2.79
Ghana	0.38

Greece	1.39
Guatemala	0.33
Haiti	0.26
Honduras	0.19
Hungary	1.34
Iceland	2.00
India	0.51
Indonesia	0.43
Iran	0.14
Ireland	0.72
Israel	3.13
Italy	1.79
Jamaica	0.56
Japan	3.57
Jordan	0.74
Kazakhstan	0.23
Kenya	0.29
Korea, South	5.06
Kuwait	2.58
Kyrgyz Republic	0.47
Latvia	0.72
Lebanon	2.90
Libya	0.98
Lithuania	1.20
Macedonia	1.06
Madagascar	0.08
Malawi	0.55
Malaysia	0.54
Mali	0.12
Mauritius	0.86
Mexico	0.40
Moldova	2.72
Mongolia	0.23
Morocco	0.16
Mozambique	0.15
Nepal	0.23
Netherlands	12.06
New Zealand	0.31
Nicaragua	0.16
Niger	0.13
Nigeria	0.28

Reducing Air Pollution

Norway	0.78
Pakistan	0.25
Panama	0.20
Papua New Guinea	0.03
Paraguay	0.46
Peru	0.07
Philippines	0.73
Poland	1.08
Portugal	1.11
Romania	0.97
Russian Federation	0.44
Rwanda	2.00
Saudi Arabia	0.18
Senegal	0.35
Singapore	
Slovak Republic	2.53
Slovenia	2.43
South Africa	0.63
Spain	0.75
Sri Lanka	0.32
Sudan	0.15
Sweden	0.63
Switzerland	3.44
Syria	0.43
Tanzania	0.23
Thailand	0.54
Togo	0.51
Trinidad and Tobago	2.24
Tunisia	0.26
Turkey	0.52
Uganda	0.36
Ukraine	1.17
United Kingdom	4.03
United States	1.79
Uruguay	0.25
Uzbekistan	0.69
Venezuela	0.44
Vietnam	0.46
Zambia	0.34
Zimbabwe	0.21

Reducing Stresses

Variable Name: SO2 Emissions per Populated Land Area

Variable Code: SO2KM **Variable Number:** 15

Units: Metric Tons/Populated Land Area

Reference Year: 1990

Source: RIVM, Emission Database for Global Atmospheric Research (EDGAR)-version 2.0, 1996

Logic: Indicator of air pollution: emissions contribute to declines in air quality.

Details: The gridded emissions data, originally available as 1x1 degree cells (approximately 100 km by 100 km at the equator, decreasing to approximately 100 km by 50 km at a latitude of 60 degrees), were summarized at the country level to give the total emissions for each country. Air pollution is generally greatest in densely populated areas. To take this into account, we used the Gridded Population of the World dataset available from CIESIN and calculated the total land area in each country inhabited with a population density of greater than 5 persons per sq. km. We then utilized this land area as the denominator for the emissions data.

Median: 1.17 **Minimum:** 0.02 **Maximum:** 59.12

Reducing Air Pollution

Albania	8.36
Algeria	0.19
Argentina	0.09
Armenia	11.17
Australia	3.85
Austria	5.90
Azerbaijan	3.90
Bangladesh	1.22
Belarus	2.15
Belgium	37.84
Benin	0.15
Bhutan	0.05
Bolivia	0.06
Botswana	1.29
Brazil	0.26
Bulgaria	10.83
Burkina Faso	0.05
Burundi	0.48
Cameroon	0.08
Canada	3.02
Central African Republic	0.17
Chile	3.67
China	2.15
Colombia	0.15
Costa Rica	0.21
Croatia	9.00
Cuba	1.30
Czech Republic	35.15
Denmark	12.86
Dominican Republic	0.51
Ecuador	0.24
Egypt	2.92
El Salvador	0.43
Estonia	2.39
Ethiopia	0.06
Fiji	0.15
Finland	2.62
France	3.81
Gabon	0.07
Germany	9.55

Ghana	0.13
Greece	8.21
Guatemala	0.22
Haiti	0.30
Honduras	0.14
Hungary	7.15
Iceland	1.54
India	0.70
Indonesia	0.68
Iran	0.35
Ireland	1.92
Israel	8.24
Italy	4.10
Jamaica	14.19
Japan	4.02
Jordan	1.65
Kazakhstan	1.17
Kenya	0.12
Korea, South	25.50
Kuwait	2.81
Kyrgyz Republic	2.16
Latvia	1.90
Lebanon	5.89
Libya	1.61
Lithuania	3.22
Macedonia	6.24
Madagascar	0.03
Malawi	0.19
Malaysia	0.87
Mali	0.04
Mauritius	2.08
Mexico	0.68
Moldova	7.70
Mongolia	0.63
Morocco	0.38
Mozambique	0.06
Nepal	0.19
Netherlands	59.12
New Zealand	0.41
Nicaragua	0.11

Niger	0.05
Nigeria	0.11
Norway	1.19
Pakistan	0.24
Panama	0.23
Papua New Guinea	0.02
Paraguay	0.20
Peru	0.17
Philippines	1.82
Poland	6.59
Portugal	3.50
Romania	4.08
Russian Federation	1.40
Rwanda	0.69
Saudi Arabia	0.25
Senegal	0.15
Singapore	
Slovak Republic	16.39
Slovenia	8.12
South Africa	1.26
Spain	1.82
Sri Lanka	0.14
Sudan	0.06
Sweden	1.30
Switzerland	2.59
Syria	0.86
Tanzania	0.08
Thailand	0.76
Togo	0.19
Trinidad and Tobago	0.76
Tunisia	0.94
Turkey	1.57
Uganda	0.13
Ukraine	3.39
United Kingdom	8.95
United States	2.48
Uruguay	0.19
Uzbekistan	2.43
Venezuela	0.27
Vietnam	0.77

Reducing Stresses**Variable Name:** VOCs emissions per populated land area**Variable Code:** VOCKM **Variable Number:** 16**Units:** Metric Tons/Populated Land Area**Reference Year:** 1990**Source:** RIVM, Emission Database for Global Atmospheric Research (EDGAR)-version 2.0, 1996**Logic:** Indicator of air pollution: emissions contribute to declines in air quality.

Details: The gridded emissions data, originally available as 1x1 degree cells (approximately 100 km by 100 km at the equator, decreasing to approximately 100 km North-South side by 50 km East-West side at a latitude of 60 degrees), were summarized at the country level to give the total emissions for each country. Air pollution is generally greatest in densely populated areas. To take this into account, we used the Gridded Population of the World dataset available from CIESIN and calculated the total land area in each country inhabited with a population density of greater than 5 persons per sq. km. We then utilized this land area as the denominator for the emissions data. A logarithmic transformation of this variable was used in calculating the ESI.

Median: 3.30 **Minimum:** 0.25 **Maximum:** 60.53

Albania	3.30
Algeria	2.45
Argentina	0.79
Armenia	8.36
Australia	6.33
Austria	6.88
Azerbaijan	4.46
Bangladesh	20.78
Belarus	2.25
Belgium	23.06
Benin	5.54
Bhutan	0.80
Bolivia	1.24
Botswana	10.39
Brazil	1.89
Bulgaria	3.92
Burkina Faso	1.23
Burundi	14.66
Cameroon	2.05
Canada	5.94
Central African Republic	3.55
Chile	1.10
China	2.49
Colombia	2.78
Costa Rica	1.49
Croatia	11.41
Cuba	1.23
Czech Republic	7.29
Denmark	25.10
Dominican Republic	2.13
Ecuador	4.05
Egypt	8.90
El Salvador	5.07
Estonia	1.54
Ethiopia	1.27
Fiji	0.83
Finland	1.71
France	5.27
Gabon	2.47
Germany	8.62

Ghana	2.99
Greece	5.59
Guatemala	4.02
Haiti	5.05
Honduras	1.83
Hungary	6.24
Iceland	6.39
India	4.87
Indonesia	4.73
Iran	1.56
Ireland	2.15
Israel	9.34
Italy	4.92
Jamaica	3.20
Japan	14.23
Jordan	2.48
Kazakhstan	0.86
Kenya	3.01
Korea, South	14.31
Kuwait	60.53
Kyrgyz Republic	1.65
Latvia	2.31
Lebanon	14.76
Libya	20.13
Lithuania	3.39
Macedonia	3.82
Madagascar	0.78
Malawi	4.78
Malaysia	5.47
Mali	0.81
Mauritius	8.27
Mexico	2.78
Moldova	6.47
Mongolia	0.88
Morocco	0.77
Mozambique	1.24
Nepal	4.04
Netherlands	31.63
New Zealand	1.32
Nicaragua	1.24

Reducing Air Pollution

Niger	1.05
Nigeria	5.15
Norway	2.24
Pakistan	2.50
Panama	1.35
Papua New Guinea	0.25
Paraguay	3.39
Peru	0.77
Philippines	7.22
Poland	2.38
Portugal	2.99
Romania	3.35
Russian Federation	2.52
Rwanda	21.06
Saudi Arabia	5.79
Senegal	2.10
Singapore	
Slovak Republic	7.17
Slovenia	9.38
South Africa	1.81
Spain	2.40
Sri Lanka	4.05
Sudan	1.47
Sweden	1.71
Switzerland	9.25
Syria	3.16
Tanzania	2.08
Thailand	3.60
Togo	4.33
Trinidad and Tobago	18.11
Tunisia	1.72
Turkey	2.21
Uganda	3.38
Ukraine	3.30
United Kingdom	13.50
United States	3.53
Uruguay	1.42
Uzbekistan	1.84
Venezuela	4.98
Vietnam	4.73

Reducing Stresses

Variable Name: Coal Consumption per Populated Land Area

Variable Code: COALKM **Variable Number:** 17

Units: Billion Btu/Populated Land Area

Reference Year: 1998

Source: US Energy Information Agency, available at <http://www.eia.doe.gov/emeu/international/contents.html>

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

Details: Air pollution is generally greatest in densely populated areas. To take this into account, we used the Gridded Population of the World dataset available from CIESIN and calculated the total land area in each country inhabited with a population density of greater than 5 persons per sq. km. We then utilized this land area as the denominator for the coal consumption data. A logarithmic transformation of this variable was used in calculating the ESI.

Median: 0.28 **Minimum:** 0.01 **Maximum:** 15.43

Reducing Air Pollution

Albania	0.01	Greece	2.57	Norway	0.38
Algeria	0.06	Guatemala		Pakistan	0.12
Argentina	0.02	Haiti		Panama	0.03
Armenia		Honduras		Papua New Guinea	
Australia	7.20	Hungary	1.84	Paraguay	0.01
Austria	1.55	Iceland	1.55	Peru	0.02
Azerbaijan		India	2.31	Philippines	0.38
Bangladesh		Indonesia	0.27	Poland	7.51
Belarus	0.07	Iran	0.03	Portugal	1.22
Belgium	10.70	Ireland	1.11	Romania	1.22
Benin		Israel	13.31	Russian Federation	1.07
Bhutan	0.01	Italy	1.55	Rwanda	
Bolivia		Jamaica	0.18	Saudi Arabia	
Botswana	0.49	Japan	7.82	Senegal	
Brazil	0.14	Jordan		Singapore	0.06
Bulgaria	2.95	Kazakhstan	0.67	Slovak Republic	3.96
Burkina Faso		Kenya	0.01	Slovenia	3.57
Burundi		Korea, South	15.43	South Africa	5.50
Cameroon		Kuwait		Spain	1.33
Canada	2.32	Kyrgyz Republic	0.11	Sri Lanka	
Central African Republic		Latvia	0.12	Sudan	
Chile	0.43	Lebanon	0.56	Sweden	0.34
China	3.86	Libya		Switzerland	0.05
Colombia	0.22	Lithuania	0.07	Syria	
Costa Rica	0.01	Macedonia	2.32	Tanzania	
Croatia	0.23	Madagascar		Thailand	0.57
Cuba	0.02	Malawi	0.02	Togo	
Czech Republic	12.04	Malaysia	0.19	Trinidad and Tobago	
Denmark	3.16	Mali		Tunisia	0.03
Dominican Republic	0.08	Mauritius	1.10	Turkey	1.00
Ecuador		Mexico	0.18	Uganda	
Egypt	0.37	Moldova	0.25	Ukraine	3.22
El Salvador		Mongolia	0.60	United Kingdom	5.81
Estonia	0.29	Morocco	0.28	United States	4.89
Ethiopia		Mozambique		Uruguay	
Fiji	0.03	Nepal	0.02	Uzbekistan	0.09
Finland	0.82	Netherlands	10.67	Venezuela	
France	1.06	New Zealand	0.56	Vietnam	0.51
Gabon		Nicaragua		Zambia	0.01
Germany	8.76	Niger	0.01	Zimbabwe	0.38
Ghana		Nigeria			

Reducing Stresses**Variable Name:** Vehicles Per Populated Land Area**Variable Code:** CARSKM**Variable Number:** 18**Units:** Vehicles/Populated Land Area**Reference Year:** MRYA 1996-1998**Source:** World Bank, World Development Indicators 2000**Logic:** Proxy for environmental impacts associated with production, use and disposal of motor vehicles and the transportation infrastructure that supports them.**Details:** Air pollution is generally greatest in densely populated areas. To take this into account, we used the Gridded Population of the World dataset available from CIESIN and calculated the total land area in each country inhabited with a population density of greater than 5 persons per sq. km. We then utilized this land area as the denominator for the vehicles data. A logarithmic transformation of this variable was used in calculating the ESI.**Median:** 5.26 **Minimum:** 0.01 **Maximum:** 1041.12.**Reducing Air Pollution**

Albania	4.57
Algeria	4.11
Argentina	4.54
Armenia	0.19
Australia	48.23
Austria	50.97
Azerbaijan	4.17
Bangladesh	0.94
Belarus	5.60
Belgium	149.66
Benin	0.42
Bhutan	0.08
Bolivia	0.89
Botswana	1.54
Brazil	3.94
Bulgaria	19.11
Burkina Faso	0.22
Burundi	
Cameroon	0.43
Canada	33.63
Central African Republic	0.01
Chile	5.21
China	1.74
Colombia	2.66
Costa Rica	9.53
Croatia	
Cuba	3.26
Czech Republic	53.52
Denmark	51.16
Dominican Republic	7.55
Ecuador	3.60
Egypt	16.98
El Salvador	17.49
Estonia	12.74
Ethiopia	0.10
Fiji	3.15
Finland	15.19
France	56.34
Gabon	0.34
Germany	
Ghana	0.61

Greece	26.89
Guatemala	2.12
Haiti	2.07
Honduras	2.39
Hungary	29.48
Iceland	106.51
India	2.21
Indonesia	2.90
Iran	1.42
Ireland	16.66
Israel	76.64
Italy	115.24
Jamaica	11.15
Japan	187.46
Jordan	7.78
Kazakhstan	1.07
Kenya	1.34
Korea, South	104.45
Kuwait	44.91
Kyrgyz Republic	0.77
Latvia	9.40
Lebanon	
Libya	30.23
Lithuania	16.80
Macedonia	12.21
Madagascar	0.16
Malawi	0.51
Malaysia	10.99
Mali	0.11
Mauritius	70.72
Mexico	10.42
Moldova	8.65
Mongolia	0.90
Morocco	4.11
Mozambique	0.02
Nepal	
Netherlands	193.80
New Zealand	27.08
Nicaragua	1.33
Niger	0.19
Nigeria	2.99

Norway	19.13
Pakistan	1.46
Panama	5.04
Papua New Guinea	0.27
Paraguay	0.78
Peru	1.39
Philippines	7.43
Poland	34.69
Portugal	37.68
Romania	13.17
Russian Federation	5.71
Rwanda	0.79
Saudi Arabia	3.89
Senegal	0.64
Singapore	1,041.12
Slovak Republic	28.27
Slovenia	43.63
South Africa	7.72
Spain	37.06
Sri Lanka	9.70
Sudan	0.21
Sweden	18.44
Switzerland	94.59
Syria	2.23
Tanzania	0.16
Thailand	12.04
Togo	2.14
Trinidad and Tobago	26.85
Tunisia	6.03
Turkey	6.70
Uganda	0.42
Ukraine	8.24
United Kingdom	106.38
United States	47.02
Uruguay	4.29
Uzbekistan	
Venezuela	5.26
Vietnam	
Zambia	0.53
Zimbabwe	0.98

Reducing Stresses

Variable Name: Fertilizer Consumption per Hectare of Arable Land

Variable Code: FERTHA **Variable Number:** 19

Units: Hundreds Grams/Hectare of Arable Land

Reference Year: 1997

Source: World Bank, World Development Indicators 2000

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 problems.

Details: A logarithmic transformation of this variable was used in calculating the ESI.

Median: 788.92 **Minimum:** 1.19 **Maximum:** 32133.33

Reducing Water Stress

Albania	88.39
Algeria	128.90
Argentina	332.88
Armenia	161.94
Australia	427.42
Austria	1,664.28
Azerbaijan	135.77
Bangladesh	1,354.75
Belarus	1,190.28
Belgium	4,166.67
Benin	256.33
Bhutan	7.14
Bolivia	67.52
Botswana	109.33
Brazil	1,030.17
Bulgaria	439.80
Burkina Faso	125.60
Burundi	59.74
Cameroon	56.21
Canada	604.35
Central African Republic	1.55
Chile	2,194.75
China	2,898.88
Colombia	2,885.95
Costa Rica	9,017.91
Croatia	1,776.23
Cuba	552.81
Czech Republic	1,015.19
Denmark	1,882.45
Dominican Republic	955.88
Ecuador	1,064.80
Egypt	3,565.63
El Salvador	1,633.63
Estonia	237.59
Ethiopia	133.79
Fiji	960.00
Finland	1,453.43
France	2,770.83
Gabon	6.15
Germany	2,414.54
Ghana	74.95

Greece	1,792.42
Guatemala	1,571.22
Haiti	173.21
Honduras	781.71
Hungary	891.32
Iceland	32,133.33
India	999.99
Indonesia	1,372.83
Iran	649.25
Ireland	5,026.06
Israel	3,410.26
Italy	2,222.62
Jamaica	1,258.62
Japan	3,856.96
Jordan	890.00
Kazakhstan	42.17
Kenya	333.25
Korea, South	5,257.54
Kuwait	2,000.00
Kyrgyz Republic	229.63
Latvia	216.67
Lebanon	3,344.72
Libya	340.50
Lithuania	466.06
Macedonia	766.83
Madagascar	36.97
Malawi	358.36
Malaysia	6,593.41
Mali	103.78
Mauritius	3,645.60
Mexico	636.11
Moldova	678.25
Mongolia	15.16
Morocco	347.35
Mozambique	22.03
Nepal	375.78
Netherlands	5,566.67
New Zealand	4,443.73
Nicaragua	201.25
Niger	19.02
Nigeria	48.76

Norway	2,308.20
Pakistan	1,264.30
Panama	672.00
Papua New Guinea	2,166.67
Paraguay	154.55
Peru	470.81
Philippines	1,582.79
Poland	1,140.54
Portugal	1,110.08
Romania	338.71
Russian Federation	132.51
Rwanda	4.71
Saudi Arabia	883.24
Senegal	102.69
Singapore	20,630.00
Slovak Republic	796.14
Slovenia	3,202.25
South Africa	507.75
Spain	1,437.19
Sri Lanka	2,428.87
Sudan	46.35
Sweden	1,104.17
Switzerland	2,509.52
Syria	772.07
Tanzania	174.10
Thailand	865.55
Togo	67.15
Trinidad and Tobago	1,413.33
Tunisia	329.31
Turkey	686.90
Uganda	1.19
Ukraine	268.32
United Kingdom	3,299.37
United States	1,141.83
Uruguay	1,022.22
Uzbekistan	1,229.05
Venezuela	1,121.21
Vietnam	2,773.29
Zambia	111.13
Zimbabwe	587.66

Reducing Stresses

Variable Name: Pesticide Use per Hectare of Crop Land

Variable Code: PESTHA Variable Number: 20

Units: Kg/Hectare of Cropland

Reference Year: 1996

Source: World Resource Institute, *World Resources 2000-2001*, Washington, DC: WRI, 2000.

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

Details:

Median: 1217.5 Minimum: 1 Maximum: 19288.

Reducing Water Stress

Albania	435.00
Algeria	835.00
Argentina	1,266.00
Armenia	
Australia	2,535.00
Austria	2,710.00
Azerbaijan	
Bangladesh	176.00
Belarus	
Belgium	
Benin	
Bhutan	670.00
Bolivia	1,514.00
Botswana	40.00
Brazil	836.00
Bulgaria	966.00
Burkina Faso	1.00
Burundi	268.00
Cameroon	253.00
Canada	644.00
Central African Republic	12.00
Chile	3,240.00
China	
Colombia	6,134.00
Costa Rica	18,726.00
Croatia	3,060.00
Cuba	
Czech Republic	1,169.00
Denmark	2,200.00
Dominican Republic	
Ecuador	1,696.00
Egypt	1,293.00
El Salvador	2,642.00
Estonia	105.00
Ethiopia	34.00
Fiji	2,333.00
Finland	410.00
France	
Gabon	
Germany	2,085.00
Ghana	2,333.00

Greece	
Guatemala	574.00
Haiti	23.00
Honduras	6,521.00
Hungary	2,863.00
Iceland	
India	436.00
Indonesia	88.00
Iran	1,881.00
Ireland	
Israel	
Italy	19,288.00
Jamaica	
Japan	
Jordan	1,495.00
Kazakhstan	
Kenya	
Korea, South	13,829.00
Kuwait	
Kyrgyz Republic	1,860.00
Latvia	208.00
Lebanon	
Libya	
Lithuania	312.00
Macedonia	7,718.00
Madagascar	28.00
Malawi	
Malaysia	5,982.00
Mali	136.00
Mauritius	
Mexico	
Moldova	1,434.00
Mongolia	
Morocco	
Mozambique	
Nepal	21.00
Netherlands	11,842.00
New Zealand	2,215.00
Nicaragua	357.00
Niger	
Nigeria	

Norway	941.00
Pakistan	365.00
Panama	
Papua New Guinea	1,750.00
Paraguay	1,542.00
Peru	
Philippines	
Poland	490.00
Portugal	2,584.00
Romania	1,617.00
Russian Federation	407.00
Rwanda	260.00
Saudi Arabia	
Senegal	183.00
Singapore	
Slovak Republic	4,148.00
Slovenia	6,389.00
South Africa	57.00
Spain	
Sri Lanka	6,271.00
Sudan	106.00
Sweden	509.00
Switzerland	4,576.00
Syria	
Tanzania	
Thailand	1,116.00
Togo	95.00
Trinidad and Tobago	11,827.00
Tunisia	
Turkey	1,145.00
Uganda	17.00
Ukraine	2,001.00
United Kingdom	4,745.00
United States	1,599.00
Uruguay	1,316.00
Uzbekistan	
Venezuela	1,403.00
Vietnam	
Zambia	317.00
Zimbabwe	531.00

Reducing Stresses

Variable Name: Industrial Organic Pollutants per available freshwater

Variable Code: BODWAT **Variable Number:** 21

Units: Kg of Biochemical Oxygen Demand (BOD) Emissions/Cubic Km of Water

Reference Year: 1996

Source: World Bank, World Development Indicators 2000 and Center for Environmental Systems Research, University of Kassel, WaterGap 2.1, 2000

Logic: Emissions of organic pollutants from industrial activities cause water quality degradation. Given these considerations, BOD emissions have been normalized per amount of freshwater availability.

Details: These are modeled emissions data from the World Bank, measuring organic pollutants in terms of Biochemical Oxygen Demand (BOD).

Median: 892.38 **Minimum:** 30.72 **Maximum:** 18083.68

Reducing Water Stress

Albania	233.77
Algeria	8,580.76
Argentina	
Armenia	2,143.00
Australia	
Austria	876.85
Azerbaijan	
Bangladesh	
Belarus	
Belgium	
Benin	
Bhutan	
Bolivia	
Botswana	243.67
Brazil	
Bulgaria	422.52
Burkina Faso	
Burundi	
Cameroon	48.84
Canada	116.28
Central African Republic	
Chile	252.08
China	3,248.13
Colombia	36.68
Costa Rica	336.47
Croatia	322.67
Cuba	
Czech Republic	
Denmark	5,674.21
Dominican Republic	
Ecuador	91.96
Egypt	
El Salvador	910.26
Estonia	
Ethiopia	160.24
Fiji	
Finland	608.04
France	2,469.97
Gabon	
Germany	
Ghana	

Greece	1,273.13
Guatemala	
Haiti	
Honduras	
Hungary	1,118.41
Iceland	
India	892.38
Indonesia	324.63
Iran	
Ireland	666.54
Israel	18,083.68
Italy	
Jamaica	2,188.43
Japan	4,504.89
Jordan	15,225.22
Kazakhstan	
Kenya	
Korea, South	5,965.52
Kuwait	
Kyrgyz Republic	
Latvia	759.91
Lebanon	
Libya	
Lithuania	
Macedonia	4,697.95
Madagascar	
Malawi	
Malaysia	391.01
Mali	
Mauritius	17,424.19
Mexico	
Moldova	
Mongolia	
Morocco	7,691.03
Mozambique	30.72
Nepal	175.83
Netherlands	1,349.91
New Zealand	
Nicaragua	
Niger	
Nigeria	

Norway	188.19
Pakistan	
Panama	138.97
Papua New Guinea	
Paraguay	
Peru	
Philippines	691.06
Poland	5,669.83
Portugal	2,462.13
Romania	
Russian Federation	475.66
Rwanda	
Saudi Arabia	
Senegal	601.34
Singapore	
Slovak Republic	
Slovenia	1,216.60
South Africa	3,719.32
Spain	3,566.38
Sri Lanka	
Sudan	
Sweden	604.04
Switzerland	3,018.35
Syria	
Tanzania	
Thailand	
Togo	
Trinidad and Tobago	
Tunisia	11,451.51
Turkey	1,011.98
Uganda	
Ukraine	5,800.97
United Kingdom	3,571.12
United States	1,122.61
Uruguay	32.54
Uzbekistan	
Venezuela	68.63
Vietnam	
Zambia	
Zimbabwe	415.29

Reducing Stresses

Reducing Water Stress

Variable Name: Percentage of Country's Territory Under Severe Water Availability Stress

Variable Code: WATSTR

Variable Number: 22

Units: Percent of Land Area

Reference Year: 1961-1990 (avg.)

Source: Center for Environmental Systems Research, University of Kassel, WaterGAP 2.1B, 2001

Logic: The regional distribution of water availability relative to population and consumption needs is more important than 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.

Details: 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 identified grid cells in which water consumption exceeds 40 percent of the water available in that particular grid cell. These were then converted to land area equivalents, and the percentage of the territory under severe water stress was calculated.

Median: 4.5

Minimum: 0

Maximum: 100

Albania	19.50
Algeria	71.00
Argentina	23.30
Armenia	84.60
Australia	8.00
Austria	0.00
Azerbaijan	95.40
Bangladesh	22.10
Belarus	0.00
Belgium	93.90
Benin	0.00
Bhutan	0.00
Bolivia	14.00
Botswana	14.20
Brazil	0.30
Bulgaria	45.90
Burkina Faso	0.00
Burundi	0.00
Cameroon	0.00
Canada	0.90
Central African Republic	0.00
Chile	41.10
China	44.70
Colombia	1.00
Costa Rica	0.00
Croatia	0.00
Cuba	24.60
Czech Republic	0.00
Denmark	7.70
Dominican Republic	4.50
Ecuador	1.20
Egypt	88.10
El Salvador	0.00
Estonia	0.30
Ethiopia	24.70
Fiji	0.00
Finland	2.10
France	19.40
Gabon	0.00
Germany	1.10
Ghana	0.00

Greece	58.00
Guatemala	0.00
Haiti	0.00
Honduras	0.00
Hungary	0.00
Iceland	0.00
India	80.20
Indonesia	1.40
Iran	87.50
Ireland	0.00
Israel	100.00
Italy	26.30
Jamaica	0.00
Japan	9.50
Jordan	82.60
Kazakhstan	60.40
Kenya	1.10
Korea, South	49.80
Kuwait	97.70
Kyrgyz Republic	93.00
Latvia	0.00
Lebanon	82.10
Libya	83.70
Lithuania	0.40
Macedonia	91.60
Madagascar	1.70
Malawi	0.00
Malaysia	1.60
Mali	2.70
Mauritius	0.00
Mexico	43.80
Moldova	6.30
Mongolia	8.10
Morocco	81.50
Mozambique	13.60
Nepal	98.10
Netherlands	36.00
New Zealand	0.00
Nicaragua	0.30
Niger	40.50
Nigeria	17.80

Norway	0.40
Pakistan	76.30
Panama	0.00
Papua New Guinea	0.00
Paraguay	0.00
Peru	23.60
Philippines	10.40
Poland	0.00
Portugal	54.70
Romania	1.70
Russian Federation	3.80
Rwanda	0.00
Saudi Arabia	88.30
Senegal	5.00
Singapore	
Slovak Republic	0.00
Slovenia	0.00
South Africa	68.50
Spain	72.30
Sri Lanka	39.50
Sudan	31.10
Sweden	0.60
Switzerland	0.00
Syria	99.60
Tanzania	0.00
Thailand	0.60
Togo	0.00
Trinidad and Tobago	100.00
Tunisia	89.00
Turkey	61.70
Uganda	0.00
Ukraine	17.00
United Kingdom	21.00
United States	31.30
Uruguay	0.00
Uzbekistan	87.10
Venezuela	2.40
Vietnam	2.80
Zambia	0.00
Zimbabwe	16.20

Reducing Stresses

Variable Name: Percentage Change in Forest Cover 1990-1995

Variable Code: FOREST **Variable Number:** 23

Units: Percent Change

Reference Year: 1995

Source: Forest Resources Assessment Programme 2000, Working Paper 1, Rome 1998, Forest Department FAO. Originally published in the *State of the World's Forests 1997* (FAO, 1997).

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 (Forest Resources Assessment).

Details: Values for Croatia, Czech Republic, Estonia, Hungary and Latvia disagreed with national reports so values were replaced with those from World Resources 2000-2001, FG1. The 1995 figures are the most current global data set on forest cover and forest cover change available according to the FAO. A logarithmic transformation of this variable was used in calculating the ESI.

Median: -0.02 **Minimum:** -0.33 **Maximum:** 0.14

Albania		Greece	0.12	Norway	0.02
Algeria	-0.06	Guatemala	-0.10	Pakistan	-0.14
Argentina	-0.01	Haiti	-0.16	Panama	-0.10
Armenia	0.14	Honduras	-0.11	Papua New Guinea	-0.02
Australia		Hungary	0.07	Paraguay	-0.12
Austria		Iceland		Peru	-0.02
Azerbaijan		India		Philippines	-0.16
Bangladesh	-0.04	Indonesia	-0.05	Poland	0.01
Belarus	0.05	Iran	-0.08	Portugal	0.04
Belgium		Ireland	0.14	Romania	
Benin	-0.06	Israel		Russian Federation	
Bhutan	-0.02	Italy		Rwanda	-0.01
Bolivia	-0.06	Jamaica	-0.31	Saudi Arabia	-0.04
Botswana	-0.02	Japan		Senegal	-0.03
Brazil	-0.02	Jordan	-0.12	Singapore	
Bulgaria		Kazakhstan	0.10	Slovak Republic	0.01
Burkina Faso	-0.04	Kenya	-0.01	Slovenia	
Burundi	-0.02	Korea, South	-0.01	South Africa	-0.01
Cameroon	-0.03	Kuwait		Spain	
Canada		Kyrgyz Republic		Sri Lanka	-0.05
Central African Republic	-0.02	Latvia		Sudan	-0.04
Chile	-0.02	Lebanon	-0.33	Sweden	
China		Libya		Switzerland	
Colombia	-0.02	Lithuania	0.03	Syria	-0.11
Costa Rica	-0.14	Macedonia		Tanzania	-0.05
Croatia		Madagascar	-0.04	Thailand	-0.12
Cuba	-0.06	Malawi	-0.08	Togo	-0.07
Czech Republic	0.04	Malaysia	-0.11	Trinidad and Tobago	-0.07
Denmark		Mali	-0.05	Tunisia	-0.03
Dominican Republic	-0.08	Mauritius		Turkey	
Ecuador	-0.08	Mexico	-0.04	Uganda	-0.05
Egypt		Moldova		Ukraine	
El Salvador	-0.15	Mongolia		United Kingdom	0.03
Estonia	0.02	Morocco	-0.02	United States	0.01
Ethiopia	-0.02	Mozambique	-0.03	Uruguay	
Fiji	-0.02	Nepal	-0.05	Uzbekistan	0.14
Finland		Netherlands		Venezuela	-0.05
France	0.06	New Zealand	0.03	Vietnam	-0.07
Gabon	-0.02	Nicaragua	-0.12	Zambia	-0.04
Germany		Niger		Zimbabwe	-0.03
Ghana	-0.06	Nigeria	-0.04		

Reducing Stresses

Reducing Ecosystem Stresses

Variable Name: Percentage of Country's territory with Acidification Exceedance

Variable Code: AC_EXC **Variable Number:** 24

Units: Percent Land Area

Reference Year: 1990

Source: Stockholm Environment Institute at York, Acidification in developing countries: ecosystem sensitivity and the critical loads approach at the global scale, 2000

Logic: Exceedance of critical SO₂ loading represents an indicator for ecosystems under stress due to acidification from anthropogenic sulphur 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".

Details: From a map of acidification exceedance, the areas at risk were summed within each country and then the percentage of a country at risk of exceedance was calculated. See the main report for more details on how the acidification exceedance map was produced.

Median: 0 **Minimum:** 0 **Maximum:** 97.48

Albania	2.54	Greece	2.77	Norway	15.96
Algeria	0.00	Guatemala	0.00	Pakistan	0.00
Argentina	0.00	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	0.00	Papua New Guinea	0.00
Australia	0.00	Hungary	4.93	Paraguay	0.00
Austria	50.81	Iceland	0.00	Peru	0.00
Azerbaijan	0.00	India	0.00	Philippines	0.00
Bangladesh	0.00	Indonesia	8.15	Poland	53.45
Belarus	4.91	Iran	0.00	Portugal	3.24
Belgium	75.83	Ireland	54.16	Romania	19.27
Benin	0.00	Israel	0.00	Russian Federation	0.33
Bhutan	0.00	Italy	17.94	Rwanda	0.00
Bolivia	0.00	Jamaica	0.00	Saudi Arabia	0.00
Botswana	0.00	Japan	10.99	Senegal	0.00
Brazil	0.00	Jordan	0.00	Singapore	0.00
Bulgaria	14.10	Kazakhstan	0.00	Slovak Republic	27.23
Burkina Faso	0.00	Kenya	0.00	Slovenia	40.11
Burundi	0.00	Korea, South	58.90	South Africa	0.00
Cameroon	0.00	Kuwait	0.00	Spain	3.65
Canada	5.39	Kyrgyz Republic	0.00	Sri Lanka	0.00
Central African Republic	0.00	Latvia	1.95	Sudan	0.00
Chile	0.00	Lebanon	0.00	Sweden	34.37
China	15.66	Libya	0.00	Switzerland	36.90
Colombia	0.00	Lithuania	0.00	Syria	0.00
Costa Rica	0.00	Macedonia	97.48	Tanzania	0.00
Croatia	4.69	Madagascar	0.00	Thailand	0.27
Cuba	0.00	Malawi	0.00	Togo	0.00
Czech Republic	89.22	Malaysia	0.00	Trinidad and Tobago	0.00
Denmark	54.88	Mali	0.00	Tunisia	0.00
Dominican Republic	0.00	Mauritius	0.00	Turkey	0.02
Ecuador	0.00	Mexico	0.68	Uganda	0.00
Egypt	0.00	Moldova	0.00	Ukraine	4.27
El Salvador	0.00	Mongolia	0.00	United Kingdom	45.75
Estonia	0.00	Morocco	0.00	United States	13.74
Ethiopia	0.00	Mozambique	0.00	Uruguay	0.00
Fiji	0.00	Nepal	0.00	Uzbekistan	0.00
Finland	1.19	Netherlands	43.81	Venezuela	0.00
France	18.84	New Zealand	0.00	Vietnam	32.17
Gabon	0.00	Nicaragua	0.00	Zambia	5.13
Germany	51.88	Niger	0.00	Zimbabwe	0.00
Ghana	0.00	Nigeria	0.00		

Reducing Stresses

Reducing Waste and Consumption Pressures

Variable Name: Consumption Pressure per capita

Variable Code: PRESS **Variable Number:** 25

Units: Consumption as a Proportion of Global Average

Reference Year: 1996

Source: World Wide Fund for Nature, *Living Planet Report*. Gland, Switzerland: WWF, 1999.

Logic: Higher level of consumption pressure produce higher levels of environmental stress, both in terms of resource depletion and waste disposal.

Details: The Consumption Pressure Index was calculated using the same methodology used by WWF for the 1998 Living Planet report, but using only grain-equivalent, fish, wood-equivalent and cement consumption per person. For each commodity, a country's per capita average was divided by the the global per person average, giving a relative score. The relative scores for all the 4 components were then averaged to give the consumption pressure per person for that country.

Median: 0.89 **Minimum:** 0.30 **Maximum:** 5.70

Albania	0.56	Greece	1.41	Norway	2.47
Algeria	0.65	Guatemala	0.87	Pakistan	0.35
Argentina	0.86	Haiti	0.58	Panama	0.86
Armenia	0.39	Honduras	0.82	Papua New Guinea	1.39
Australia	1.53	Hungary	1.00	Paraguay	1.39
Austria	1.80	Iceland		Peru	0.78
Azerbaijan	0.30	India	0.44	Philippines	1.21
Bangladesh	0.46	Indonesia	0.99	Poland	1.17
Belarus	1.19	Iran	0.62	Portugal	2.33
Belgium		Ireland	1.59	Romania	0.78
Benin	0.92	Israel	1.87	Russian Federation	1.03
Bhutan	0.90	Italy	1.62	Rwanda	0.54
Bolivia	0.49	Jamaica	0.88	Saudi Arabia	1.17
Botswana	1.02	Japan	2.49	Senegal	1.02
Brazil	1.16	Jordan	0.82	Singapore	5.70
Bulgaria	0.75	Kazakhstan	0.77	Slovak Republic	0.86
Burkina Faso	0.65	Kenya	0.91	Slovenia	1.40
Burundi	0.59	Korea, South	2.62	South Africa	0.91
Cameroon	0.85	Kuwait	2.47	Spain	1.83
Canada	1.80	Kyrgyz Republic	0.40	Sri Lanka	0.74
Central African Republic	0.64	Latvia	2.04	Sudan	0.48
Chile	1.26	Lebanon	1.79	Sweden	1.87
China	1.11	Libya	1.12	Switzerland	1.55
Colombia	0.65	Lithuania	1.46	Syria	0.58
Costa Rica	1.24	Macedonia	0.78	Tanzania	0.89
Croatia	0.89	Madagascar	0.57	Thailand	1.45
Cuba	0.57	Malawi	0.69	Togo	0.72
Czech Republic	1.22	Malaysia	2.69	Trinidad and Tobago	0.64
Denmark	1.90	Mali	0.72	Tunisia	0.97
Dominican Republic	0.64	Mauritius	1.30	Turkey	1.12
Ecuador	0.97	Mexico	0.74	Uganda	0.63
Egypt	0.73	Moldova	0.32	Ukraine	0.66
El Salvador	0.74	Mongolia	0.50	United Kingdom	1.17
Estonia	1.55	Morocco	0.71	United States	2.10
Ethiopia	0.55	Mozambique	0.57	Uruguay	1.36
Fiji		Nepal	0.65	Uzbekistan	0.49
Finland	2.14	Netherlands	1.22	Venezuela	0.75
France	1.57	New Zealand	1.69	Vietnam	0.74
Gabon	1.22	Nicaragua	0.62	Zambia	1.10
Germany	1.45	Niger	0.52	Zimbabwe	0.65
Ghana	1.18	Nigeria	0.80		

Reducing Stresses

Reducing Waste and Consumption Pressures

Variable Name: Radioactive Waste

Variable Code: NUKE **Variable Number:** 26

Units: Standardized Scale (Z score)

Reference Year: 1996

Source: International Atomic Energy Agency, Waste Management Database, 1997

Logic: Radioactive waste, as a source of ionizing radiation, has long been recognized as a potential hazard to human health. Many practices in the fields of research, medicine, industry and generation of electricity generate waste that requires management to ensure the protection of human health and the environment now and in the future, without imposing undue burdens on future generations (The Principle of Radioactive Waste Management, IAEA, 1997).

Details: Two variables were initially available for Radioactive Waste: Accumulated Quantity (cubic meters) as generated and Accumulated Quantity (cubic meters) after treatment. We calculated the Z scores for the two variables, in order to make them comparable, and took the one available for each country. For the three countries (Australia, Canada and Czech Republic) which had both variables, we took the higher.

Median: -0.33 **Minimum:** -0.36 **Maximum:** 4.36

Albania	-0.33	Ghana		Niger	
Algeria		Greece		Nigeria	
Argentina	-0.35	Guatemala	-0.33	Norway	-0.35
Armenia		Haiti		Pakistan	
Australia	-0.34	Honduras		Panama	
Austria		Hungary	-0.34	Papua New Guinea	
Azerbaijan		Iceland		Paraguay	
Bangladesh		India	-0.06	Peru	
Belarus	-0.32	Indonesia	-0.36	Philippines	
Belgium	-0.31	Iran	-0.33	Poland	-0.35
Benin		Ireland		Portugal	-0.36
Bhutan		Israel		Romania	-0.31
Bolivia		Italy	-0.19	Russian Federation	
Botswana		Jamaica		Rwanda	
Brazil	-0.34	Japan		Saudi Arabia	
Bulgaria	-0.20	Jordan		Senegal	
Burkina Faso		Kazakhstan		Singapore	
Burundi		Kenya		Slovak Republic	-0.24
Cameroon		Korea, South	-0.30	Slovenia	-0.35
Canada	0.66	Kuwait		South Africa	-0.23
Central African Republic		Kyrgyz Republic		Spain	-0.26
Chile	-0.36	Latvia		Sri Lanka	
China		Lebanon		Sudan	
Colombia		Libya		Sweden	-0.23
Costa Rica		Lithuania	-0.10	Switzerland	-0.32
Croatia		Macedonia		Syria	
Cuba	-0.33	Madagascar		Tanzania	
Czech Republic	-0.28	Malawi		Thailand	-0.36
Denmark	-0.35	Malaysia	-0.33	Togo	
Dominican Republic		Mali		Trinidad and Tobago	
Ecuador		Mauritius		Tunisia	-0.33
Egypt	-0.33	Mexico	-0.33	Turkey	-0.36
El Salvador		Moldova		Uganda	
Estonia	-0.36	Mongolia		Ukraine	4.36
Ethiopia		Morocco		United Kingdom	3.98
Fiji		Mozambique		United States	1.67
Finland	-0.34	Nepal		Uruguay	
France	2.18	Netherlands	-0.32	Uzbekistan	-0.33
Gabon		New Zealand		Venezuela	
Germany	0.19	Nicaragua		Vietnam	

Reducing Stresses

Reducing Population Pressure

Variable Name: Total Fertility Rate

Variable Code: TFR Variable Number: 27

Units: Average Number of Births Per Woman

Reference Year: 2000

Source: Population Reference Bureau, *2000 World Population Data Sheet*, Washington, DC: PRB, 2000.

Logic: Fertility affects population growth and thus resource and consumption pressure. High levels of fertility are environmentally unsustainable.

Details:

Median: 2.74 Minimum: 1.11 Maximum: 7.5

Albania	2.16	Greece	1.29	Norway	1.81
Algeria	3.81	Guatemala	5.00	Pakistan	5.60
Argentina	2.62	Haiti	4.72	Panama	2.60
Armenia	1.30	Honduras	4.41	Papua New Guinea	4.84
Australia	1.70	Hungary	1.30	Paraguay	4.30
Austria	1.32	Iceland	2.05	Peru	3.40
Azerbaijan	1.87	India	3.34	Philippines	3.69
Bangladesh	3.27	Indonesia	2.78	Poland	1.39
Belarus	1.28	Iran	2.92	Portugal	1.46
Belgium	1.56	Ireland	1.93	Romania	1.32
Benin	6.32	Israel	2.92	Russian Federation	1.18
Bhutan	5.60	Italy	1.19	Rwanda	6.50
Bolivia	4.20	Jamaica	2.58	Saudi Arabia	6.37
Botswana	4.10	Japan	1.35	Senegal	5.70
Brazil	2.44	Jordan	4.40	Singapore	1.48
Bulgaria	1.11	Kazakhstan	1.70	Slovak Republic	1.38
Burkina Faso	6.80	Kenya	4.70	Slovenia	1.23
Burundi	6.48	Korea, South	1.48	South Africa	2.90
Cameroon	5.20	Kuwait	3.19	Spain	1.15
Canada	1.48	Kyrgyz Republic	2.83	Sri Lanka	2.06
Central African Republic	5.07	Latvia	1.16	Sudan	4.57
Chile	2.44	Lebanon	2.35	Sweden	1.49
China	1.80	Libya	4.10	Switzerland	1.46
Colombia	3.00	Lithuania	1.35	Syria	4.70
Costa Rica	3.20	Macedonia	1.93	Tanzania	5.63
Croatia	1.45	Madagascar	5.97	Thailand	1.90
Cuba	1.55	Malawi	5.90	Togo	6.12
Czech Republic	1.14	Malaysia	3.20	Trinidad and Tobago	1.68
Denmark	1.72	Mali	6.70	Tunisia	2.84
Dominican Republic	3.10	Mauritius	2.03	Turkey	2.46
Ecuador	3.30	Mexico	2.65	Uganda	6.86
Egypt	3.30	Moldova	1.51	Ukraine	1.28
El Salvador	3.58	Mongolia	2.69	United Kingdom	1.70
Estonia	1.21	Morocco	3.10	United States	2.07
Ethiopia	6.70	Mozambique	5.62	Uruguay	2.26
Fiji	3.30	Nepal	4.60	Uzbekistan	2.85
Finland	1.72	Netherlands	1.59	Venezuela	2.90
France	1.77	New Zealand	1.97	Vietnam	2.50
Gabon	5.40	Nicaragua	4.40	Zambia	6.08
Germany	1.32	Niger	7.50	Zimbabwe	4.00
Ghana	4.48	Nigeria	5.99		

Reducing Stresses

Reducing Population Pressure

Variable Name: Percentage Change in Projected Population Between 2000 and 2050

Variable Code: GR2050 **Variable Number:** 28

Units: Percent Change in Population

Reference Year: 2000

Source: Population Reference Bureau, *2000 World Population Data Sheet*, Washington, DC: PRB, 2000.

Logic: The projected change in population between 2000 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.

Details: A lower threshold of 0 was applied in calculating the ESI. All countries with growth rates of 0 or below received the same score.

Median: 47.17 **Minimum:** -34.96 **Maximum:** 260.7

Albania	51.71	Greece	-8.93	Norway	13.02
Algeria	83.44	Guatemala	154.03	Pakistan	89.20
Argentina	47.17	Haiti	84.52	Panama	49.21
Armenia	-0.50	Honduras	79.46	Papua New Guinea	97.83
Australia	29.72	Hungary	-19.80	Paraguay	128.25
Austria	-5.10	Iceland	19.22	Peru	76.51
Azerbaijan	48.69	India	62.45	Philippines	73.80
Bangladesh	64.53	Indonesia	46.96	Poland	-12.26
Belarus	-14.73	Iran	52.70	Portugal	-18.23
Belgium	-2.40	Ireland	19.34	Romania	-20.56
Benin	182.32	Israel	51.60	Russian Federation	-12.07
Bhutan	132.04	Italy	-27.46	Rwanda	23.20
Bolivia	87.24	Jamaica	47.18	Saudi Arabia	152.05
Botswana	-25.95	Japan	-20.79	Senegal	144.01
Brazil	43.57	Jordan	135.49	Singapore	159.21
Bulgaria	-34.96	Kazakhstan	-12.60	Slovak Republic	-12.89
Burkina Faso	187.15	Kenya	27.42	Slovenia	-16.57
Burundi	165.73	Korea, South	8.19	South Africa	-25.06
Cameroon	124.76	Kuwait	101.10	Spain	-22.04
Canada	30.81	Kyrgyz Republic	24.53	Sri Lanka	35.09
Central African Republic	81.30	Latvia	-27.69	Sudan	100.66
Chile	46.05	Lebanon	54.62	Sweden	3.86
China	8.26	Libya	109.31	Switzerland	3.00
Colombia	83.20	Lithuania	-15.77	Syria	113.89
Costa Rica	95.63	Macedonia	3.69	Tanzania	150.04
Croatia	-14.89	Madagascar	215.97	Thailand	15.83
Cuba	-4.89	Malawi	41.82	Togo	93.68
Czech Republic	-9.43	Malaysia	107.27	Trinidad and Tobago	19.15
Denmark	15.05	Mali	179.09	Tunisia	56.29
Dominican Republic	76.75	Mauritius	23.30	Turkey	54.13
Ecuador	67.56	Mexico	52.63	Uganda	260.70
Egypt	71.37	Moldova	-0.75	Ukraine	-22.54
El Salvador	117.01	Mongolia	65.21	United Kingdom	7.38
Estonia	-27.36	Morocco	60.25	United States	46.48
Ethiopia	193.05	Mozambique	20.07	Uruguay	27.71
Fiji	61.53	Nepal	106.10	Uzbekistan	36.64
Finland	-7.67	Netherlands	8.22	Venezuela	74.40
France	9.68	New Zealand	17.05	Vietnam	57.13
Gabon	118.76	Nicaragua	128.62	Zambia	111.74
Germany	-10.76	Niger	182.42	Zimbabwe	-18.21
Ghana	63.58	Nigeria	146.14		

Reducing Human Vulnerability**Basic Human Sustenance**

Variable Name: Daily Per Capita Calorie Supply as a Percentage of Total Requirements

Variable Code: CALOR **Variable Number:** 29

Units: Percent of Total Calorie Requirements

Reference Year: MRYA 1988-90

Source: World Resource Institute, World Development Indicators 1998-1999

Logic: This indicator represents a measure of 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.

Details: An upper threshold of 120 was applied in calculating the ESI. Countries with values higher than 120 were assigned a value of 120, based on considerations in the background paper: Bender, W. H., "An end use analysis of global food requirements", Food Policy, vol.19, n.4, August 1994.

Median: 112.5 **Minimum:** 73 **Maximum:** 157

Albania	107.00	Greece	151.00	Norway	120.00
Algeria	123.00	Guatemala	103.00	Pakistan	99.00
Argentina	131.00	Haiti	89.00	Panama	98.00
Armenia		Honduras	98.00	Papua New Guinea	114.00
Australia	124.00	Hungary	137.00	Paraguay	116.00
Austria	133.00	Iceland		Peru	87.00
Azerbaijan		India	101.00	Philippines	104.00
Bangladesh	88.00	Indonesia	121.00	Poland	131.00
Belarus		Iran	125.00	Portugal	136.00
Belgium	149.00	Ireland	157.00	Romania	116.00
Benin	104.00	Israel	125.00	Russian Federation	
Bhutan	128.00	Italy	139.00	Rwanda	82.00
Bolivia	84.00	Jamaica	114.00	Saudi Arabia	121.00
Botswana	97.00	Japan	125.00	Senegal	98.00
Brazil	114.00	Jordan	110.00	Singapore	136.00
Bulgaria	148.00	Kazakhstan		Slovak Republic	
Burkina Faso	94.00	Kenya	89.00	Slovenia	
Burundi	84.00	Korea, South	120.00	South Africa	128.00
Cameroon	95.00	Kuwait		Spain	141.00
Canada	122.00	Kyrgyz Republic		Sri Lanka	101.00
Central African Republic	82.00	Latvia		Sudan	87.00
Chile	102.00	Lebanon	127.00	Sweden	111.00
China	112.00	Libya	140.00	Switzerland	130.00
Colombia	106.00	Lithuania		Syria	126.00
Costa Rica	121.00	Macedonia		Tanzania	95.00
Croatia		Madagascar	95.00	Thailand	103.00
Cuba	135.00	Malawi	88.00	Togo	99.00
Czech Republic		Malaysia	120.00	Trinidad and Tobago	114.00
Denmark	135.00	Mali	96.00	Tunisia	131.00
Dominican Republic	102.00	Mauritius	128.00	Turkey	127.00
Ecuador	105.00	Mexico	131.00	Uganda	93.00
Egypt	132.00	Moldova		Ukraine	
El Salvador	102.00	Mongolia	97.00	United Kingdom	130.00
Estonia		Morocco	125.00	United States	138.00
Ethiopia	73.00	Mozambique	77.00	Uruguay	101.00
Fiji		Nepal	100.00	Uzbekistan	
Finland	113.00	Netherlands	114.00	Venezuela	99.00
France	143.00	New Zealand	131.00	Vietnam	
Gabon	104.00	Nicaragua	99.00	Zambia	87.00
Germany		Niger	95.00	Zimbabwe	94.00
Ghana	93.00	Nigeria	93.00		

Reducing Human Vulnerability

Basic Human Sustenance

Variable Name: Percentage of Population with Access to Improved Drinking Water Supply

Variable Code: WATSUP

Variable Number: 30

Units: Percent of Population

Reference Year: 2000

Source: World Health Organization and the United Nations Children's Fund, *Global Water Supply and Sanitation Assessment 2000*, New York: WHO and UNICEF, 2000.

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-related diseases and exposure to pollutants.

Details:

Median: 83.5 **Minimum:** 24 **Maximum:** 100

Albania		Greece		Norway	100.00
Algeria	94.00	Guatemala	92.00	Pakistan	88.00
Argentina	79.00	Haiti	46.00	Panama	87.00
Armenia		Honduras	90.00	Papua New Guinea	42.00
Australia	100.00	Hungary	99.00	Paraguay	
Austria	100.00	Iceland		Peru	77.00
Azerbaijan		India	88.00	Philippines	87.00
Bangladesh	97.00	Indonesia	76.00	Poland	
Belarus	100.00	Iran	95.00	Portugal	
Belgium		Ireland		Romania	58.00
Benin	63.00	Israel		Russian Federation	99.00
Bhutan	62.00	Italy		Rwanda	41.00
Bolivia	79.00	Jamaica	71.00	Saudi Arabia	95.00
Botswana	95.00	Japan		Senegal	78.00
Brazil	87.00	Jordan	96.00	Singapore	100.00
Bulgaria	100.00	Kazakhstan	91.00	Slovak Republic	100.00
Burkina Faso	53.00	Kenya	49.00	Slovenia	100.00
Burundi	65.00	Korea, South	92.00	South Africa	86.00
Cameroon	62.00	Kuwait		Spain	
Canada	100.00	Kyrgyz Republic	77.00	Sri Lanka	83.00
Central African Republic	60.00	Latvia		Sudan	75.00
Chile	94.00	Lebanon	100.00	Sweden	100.00
China	75.00	Libya	72.00	Switzerland	100.00
Colombia	91.00	Lithuania		Syria	80.00
Costa Rica	98.00	Macedonia		Tanzania	54.00
Croatia		Madagascar	47.00	Thailand	80.00
Cuba	95.00	Malawi	57.00	Togo	54.00
Czech Republic		Malaysia		Trinidad and Tobago	86.00
Denmark	100.00	Mali	65.00	Tunisia	80.00
Dominican Republic	79.00	Mauritius	100.00	Turkey	83.00
Ecuador	71.00	Mexico	86.00	Uganda	50.00
Egypt	95.00	Moldova	100.00	Ukraine	
El Salvador	74.00	Mongolia	60.00	United Kingdom	100.00
Estonia		Morocco	82.00	United States	100.00
Ethiopia	24.00	Mozambique	60.00	Uruguay	98.00
Fiji	47.00	Nepal	81.00	Uzbekistan	85.00
Finland	100.00	Netherlands	100.00	Venezuela	84.00
France		New Zealand		Vietnam	56.00
Gabon	70.00	Nicaragua	79.00	Zambia	64.00
Germany		Niger	59.00	Zimbabwe	85.00
Ghana	64.00	Nigeria	57.00		

Reducing Human Vulnerability

Environmental Health

Variable Name: Child Death Rate from Respiratory Diseases

Variable Code: DISRES **Variable Number:** 31

Units: Deaths/100,000 population

Reference Year: MRYA 1990-1998

Source: World Health Organisation. *1997-1999 World Health Statistics Annual*, Geneva: WHO, 2000, available at <http://www.who.int/whosis/mort/download.htm>

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

Details: The final number is based on an aggregation of deaths recorded for WHO codes B31, B320, and B321, by sex and by age. These were then combined with UN Population Division population data broken down by age group to produce rates. See the main report for more details on the methodology.

Median: 3.53 **Minimum:** 0.24 **Maximum:** 179.57

Albania	40.92	Greece	1.63	Norway	0.24
Algeria		Guatemala		Pakistan	
Argentina	10.34	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	1.37	Hungary	4.04	Paraguay	20.03
Austria	0.28	Iceland	3.07	Peru	
Azerbaijan		India		Philippines	46.49
Bangladesh		Indonesia		Poland	2.67
Belarus		Iran		Portugal	1.87
Belgium	0.94	Ireland	1.43	Romania	48.44
Benin		Israel	1.45	Russian Federation	
Bhutan		Italy	0.70	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	1.52	Senegal	
Brazil		Jordan		Singapore	3.14
Bulgaria	19.52	Kazakhstan	46.00	Slovak Republic	10.63
Burkina Faso		Kenya		Slovenia	1.39
Burundi		Korea, South	2.55	South Africa	19.57
Cameroon		Kuwait	3.53	Spain	0.64
Canada	0.62	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	11.86	Lebanon		Sweden	1.03
China		Libya		Switzerland	
Colombia	12.73	Lithuania	3.11	Syria	
Costa Rica	6.35	Macedonia		Tanzania	
Croatia	2.77	Madagascar		Thailand	
Cuba	5.11	Malawi		Togo	
Czech Republic	2.35	Malaysia		Trinidad and Tobago	6.38
Denmark		Mali		Tunisia	
Dominican Republic		Mauritius	4.70	Turkey	
Ecuador	32.80	Mexico	27.97	Uganda	
Egypt	120.86	Moldova	33.59	Ukraine	
El Salvador	17.69	Mongolia	179.57	United Kingdom	1.78
Estonia	5.12	Morocco		United States	
Ethiopia		Mozambique		Uruguay	11.00
Fiji		Nepal		Uzbekistan	
Finland	0.41	Netherlands	0.88	Venezuela	19.07
France	0.78	New Zealand	1.75	Vietnam	
Gabon		Nicaragua	26.20	Zambia	
Germany	0.51	Niger		Zimbabwe	44.52
Ghana		Nigeria			

Reducing Human Vulnerability

Environmental Health

Variable Name: Death Rate from Intestinal Infectious Diseases

Variable Code: DISINT **Variable Number:** 32

Units: Deaths/100,000 population

Reference Year: MRYA 1990-1999

Source: World Health Organisation. *1997-1999 World Health Statistics Annual*, Geneva: WHO, 2000, available at <http://www.who.int/whosis/mort/download.htm>

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

Details: The final number is based on an aggregation of deaths recorded for WHO code B01 for all age groups by sex. These were then combined with UN Population Division population data for the country in that particular year. The death rates were standardized to a common age structure. See the main report for more details on the methodology.

Median: 0.97 **Minimum:** 0.00 **Maximum:** 36.17

Albania	0.33	Greece	0.00	Norway	1.33
Algeria		Guatemala		Pakistan	
Argentina	1.95	Haiti		Panama	
Armenia	3.15	Honduras		Papua New Guinea	
Australia	0.62	Hungary	0.25	Paraguay	16.00
Austria	0.13	Iceland	1.11	Peru	
Azerbaijan	5.05	India		Philippines	13.78
Bangladesh		Indonesia		Poland	0.11
Belarus	0.43	Iran		Portugal	0.17
Belgium	0.84	Ireland	0.57	Romania	1.08
Benin		Israel	0.45	Russian Federation	0.90
Bhutan		Italy	0.12	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	0.88	Senegal	
Brazil		Jordan		Singapore	1.24
Bulgaria	0.56	Kazakhstan	3.24	Slovak Republic	0.24
Burkina Faso		Kenya		Slovenia	0.29
Burundi		Korea, South	2.62	South Africa	24.99
Cameroon		Kuwait	0.26	Spain	0.56
Canada	0.30	Kyrgyz Republic	8.28	Sri Lanka	
Central African Republic		Latvia	0.23	Sudan	
Chile	3.21	Lebanon		Sweden	0.39
China		Libya		Switzerland	
Colombia	6.42	Lithuania	0.34	Syria	
Costa Rica	9.28	Macedonia		Tanzania	
Croatia	0.38	Madagascar		Thailand	
Cuba	9.51	Malawi		Togo	
Czech Republic	0.43	Malaysia		Trinidad and Tobago	4.97
Denmark		Mali		Tunisia	
Dominican Republic		Mauritius	2.15	Turkey	
Ecuador	14.28	Mexico	18.48	Uganda	
Egypt	19.65	Moldova	1.04	Ukraine	0.54
El Salvador	36.17	Mongolia	2.06	United Kingdom	0.75
Estonia	0.31	Morocco		United States	
Ethiopia		Mozambique		Uruguay	4.30
Fiji		Nepal		Uzbekistan	9.58
Finland	0.97	Netherlands	0.28	Venezuela	20.16
France	0.97	New Zealand	0.51	Vietnam	
Gabon		Nicaragua	24.07	Zambia	
Germany	0.34	Niger		Zimbabwe	19.43
Ghana		Nigeria			

Reducing Human Vulnerability

Environmental Health

Variable Name: Under-5 Mortality Rate

Variable Code: U5MORT Variable Number: 33

Units: Deaths Per 1,000 Live Births

Reference Year: 1998

Source: The United Nations Children's Fund (UNICEF), *The State of the World's Children 2000*, New York: UNICEF, 2000.

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

Details: Deaths between birth and age five, divided by 1,000 live births.

Median: 35 Minimum: 4 Maximum: 300

Albania	151.00	Greece	7.00	Norway	4.00
Algeria	255.00	Guatemala	52.00	Pakistan	136.00
Argentina	72.00	Haiti	130.00	Panama	20.00
Armenia	48.00	Honduras	44.00	Papua New Guinea	112.00
Australia	24.00	Hungary	11.00	Paraguay	33.00
Austria	43.00	Iceland	5.00	Peru	54.00
Azerbaijan	74.00	India	105.00	Philippines	44.00
Bangladesh	247.00	Indonesia	56.00	Poland	11.00
Belarus	47.00	Iran	33.00	Portugal	9.00
Belgium	35.00	Ireland	7.00	Romania	24.00
Benin	300.00	Israel	6.00	Russian Federation	25.00
Bhutan	300.00	Italy	6.00	Rwanda	170.00
Bolivia	255.00	Jamaica	11.00	Saudi Arabia	26.00
Botswana	48.00	Japan	4.00	Senegal	121.00
Brazil	42.00	Jordan	36.00	Singapore	5.00
Bulgaria	17.00	Kazakhstan	43.00	Slovak Republic	10.00
Burkina Faso	165.00	Kenya	117.00	Slovenia	5.00
Burundi	176.00	Korea, South	5.00	South Africa	83.00
Cameroon	153.00	Kuwait	13.00	Spain	6.00
Canada	6.00	Kyrgyz Republic	66.00	Sri Lanka	19.00
Central African Republic	173.00	Latvia	22.00	Sudan	115.00
Chile	12.00	Lebanon	35.00	Sweden	4.00
China	47.00	Libya	24.00	Switzerland	5.00
Colombia	30.00	Lithuania	23.00	Syria	32.00
Costa Rica	16.00	Macedonia	27.00	Tanzania	142.00
Croatia	9.00	Madagascar	157.00	Thailand	37.00
Cuba	8.00	Malawi	213.00	Togo	144.00
Czech Republic	6.00	Malaysia	10.00	Trinidad and Tobago	18.00
Denmark	5.00	Mali	237.00	Tunisia	32.00
Dominican Republic	51.00	Mauritius	23.00	Turkey	42.00
Ecuador	39.00	Mexico	34.00	Uganda	134.00
Egypt	69.00	Moldova	35.00	Ukraine	22.00
El Salvador	34.00	Mongolia	150.00	United Kingdom	6.00
Estonia	22.00	Morocco	70.00	United States	8.00
Ethiopia	173.00	Mozambique	206.00	Uruguay	19.00
Fiji	23.00	Nepal	100.00	Uzbekistan	58.00
Finland	5.00	Netherlands	5.00	Venezuela	25.00
France	5.00	New Zealand	6.00	Vietnam	42.00
Gabon	144.00	Nicaragua	48.00	Zambia	202.00
Germany	5.00	Niger	280.00	Zimbabwe	89.00
Ghana	105.00	Nigeria	187.00		

Social and Institutional Capacity

Science/Technology

Variable Name: Research & Development Scientists and Engineers per Million Population

Variable Code: RDPERS **Variable Number:** 34

Units: Scientists & Engineers/Million Population

Reference Year: MRYA 1980-1997

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO), *Statistical Yearbook 1999*, Paris: UNESCO, 1999.

Logic: The greater the proportion of a country's population that is dedicated to research and development in a variety of scientific fields, the more capacity it has to respond effectively to environmental threats.

Details:

Median: 663.5 **Minimum:** 3 **Maximum:** 4909

Albania		Greece	773.00	Norway	3,664.00
Algeria		Guatemala	104.00	Pakistan	72.00
Argentina	660.00	Haiti		Panama	252.00
Armenia	1,485.00	Honduras		Papua New Guinea	
Australia	3,357.00	Hungary	1,099.00	Paraguay	
Austria	1,627.00	Iceland	4,131.00	Peru	233.00
Azerbaijan	2,791.00	India	149.00	Philippines	157.00
Bangladesh	52.00	Indonesia	182.00	Poland	1,358.00
Belarus	2,248.00	Iran	560.00	Portugal	1,182.00
Belgium	2,272.00	Ireland	2,319.00	Romania	1,387.00
Benin	176.00	Israel	4,828.00	Russian Federation	3,587.00
Bhutan		Italy	1,318.00	Rwanda	35.00
Bolivia	172.00	Jamaica	8.00	Saudi Arabia	
Botswana		Japan	4,909.00	Senegal	3.00
Brazil	168.00	Jordan	94.00	Singapore	2,318.00
Bulgaria	1,747.00	Kazakhstan		Slovak Republic	1,866.00
Burkina Faso	17.00	Kenya		Slovenia	2,251.00
Burundi	33.00	Korea, South	2,193.00	South Africa	1,031.00
Cameroon		Kuwait	230.00	Spain	1,305.00
Canada	2,719.00	Kyrgyz Republic	584.00	Sri Lanka	191.00
Central African Republic	56.00	Latvia	1,049.00	Sudan	
Chile	455.00	Lebanon		Sweden	3,826.00
China	454.00	Libya	362.00	Switzerland	3,006.00
Colombia	37.00	Lithuania	2,028.00	Syria	30.00
Costa Rica	532.00	Macedonia	1,335.00	Tanzania	
Croatia	1,916.00	Madagascar	12.00	Thailand	103.00
Cuba	1,612.00	Malawi		Togo	98.00
Czech Republic	1,222.00	Malaysia	93.00	Trinidad and Tobago	
Denmark	3,259.00	Mali		Tunisia	125.00
Dominican Republic		Mauritius	361.00	Turkey	291.00
Ecuador	146.00	Mexico	214.00	Uganda	21.00
Egypt	459.00	Moldova	330.00	Ukraine	2,171.00
El Salvador	20.00	Mongolia	910.00	United Kingdom	2,448.00
Estonia	2,017.00	Morocco		United States	3,676.00
Ethiopia		Mozambique		Uruguay	667.00
Fiji		Nepal		Uzbekistan	1,763.00
Finland	2,799.00	Netherlands	2,219.00	Venezuela	209.00
France	2,659.00	New Zealand	1,663.00	Vietnam	334.00
Gabon	234.00	Nicaragua	204.00	Zambia	
Germany	2,831.00	Niger		Zimbabwe	
Ghana		Nigeria	15.00		

Social and Institutional Capacity

Science/Technology

Variable Name: Expenditure for Research & Development as a Percentage of GNP

Variable Code: RDEXP **Variable Number:** 35

Units: Percent of Gross National Product

Reference Year: MRYA 1980-1997

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO), *Statistical Yearbook 1999*, Paris: UNESCO, 1999.

Logic: The greater the proportion of a country's annual GNP that is dedicated to research and development in a variety of scientific fields, the more capacity it has to respond effectively to environmental threats.

Details:

Median: 0.64 **Minimum:** 0.01 **Maximum:** 3.76

Albania		Greece	0.47	Norway	1.58
Algeria		Guatemala	0.16	Pakistan	0.92
Argentina	0.38	Haiti		Panama	0.01
Armenia		Honduras		Papua New Guinea	
Australia	1.80	Hungary	0.68	Paraguay	
Austria	1.53	Iceland	1.55	Peru	0.25
Azerbaijan	0.21	India	0.73	Philippines	0.22
Bangladesh	0.03	Indonesia	0.07	Poland	0.77
Belarus	1.07	Iran	0.48	Portugal	0.62
Belgium	1.60	Ireland	1.61	Romania	0.72
Benin	0.70	Israel	2.35	Russian Federation	0.88
Bhutan		Italy	2.21	Rwanda	0.04
Bolivia	1.67	Jamaica	0.04	Saudi Arabia	
Botswana		Japan	2.80	Senegal	0.01
Brazil	0.81	Jordan	0.26	Singapore	1.13
Bulgaria	0.57	Kazakhstan	0.32	Slovak Republic	1.05
Burkina Faso	0.19	Kenya		Slovenia	1.46
Burundi	0.31	Korea, South	2.82	South Africa	0.70
Cameroon		Kuwait	0.16	Spain	0.90
Canada	1.66	Kyrgyz Republic	0.20	Sri Lanka	0.19
Central African Republic	0.25	Latvia	0.43	Sudan	
Chile	0.68	Lebanon		Sweden	3.76
China	0.66	Libya	0.22	Switzerland	2.60
Colombia	0.12	Lithuania	0.70	Syria	0.20
Costa Rica	0.21	Macedonia	0.31	Tanzania	
Croatia	1.03	Madagascar	0.18	Thailand	0.13
Cuba	0.84	Malawi		Togo	0.48
Czech Republic	1.20	Malaysia	0.24	Trinidad and Tobago	
Denmark	1.95	Mali		Tunisia	0.30
Dominican Republic		Mauritius	0.32	Turkey	0.45
Ecuador	0.02	Mexico	0.33	Uganda	0.57
Egypt	0.22	Moldova	0.90	Ukraine	
El Salvador	2.20	Mongolia		United Kingdom	1.95
Estonia	0.57	Morocco		United States	2.63
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	2.76	Netherlands	2.08	Venezuela	0.49
France	2.25	New Zealand	1.04	Vietnam	
Gabon	0.01	Nicaragua		Zambia	
Germany	2.41	Niger		Zimbabwe	
Ghana		Nigeria	0.09		

Social and Institutional Capacity

Science/Technology

Variable Name: Scientific and technical articles per million population

Variable Code: ARTPOP **Variable Number:** 36

Units: Articles/Million Population

Reference Year: 1995

Source: National Science Board, *Science and Engineering Indicators - 1998*. Arlington, VA: National Science Foundation (NSF), 1998.

Logic: The rate at which a country's scientific establishment publishes articles in the natural and earth sciences is correlated with its capacity to respond to environmental problems.

Details:

Median: 109.36 **Minimum:** 1.84 **Maximum:** 395.6

Albania		Greece	97.15	Norway	218.44
Algeria		Guatemala		Pakistan	
Argentina	26.92	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	281.29	Hungary	95.83	Paraguay	
Austria	150.49	Iceland	197.47	Peru	
Azerbaijan		India	6.27	Philippines	
Bangladesh		Indonesia		Poland	82.70
Belarus		Iran		Portugal	50.73
Belgium	183.98	Ireland	106.95	Romania	
Benin		Israel	395.60	Russian Federation	93.62
Bhutan		Italy	124.19	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	174.76	Senegal	
Brazil	10.24	Jordan		Singapore	178.88
Bulgaria	72.59	Kazakhstan		Slovak Republic	108.32
Burkina Faso		Kenya	2.87	Slovenia	124.12
Burundi		Korea, South	53.15	South Africa	26.95
Cameroon		Kuwait		Spain	131.80
Canada	314.58	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	21.96	Lebanon		Sweden	318.18
China	4.29	Libya		Switzerland	390.88
Colombia		Lithuania		Syria	
Costa Rica		Macedonia		Tanzania	
Croatia	66.77	Madagascar		Thailand	
Cuba		Malawi		Togo	
Czech Republic	110.41	Malaysia		Trinidad and Tobago	
Denmark	271.01	Mali		Tunisia	
Dominican Republic		Mauritius		Turkey	11.82
Ecuador		Mexico	10.02	Uganda	
Egypt	14.32	Moldova		Ukraine	44.70
El Salvador		Mongolia		United Kingdom	250.36
Estonia		Morocco		United States	
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	242.96	Netherlands	254.10	Venezuela	
France	224.70	New Zealand	271.56	Vietnam	
Gabon		Nicaragua		Zambia	
Germany	212.94	Niger		Zimbabwe	
Ghana		Nigeria	1.84		

Social and Institutional Capacity

Capacity for Debate

Variable Name: IUCN Member Organizations per Million Population

Variable Code: IUCN **Variable Number:** 37

Units: Organizations/Million Population

Reference Year: 2000

Source: Membership List, IUCN-The World Conservation Union, 1 August 2000 (updated with new data on 10-Nov-00)

Logic: IUCN is the oldest international environmental membership organization, currently with over 900 members (governmental and NGO) worldwide, often including the most significant environmental NGOs in each country.

Details:

Median: 0.42 **Minimum:** 0.01 **Maximum:** 7.85

Albania		Greece	0.59	Norway	1.41
Algeria	0.12	Guatemala	1.26	Pakistan	0.18
Argentina	0.68	Haiti		Panama	3.34
Armenia		Honduras	1.02	Papua New Guinea	0.26
Australia	2.19	Hungary	0.39	Paraguay	0.95
Austria	0.78	Iceland	7.85	Peru	0.37
Azerbaijan		India	0.02	Philippines	0.05
Bangladesh	0.13	Indonesia	0.01	Poland	0.21
Belarus		Iran	0.02	Portugal	0.30
Belgium	0.70	Ireland	0.86	Romania	0.13
Benin		Israel	0.86	Russian Federation	0.05
Bhutan		Italy	0.33	Rwanda	
Bolivia	1.22	Jamaica	1.27	Saudi Arabia	0.19
Botswana	6.27	Japan	0.17	Senegal	0.55
Brazil	0.10	Jordan	2.38	Singapore	1.33
Bulgaria	0.23	Kazakhstan	0.24	Slovak Republic	0.57
Burkina Faso	0.33	Kenya	0.30	Slovenia	0.52
Burundi		Korea, South	0.14	South Africa	0.65
Cameroon	0.09	Kuwait	1.40	Spain	0.71
Canada	1.08	Kyrgyz Republic	0.23	Sri Lanka	0.70
Central African Republic		Latvia	0.37	Sudan	0.04
Chile	0.23	Lebanon	2.74	Sweden	0.82
China	0.01	Libya	0.23	Switzerland	1.17
Colombia	0.34	Lithuania	0.54	Syria	0.08
Costa Rica	2.62	Macedonia	0.52	Tanzania	0.12
Croatia	0.66	Madagascar	0.09	Thailand	0.05
Cuba		Malawi	0.32	Togo	0.28
Czech Republic	0.49	Malaysia	0.34	Trinidad and Tobago	
Denmark	1.36	Mali	0.68	Tunisia	0.61
Dominican Republic	0.42	Mauritius	1.89	Turkey	0.07
Ecuador	1.46	Mexico	0.11	Uganda	0.30
Egypt	0.05	Moldova	0.46	Ukraine	0.06
El Salvador	1.37	Mongolia	0.45	United Kingdom	0.76
Estonia	1.27	Morocco	0.25	United States	0.21
Ethiopia	0.02	Mozambique	0.21	Uruguay	1.61
Fiji	2.75	Nepal	0.48	Uzbekistan	0.05
Finland	1.00	Netherlands	1.34	Venezuela	0.36
France	0.56	New Zealand	2.08	Vietnam	0.04
Gabon		Nicaragua	0.52	Zambia	0.97
Germany	0.21	Niger	0.26	Zimbabwe	2.03
Ghana	0.20	Nigeria	0.03		

Social and Institutional Capacity

Capacity for Debate

Variable Name: Civil and Political Liberties

Variable Code: CIVLIB **Variable Number:** 38

Units: Index Ranging from 1 (High Levels of Liberties) to 7 (Low Levels)

Reference Year: 2000

Source: Freedom House, *Freedom in the World 1999-2000*, New York: Freedom House, 2000, <http://www.freedomhouse.org/research/freeworld/2000/table5.htm>

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.

Details:

Median: 3 **Minimum:** 1 **Maximum:** 7

Albania	4.50	Greece	2.00	Norway	1.00
Algeria	5.50	Guatemala	3.50	Pakistan	6.00
Argentina	2.50	Haiti	5.00	Panama	1.50
Armenia	4.00	Honduras	3.00	Papua New Guinea	2.50
Australia	1.00	Hungary	1.50	Paraguay	3.50
Austria	1.00	Iceland	1.00	Peru	4.50
Azerbaijan	5.00	India	2.50	Philippines	2.50
Bangladesh	3.50	Indonesia	4.00	Poland	1.50
Belarus	6.00	Iran	6.00	Portugal	1.00
Belgium	1.50	Ireland	1.00	Romania	2.00
Benin	2.50	Israel	1.50	Russian Federation	4.50
Bhutan	6.50	Italy	1.50	Rwanda	6.50
Bolivia	2.00	Jamaica	2.00	Saudi Arabia	7.00
Botswana	2.00	Japan	1.50	Senegal	4.00
Brazil	3.50	Jordan	4.00	Singapore	5.00
Bulgaria	2.50	Kazakhstan	5.50	Slovak Republic	1.50
Burkina Faso	4.00	Kenya	5.50	Slovenia	1.50
Burundi	6.00	Korea, South	2.00	South Africa	1.50
Cameroon	6.50	Kuwait	4.50	Spain	1.50
Canada	1.00	Kyrgyz Republic	5.00	Sri Lanka	3.50
Central African Republic	3.50	Latvia	1.50	Sudan	7.00
Chile	2.00	Lebanon	5.50	Sweden	1.00
China	6.50	Libya	7.00	Switzerland	1.00
Colombia	4.00	Lithuania	1.50	Syria	7.00
Costa Rica	1.50	Macedonia	3.00	Tanzania	4.00
Croatia	4.00	Madagascar	3.00	Thailand	2.50
Cuba	7.00	Malawi	3.00	Togo	5.00
Czech Republic	1.50	Malaysia	5.00	Trinidad and Tobago	1.50
Denmark	1.00	Mali	3.00	Tunisia	5.50
Dominican Republic	2.50	Mauritius	1.50	Turkey	4.50
Ecuador	2.50	Mexico	3.50	Uganda	5.00
Egypt	5.50	Moldova	3.00	Ukraine	3.50
El Salvador	2.50	Mongolia	2.50	United Kingdom	1.50
Estonia	1.50	Morocco	4.50	United States	1.00
Ethiopia	5.00	Mozambique	3.50	Uruguay	1.50
Fiji	2.50	Nepal	3.50	Uzbekistan	6.50
Finland	1.00	Netherlands	1.00	Venezuela	4.00
France	1.50	New Zealand	1.00	Vietnam	7.00
Gabon	4.50	Nicaragua	3.00	Zambia	4.50
Germany	1.50	Niger	5.00	Zimbabwe	5.50
Ghana	3.00	Nigeria	3.50		

Social and Institutional Capacity**Regulation and Management**

Variable Name: Stringency and Consistency of Environmental Regulations

Variable Code: WEFSTR **Variable Number:** 39

Units: Survey Responses Ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)

Reference Year: 2000

Source: Michael E. Porter et al, *The Global Competitiveness Report 2000*, Oxford: Oxford University Press, 2000.

Logic: Stronger regulations prompt more effective action, other things equal.

Details: Average of responses to the following survey questions: "Air pollution regulations are among the world's most stringent"; "Water pollution regulations are among the world's most stringent"; "Environmental regulations are enforced consistently and fairly"; and "Environmental regulations are typically enacted ahead of most other countries."

Median: 3.86 **Minimum:** 2.35 **Maximum:** 6.45

Albania		Greece	3.65	Norway	5.65
Algeria		Guatemala		Pakistan	
Argentina	2.90	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	5.53	Hungary	3.88	Paraguay	
Austria	6.30	Iceland	4.63	Peru	2.80
Azerbaijan		India	2.78	Philippines	2.55
Bangladesh		Indonesia	2.63	Poland	3.48
Belarus		Iran		Portugal	4.13
Belgium	5.20	Ireland	4.55	Romania	
Benin		Israel	4.13	Russian Federation	3.40
Bhutan		Italy	4.48	Rwanda	
Bolivia	2.40	Jamaica		Saudi Arabia	
Botswana		Japan	5.60	Senegal	
Brazil	3.83	Jordan	3.65	Singapore	5.85
Bulgaria	3.20	Kazakhstan		Slovak Republic	3.93
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	4.15	South Africa	3.75
Cameroon		Kuwait		Spain	4.40
Canada	5.50	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	3.85	Lebanon		Sweden	6.10
China	2.85	Libya		Switzerland	6.13
Colombia	3.23	Lithuania		Syria	
Costa Rica	3.90	Macedonia		Tanzania	
Croatia		Madagascar		Thailand	2.98
Cuba		Malawi		Togo	
Czech Republic	4.35	Malaysia	3.83	Trinidad and Tobago	
Denmark	6.38	Mali		Tunisia	
Dominican Republic		Mauritius	3.10	Turkey	3.63
Ecuador	3.00	Mexico	3.53	Uganda	
Egypt	3.35	Moldova		Ukraine	2.98
El Salvador	2.35	Mongolia		United Kingdom	5.40
Estonia		Morocco		United States	5.88
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	6.38	Netherlands	6.08	Venezuela	2.88
France	5.30	New Zealand	5.35	Vietnam	2.63
Gabon		Nicaragua		Zambia	
Germany	6.45	Niger		Zimbabwe	2.70
Ghana		Nigeria			

Social and Institutional Capacity**Regulation and Management**

Variable Name: Degree to which Environmental Regulations Promote Innovation

Variable Code: WEFINN **Variable Number:** 40

Units: Survey Responses Ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)

Reference Year: 2000

Source: Michael E. Porter et al, *The Global Competitiveness Report 2000*, Oxford: Oxford University Press, 2000.

Logic: Where regulations and management strategies prompt effective innovation, better results follow.

Details: Average of responses to the following survey questions: “Environmental regulations are flexible and offer many points for achieving compliance”; and “Environmental regulations are transparent and stable”.

Median: 4.03 **Minimum:** 2.75 **Maximum:** 5.7

Albania		Greece	4.00	Norway	5.00
Algeria		Guatemala		Pakistan	
Argentina	3.60	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	4.80	Hungary	3.95	Paraguay	
Austria	4.75	Iceland	4.70	Peru	3.70
Azerbaijan		India	3.70	Philippines	3.65
Bangladesh		Indonesia	3.60	Poland	3.70
Belarus		Iran		Portugal	4.15
Belgium	4.45	Ireland	4.75	Romania	
Benin		Israel	4.15	Russian Federation	4.00
Bhutan		Italy	3.85	Rwanda	
Bolivia	3.35	Jamaica		Saudi Arabia	
Botswana		Japan	4.85	Senegal	
Brazil	3.95	Jordan	4.25	Singapore	5.55
Bulgaria	3.60	Kazakhstan		Slovak Republic	4.10
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	4.00	South Africa	4.25
Cameroon		Kuwait		Spain	4.25
Canada	4.90	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	3.60	Lebanon		Sweden	5.00
China	3.90	Libya		Switzerland	5.15
Colombia	3.80	Lithuania		Syria	
Costa Rica	3.90	Macedonia		Tanzania	
Croatia		Madagascar		Thailand	3.60
Cuba		Malawi		Togo	
Czech Republic	4.05	Malaysia	4.25	Trinidad and Tobago	
Denmark	5.10	Mali		Tunisia	
Dominican Republic		Mauritius	3.70	Turkey	4.15
Ecuador	2.75	Mexico	3.85	Uganda	
Egypt	4.00	Moldova		Ukraine	3.40
El Salvador	2.85	Mongolia		United Kingdom	4.90
Estonia		Morocco		United States	4.65
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	5.70	Netherlands	5.00	Venezuela	3.50
France	4.30	New Zealand	4.80	Vietnam	3.35
Gabon		Nicaragua		Zambia	
Germany	4.60	Niger		Zimbabwe	3.75
Ghana		Nigeria			

Social and Institutional Capacity

Regulation and Management

Variable Name: Percentage of Land Area Under Protected Status

Variable Code: PRAREA **Variable Number:** 41

Units: Percent Land Area

Reference Year: 1997

Source: World Resources Institute, *World Resources 2000-01*, Washington, DC: World Resources Institute, 2000.

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

Details:

Median: 6.47 **Minimum:** 0.00 **Maximum:** 43.08

Albania	2.76	Greece	2.24	Norway	6.76
Algeria	2.47	Guatemala	16.83	Pakistan	4.83
Argentina	1.70	Haiti	0.35	Panama	19.09
Armenia	7.59	Honduras	9.94	Papua New Guinea	0.02
Australia	6.99	Hungary	6.81	Paraguay	3.53
Austria	28.33	Iceland	9.70	Peru	2.70
Azerbaijan	5.49	India	4.80	Philippines	4.87
Bangladesh	0.75	Indonesia	9.66	Poland	9.56
Belarus	4.16	Iran	5.12	Portugal	6.50
Belgium	2.59	Ireland	0.86	Romania	4.66
Benin	7.03	Israel	14.92	Russian Federation	3.06
Bhutan	21.23	Italy	7.30	Rwanda	14.68
Bolivia	14.39	Jamaica	0.14	Saudi Arabia	2.31
Botswana	18.52	Japan	6.77	Senegal	11.32
Brazil	4.20	Jordan	3.35	Singapore	4.43
Bulgaria	4.44	Kazakhstan	2.75	Slovak Republic	21.76
Burkina Faso	10.44	Kenya	6.16	Slovenia	5.70
Burundi	5.61	Korea, South	6.91	South Africa	5.39
Cameroon	4.51	Kuwait	1.52	Spain	8.44
Canada	9.99	Kyrgyz Republic	3.59	Sri Lanka	13.28
Central African Republic	8.20	Latvia	12.48	Sudan	3.64
Chile	18.88	Lebanon	0.34	Sweden	9.01
China	6.44	Libya	0.10	Switzerland	18.03
Colombia	9.01	Lithuania	9.96	Syria	0.00
Costa Rica	13.75	Macedonia	7.08	Tanzania	15.64
Croatia	6.70	Madagascar	1.92	Thailand	13.09
Cuba	17.37	Malawi	11.25	Togo	7.87
Czech Republic	15.83	Malaysia	4.51	Trinidad and Tobago	3.04
Denmark	32.24	Mali	3.71	Tunisia	0.29
Dominican Republic	31.48	Mauritius	6.01	Turkey	1.39
Ecuador	43.08	Mexico	2.39	Uganda	9.57
Egypt	0.80	Moldova	1.18	Ukraine	1.55
El Salvador	0.25	Mongolia	10.30	United Kingdom	20.46
Estonia	12.00	Morocco	0.71	United States	13.39
Ethiopia	5.52	Mozambique	6.09	Uruguay	0.26
Fiji	1.03	Nepal	7.77	Uzbekistan	2.05
Finland	5.99	Netherlands	6.71	Venezuela	36.25
France	11.66	New Zealand	23.59	Vietnam	3.05
Gabon	2.81	Nicaragua	7.44	Zambia	8.56
Germany	26.95	Niger	7.65	Zimbabwe	7.93
Ghana	4.85	Nigeria	3.32		

Social and Institutional Capacity

Regulation and Management

Variable Name: Number of Sectoral EIA Guidelines

Variable Code: EIA **Variable Number:** 42

Units: Number of Guidelines

Reference Year: 1998

Source: IIED, WRI and IUCN. *A Directory of Impact Assessment Guidelines (Second Edition)*, London: International Institute for Environment and Development (IIED), 1998.

Logic: Environmental Impact Assessment represents an important tool for promoting sound environmental management.

Details:

Median: 0 **Minimum:** 0 **Maximum:** 13

Albania	0.00	Greece	1.00	Norway	0.00
Algeria	0.00	Guatemala	0.00	Pakistan	8.00
Argentina	6.00	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	0.00	Papua New Guinea	0.00
Australia	1.00	Hungary	0.00	Paraguay	4.00
Austria	1.00	Iceland	0.00	Peru	6.00
Azerbaijan	0.00	India	9.00	Philippines	1.00
Bangladesh	3.00	Indonesia	5.00	Poland	0.00
Belarus	0.00	Iran	0.00	Portugal	7.00
Belgium	9.00	Ireland	2.00	Romania	0.00
Benin	0.00	Israel	0.00	Russian Federation	2.00
Bhutan	0.00	Italy	4.00	Rwanda	0.00
Bolivia	7.00	Jamaica	0.00	Saudi Arabia	0.00
Botswana	0.00	Japan	0.00	Senegal	0.00
Brazil	2.00	Jordan	0.00	Singapore	1.00
Bulgaria	0.00	Kazakhstan	0.00	Slovak Republic	8.00
Burkina Faso	0.00	Kenya	1.00	Slovenia	0.00
Burundi	0.00	Korea, South	0.00	South Africa	8.00
Cameroon	0.00	Kuwait	2.00	Spain	6.00
Canada	9.00	Kyrgyz Republic	0.00	Sri Lanka	2.00
Central African Republic	0.00	Latvia	0.00	Sudan	0.00
Chile	9.00	Lebanon	0.00	Sweden	3.00
China	1.00	Libya	0.00	Switzerland	6.00
Colombia	2.00	Lithuania	0.00	Syria	0.00
Costa Rica	8.00	Macedonia	0.00	Tanzania	1.00
Croatia	0.00	Madagascar	0.00	Thailand	7.00
Cuba	0.00	Malawi	2.00	Togo	0.00
Czech Republic	1.00	Malaysia	13.00	Trinidad and Tobago	0.00
Denmark	1.00	Mali	0.00	Tunisia	0.00
Dominican Republic	0.00	Mauritius	0.00	Turkey	0.00
Ecuador	1.00	Mexico	2.00	Uganda	0.00
Egypt	11.00	Moldova	0.00	Ukraine	0.00
El Salvador	0.00	Mongolia	0.00	United Kingdom	9.00
Estonia	0.00	Morocco	0.00	United States	9.00
Ethiopia	0.00	Mozambique	1.00	Uruguay	0.00
Fiji	0.00	Nepal	6.00	Uzbekistan	0.00
Finland	5.00	Netherlands	3.00	Venezuela	2.00
France	7.00	New Zealand	3.00	Vietnam	2.00
Gabon	0.00	Nicaragua	0.00	Zambia	0.00
Germany	3.00	Niger	1.00	Zimbabwe	9.00
Ghana	1.00	Nigeria	1.00		

Social and Institutional Capacity

Private Sector Responsiveness

Variable Name: ISO 14001 Certified Companies per Million Dollars GDP

Variable Code: ISO14 **Variable Number:** 43

Units: Number of ISO 14001 Certified Companies/Million US Dollars GDP

Reference Year: 2000

Source: ISO14001/EMAS registered companies, ISO World, International Standards Organisation, available at <http://www.ecology.or.jp/isoworld/english/analy14k.htm>, visited November 2000.

Logic: ISO 14001 specifies standards for corporate environmental management. The commitment to ISO 14001 certification serves as a proxy for the degree to which industries are instituting management practices that reduce waste and resource consumption.

Details:

Median: 0.05 **Minimum:** 0.03 **Maximum:** 30.8

Albania	0.00	Greece	0.00	Norway	0.00
Algeria	0.00	Guatemala	0.33	Pakistan	0.10
Argentina	2.58	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	1.69	Papua New Guinea	0.00
Australia	13.45	Hungary	14.43	Paraguay	0.55
Austria	0.00	Iceland	0.00	Peru	1.08
Azerbaijan	0.00	India	1.56	Philippines	2.46
Bangladesh	0.00	Indonesia	1.59	Poland	1.89
Belarus	0.00	Iran	0.45	Portugal	0.00
Belgium	0.00	Ireland	0.00	Romania	0.08
Benin	0.00	Israel	4.47	Russian Federation	0.03
Bhutan	0.00	Italy	0.00	Rwanda	0.00
Bolivia	0.00	Jamaica	0.00	Saudi Arabia	0.31
Botswana	0.00	Japan	14.77	Senegal	0.00
Brazil	2.75	Jordan	5.17	Singapore	27.25
Bulgaria	0.00	Kazakhstan	0.00	Slovak Republic	7.06
Burkina Faso	0.00	Kenya	0.00	Slovenia	8.39
Burundi	0.00	Korea, South	8.01	South Africa	3.39
Cameroon	0.00	Kuwait	0.00	Spain	0.00
Canada	4.21	Kyrgyz Republic	0.00	Sri Lanka	0.39
Central African Republic	0.00	Latvia	0.65	Sudan	0.00
Chile	0.78	Lebanon	4.52	Sweden	0.00
China	0.94	Libya	0.00	Switzerland	30.80
Colombia	0.95	Lithuania	0.42	Syria	0.56
Costa Rica	8.22	Macedonia	0.00	Tanzania	0.00
Croatia	2.62	Madagascar	0.00	Thailand	9.40
Cuba	0.00	Malawi	0.00	Togo	0.00
Czech Republic	7.85	Malaysia	12.95	Trinidad and Tobago	1.10
Denmark	0.00	Mali	0.00	Tunisia	0.23
Dominican Republic	0.31	Mauritius	3.42	Turkey	1.80
Ecuador	0.32	Mexico	2.31	Uganda	0.00
Egypt	4.09	Moldova	0.00	Ukraine	0.06
El Salvador	0.00	Mongolia	0.00	United Kingdom	0.00
Estonia	3.31	Morocco	0.63	United States	1.22
Ethiopia	0.00	Mozambique	0.00	Uruguay	3.73
Fiji	3.25	Nepal	0.00	Uzbekistan	0.00
Finland	0.00	Netherlands	0.00	Venezuela	0.62
France	0.00	New Zealand	10.33	Vietnam	0.80
Gabon	0.00	Nicaragua	0.00	Zambia	3.84
Germany	0.00	Niger	0.00	Zimbabwe	1.14
Ghana	0.00	Nigeria	0.14		

Social and Institutional Capacity

Private Sector Responsiveness

Variable Name: Dow Jones Sustainability Group Index

Variable Code: DJSGI **Variable Number:** 44

Units: Percentage

Reference Year: 2000

Source: "Assessment of the Country Allocation of the Dow Jones Sustainability Group Index", SAM Sustainability Group, 2001.

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 vigorously to environmental sustainability.

Details: For each country, the number of companies in the Sustainability Index was divided by the number of companies in the Global Index.

Median: 10.73 **Minimum:** 0.00 **Maximum:** 46.34

Albania		Greece	10.34	Norway	
Algeria		Guatemala		Pakistan	
Argentina		Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	25.00	Hungary		Paraguay	
Austria	33.33	Iceland		Peru	
Azerbaijan		India		Philippines	7.69
Bangladesh		Indonesia	0.00	Poland	
Belarus		Iran		Portugal	
Belgium	22.22	Ireland	11.11	Romania	
Benin		Israel		Russian Federation	
Bhutan		Italy	9.52	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	7.10	Senegal	
Brazil	11.76	Jordan		Singapore	6.98
Bulgaria		Kazakhstan		Slovak Republic	
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	10.00	South Africa	2.86
Cameroon		Kuwait		Spain	17.39
Canada	17.20	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	10.00	Lebanon		Sweden	40.74
China		Libya		Switzerland	42.31
Colombia		Lithuania		Syria	
Costa Rica		Macedonia		Tanzania	
Croatia		Madagascar		Thailand	20.00
Cuba		Malawi		Togo	
Czech Republic		Malaysia		Trinidad and Tobago	
Denmark	28.57	Mali		Tunisia	
Dominican Republic		Mauritius		Turkey	
Ecuador		Mexico	20.59	Uganda	
Egypt		Moldova		Ukraine	
El Salvador		Mongolia		United Kingdom	19.08
Estonia		Morocco		United States	7.56
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	33.33	Netherlands		Venezuela	
France	8.57	New Zealand	25.00	Vietnam	
Gabon		Nicaragua		Zambia	
Germany	46.34	Niger		Zimbabwe	
Ghana		Nigeria			

Social and Institutional Capacity

Private Sector Responsiveness

Variable Name: Average Innovest EcoValue '21 Rating of Firms

Variable Code: ECOVAL **Variable Number:** 45

Units: Scale ranging from -3 (low) to 3 (high)

Reference Year: 2001

Source: Innovest Strategic Value Advisors

Logic: The Innovest EcoValue '21 rating measures environmental performance at the firm level.

Details: 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.

Median: 0.83 **Minimum:** -3 **Maximum:** 2.34

Albania		Greece		Norway	2.00
Algeria		Guatemala		Pakistan	
Argentina		Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	-3.00	Hungary		Paraguay	
Austria		Iceland		Peru	
Azerbaijan		India		Philippines	
Bangladesh		Indonesia		Poland	
Belarus		Iran		Portugal	
Belgium	-0.82	Ireland	2.00	Romania	
Benin		Israel		Russian Federation	
Bhutan		Italy	-2.01	Rwanda	
Bolivia		Jamaica		Saudi Arabia	
Botswana		Japan	1.69	Senegal	
Brazil		Jordan		Singapore	-2.97
Bulgaria		Kazakhstan		Slovak Republic	
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South		South Africa	
Cameroon		Kuwait		Spain	-0.96
Canada	1.36	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile		Lebanon		Sweden	2.34
China		Libya		Switzerland	1.40
Colombia		Lithuania		Syria	
Costa Rica		Macedonia		Tanzania	
Croatia		Madagascar		Thailand	
Cuba		Malawi		Togo	
Czech Republic		Malaysia	-3.00	Trinidad and Tobago	
Denmark	2.15	Mali		Tunisia	
Dominican Republic		Mauritius		Turkey	
Ecuador		Mexico	-3.00	Uganda	
Egypt		Moldova		Ukraine	
El Salvador		Mongolia		United Kingdom	1.07
Estonia		Morocco		United States	0.33
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	1.95	Netherlands	1.30	Venezuela	
France	-0.48	New Zealand		Vietnam	
Gabon		Nicaragua		Zambia	
Germany	0.59	Niger		Zimbabwe	
Ghana		Nigeria			

Social and Institutional Capacity

Private Sector Responsiveness

Variable Name: World Business Council on Sustainable Development Members (per million dollars GDP)

Variable Code: WBCSD **Variable Number:** 46

Units: Members per Million Dollars GDP

Reference Year: 2001

Source: World Business Council on Sustainable Development, "List of Members," <http://www.wbcso.org/memlist2.htm>, visited 6 January 2001.

Logic: The WBCSD is a prominent private-sector organization promoting the principles of sustainable development and encouraging high standards of environmental management within firms.

Details:

Median: 0.00 **Minimum:** 0.00 **Maximum:** 1148.45

Albania	0.00	Greece	0.00	Norway	0.00
Algeria	208.68	Guatemala	0.00	Pakistan	0.00
Argentina	0.00	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	0.00	Papua New Guinea	0.00
Australia	133.62	Hungary	0.00	Paraguay	233.23
Austria	0.00	Iceland	0.00	Peru	0.00
Azerbaijan	0.00	India	0.00	Philippines	0.00
Bangladesh	0.00	Indonesia	0.00	Poland	0.00
Belarus	0.00	Iran	0.00	Portugal	204.06
Belgium	0.00	Ireland	0.00	Romania	0.00
Benin	0.00	Israel	0.00	Russian Federation	619.20
Bhutan	0.00	Italy	145.74	Rwanda	0.00
Bolivia	0.00	Jamaica	0.00	Saudi Arabia	0.00
Botswana	0.00	Japan	859.94	Senegal	0.00
Brazil	452.85	Jordan	0.00	Singapore	0.00
Bulgaria	0.00	Kazakhstan	0.00	Slovak Republic	0.00
Burkina Faso	0.00	Kenya	0.00	Slovenia	0.00
Burundi	0.00	Korea, South	222.59	South Africa	117.82
Cameroon	0.00	Kuwait	0.00	Spain	0.00
Canada	254.43	Kyrgyz Republic	0.00	Sri Lanka	0.00
Central African Republic	0.00	Latvia	0.00	Sudan	0.00
Chile	113.81	Lebanon	0.00	Sweden	0.00
China	322.03	Libya	0.00	Switzerland	470.36
Colombia	0.00	Lithuania	0.00	Syria	0.00
Costa Rica	167.04	Macedonia	0.00	Tanzania	0.00
Croatia	148.17	Madagascar	0.00	Thailand	183.30
Cuba	0.00	Malawi	0.00	Togo	0.00
Czech Republic	161.79	Malaysia	0.00	Trinidad and Tobago	0.00
Denmark	123.88	Mali	0.00	Tunisia	0.00
Dominican Republic	0.00	Mauritius	0.00	Turkey	0.00
Ecuador	0.00	Mexico	389.41	Uganda	0.00
Egypt	0.00	Moldova	0.00	Ukraine	0.00
El Salvador	0.00	Mongolia	0.00	United Kingdom	688.42
Estonia	0.00	Morocco	0.00	United States	1,148.45
Ethiopia	0.00	Mozambique	0.00	Uruguay	0.00
Fiji	0.00	Nepal	0.00	Uzbekistan	0.00
Finland	191.87	Netherlands	270.56	Venezuela	0.00
France	283.35	New Zealand	57.84	Vietnam	0.00
Gabon	0.00	Nicaragua	0.00	Zambia	0.00
Germany	360.86	Niger	0.00	Zimbabwe	0.00
Ghana	0.00	Nigeria	0.00		

Social and Institutional Capacity

Private Sector Responsiveness

Variable Name: Levels of Environmental Competitiveness

Variable Code: WEFCOM **Variable Number:** 47

Units: Survey Responses Ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)

Reference Year: 2000

Source: Michael E. Porter et al, *The Global Competitiveness Report 2000*, Oxford: Oxford University Press, 2000.

Logic: In countries where compliance with environmental standards is seen as beneficial to the economic interests of firms, the prospects for environmental sustainability are enhanced.

Details: Response to the statement "Complying with environmental standards has a positive influence on long-term competitiveness by prompting companies to improve products and processes."

Median: 4.35 **Minimum:** 3.20 **Maximum:** 5.90

Albania		Greece	4.00	Norway	5.40
Algeria		Guatemala		Pakistan	
Argentina	4.10	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	5.30	Hungary	4.10	Paraguay	
Austria	5.40	Iceland	5.10	Peru	4.00
Azerbaijan		India	3.90	Philippines	3.70
Bangladesh		Indonesia	3.60	Poland	3.80
Belarus		Iran		Portugal	4.50
Belgium	5.20	Ireland	4.70	Romania	
Benin		Israel	4.40	Russian Federation	3.50
Bhutan		Italy	4.30	Rwanda	
Bolivia	3.50	Jamaica		Saudi Arabia	
Botswana		Japan	5.40	Senegal	
Brazil	4.60	Jordan	4.20	Singapore	5.90
Bulgaria	3.60	Kazakhstan		Slovak Republic	4.30
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	4.60	South Africa	4.40
Cameroon		Kuwait		Spain	5.00
Canada	5.10	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	4.20	Lebanon		Sweden	5.40
China	4.30	Libya		Switzerland	5.60
Colombia	3.90	Lithuania		Syria	
Costa Rica	4.50	Macedonia		Tanzania	
Croatia		Madagascar		Thailand	3.50
Cuba		Malawi		Togo	
Czech Republic	4.70	Malaysia	4.20	Trinidad and Tobago	
Denmark	5.70	Mali		Tunisia	
Dominican Republic		Mauritius	3.70	Turkey	4.20
Ecuador	4.20	Mexico	4.40	Uganda	
Egypt	4.30	Moldova		Ukraine	3.20
El Salvador	3.30	Mongolia		United Kingdom	5.00
Estonia		Morocco		United States	5.00
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	5.80	Netherlands	5.60	Venezuela	3.60
France	4.90	New Zealand	5.00	Vietnam	3.50
Gabon		Nicaragua		Zambia	
Germany	5.50	Niger		Zimbabwe	4.10
Ghana		Nigeria			

Social and Institutional Capacity

Environmental Information

Variable Name: Availability of Sustainable Development Information at the National Level

Variable Code: SDINFO **Variable Number:** 48

Units: Index Ranging from 1 (Low Levels of SD Information) to 4 (High Levels)

Reference Year: 1997

Source: United Nations Department of Economic and Social Affairs web site, <http://www.un.org/esa/agenda21/natinfo/agenda21/issue/inst.htm#info>, visited December 1999.

Logic: Agenda 21 represents a major effort to frame the sustainable development agenda, and therefore the quality of information related to Agenda 21 chapters has a direct bearing on decision-makers' abilities to pursue sustainability.

Details: In their reports to Rio+5 in 1997, countries rated themselves on the availability of information pertaining to chapters of Agenda 21 (from 1 for low levels of information, to 4 for high levels). We averaged the scores for seven key chapters, included Chapter 9 on protection of the atmosphere, Chapter 14 on sustainable agriculture and rural development, Chapter 15 on conservation of biological diversity, Chapter 18 on freshwater resources, Chapter 19 on toxic chemicals, Chapter 21 on solid wastes, and Chapter 40 on information for decision-making.

Median: 2.57 **Minimum:** 1.50 **Maximum:** 4.00

Albania	3.00
Algeria	2.29
Argentina	
Armenia	
Australia	
Austria	3.57
Azerbaijan	
Bangladesh	1.50
Belarus	
Belgium	
Benin	2.50
Bhutan	
Bolivia	2.00
Botswana	
Brazil	2.00
Bulgaria	
Burkina Faso	
Burundi	
Cameroon	
Canada	2.50
Central African Republic	
Chile	
China	
Colombia	2.00
Costa Rica	2.86
Croatia	
Cuba	2.83
Czech Republic	
Denmark	3.00
Dominican Republic	
Ecuador	2.57
Egypt	2.71
El Salvador	
Estonia	2.57
Ethiopia	
Fiji	2.17
Finland	3.14
France	2.83
Gabon	
Germany	3.14
Ghana	
Greece	2.29
Guatemala	
Haiti	1.57
Honduras	
Hungary	2.43
Iceland	3.00
India	
Indonesia	
Iran	
Ireland	3.43
Israel	3.29
Italy	
Jamaica	
Japan	2.86
Jordan	
Kazakhstan	
Kenya	
Korea, South	
Kuwait	
Kyrgyz Republic	
Latvia	
Lebanon	2.29
Libya	
Lithuania	3.00
Macedonia	2.71
Madagascar	
Malawi	2.00
Malaysia	2.43
Mali	
Mauritius	2.14
Mexico	2.14
Moldova	
Mongolia	2.57
Morocco	
Mozambique	
Nepal	3.43
Netherlands	3.57
New Zealand	1.86
Nicaragua	3.29
Niger	
Nigeria	
Norway	3.14
Pakistan	
Panama	2.00
Papua New Guinea	
Paraguay	1.71
Peru	
Philippines	1.83
Poland	2.17
Portugal	2.71
Romania	
Russian Federation	2.14
Rwanda	
Saudi Arabia	
Senegal	
Singapore	
Slovak Republic	3.50
Slovenia	2.86
South Africa	2.00
Spain	3.57
Sri Lanka	
Sudan	
Sweden	
Switzerland	3.00
Syria	2.00
Tanzania	
Thailand	2.71
Togo	
Trinidad and Tobago	
Tunisia	2.14
Turkey	2.29
Uganda	2.00
Ukraine	3.00
United Kingdom	
United States	4.00
Uruguay	
Uzbekistan	2.00
Venezuela	
Vietnam	3.29

Social and Institutional Capacity**Environmental Information**

Variable Name: Environmental Strategies and Action Plans

Variable Code: PLANS **Variable Number:** 49

Units: Number of Strategies and Action Plans

Reference Year: 1992-1996

Source: Sustainable Development Information Service, World Resources Institute, May 1996, <http://www.wri.org/wdces/>, site visited October 2000.

Logic: Environmental Strategies, Action Plans and Assessments provide valuable information for sustainable development decision making.

Details: Countries received one credit for each strategy, action plan or assessment produced from 1992-96 in the following categories: climate change, environmental synopsis, environmental profiles, environmental strategies, forestry, OECD, state of the environment, and other.

Median: 2 **Minimum:** 0 **Maximum:** 7

Albania	2.00	Greece	0.00	Norway	6.00
Algeria	0.00	Guatemala	2.00	Pakistan	4.00
Argentina	3.00	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	1.00	Papua New Guinea	1.00
Australia	3.00	Hungary	3.00	Paraguay	0.00
Austria	3.00	Iceland	2.00	Peru	2.00
Azerbaijan	1.00	India	5.00	Philippines	2.00
Bangladesh	1.00	Indonesia	7.00	Poland	4.00
Belarus	0.00	Iran	1.00	Portugal	3.00
Belgium	0.00	Ireland	2.00	Romania	0.00
Benin	3.00	Israel	2.00	Russian Federation	2.00
Bhutan	1.00	Italy	3.00	Rwanda	2.00
Bolivia	4.00	Jamaica	4.00	Saudi Arabia	0.00
Botswana	1.00	Japan	2.00	Senegal	2.00
Brazil	1.00	Jordan	0.00	Singapore	3.00
Bulgaria	0.00	Kazakhstan	1.00	Slovak Republic	2.00
Burkina Faso	2.00	Kenya	3.00	Slovenia	1.00
Burundi	2.00	Korea, South	0.00	South Africa	3.00
Cameroon	1.00	Kuwait	0.00	Spain	0.00
Canada	2.00	Kyrgyz Republic	0.00	Sri Lanka	5.00
Central African Republic	2.00	Latvia	3.00	Sudan	0.00
Chile	3.00	Lebanon	0.00	Sweden	1.00
China	6.00	Libya	0.00	Switzerland	2.00
Colombia	5.00	Lithuania	1.00	Syria	0.00
Costa Rica	0.00	Macedonia	1.00	Tanzania	5.00
Croatia	1.00	Madagascar	0.00	Thailand	2.00
Cuba	1.00	Malawi	2.00	Togo	2.00
Czech Republic	4.00	Malaysia	4.00	Trinidad and Tobago	1.00
Denmark	2.00	Mali	1.00	Tunisia	2.00
Dominican Republic	1.00	Mauritius	1.00	Turkey	1.00
Ecuador	5.00	Mexico	4.00	Uganda	5.00
Egypt	4.00	Moldova	4.00	Ukraine	2.00
El Salvador	3.00	Mongolia	3.00	United Kingdom	4.00
Estonia	3.00	Morocco	0.00	United States	4.00
Ethiopia	3.00	Mozambique	3.00	Uruguay	2.00
Fiji	4.00	Nepal	2.00	Uzbekistan	1.00
Finland	4.00	Netherlands	6.00	Venezuela	0.00
France	4.00	New Zealand	1.00	Vietnam	0.00
Gabon	2.00	Nicaragua	1.00	Zambia	2.00
Germany	2.00	Niger	3.00	Zimbabwe	3.00
Ghana	2.00	Nigeria	2.00		

Social and Institutional Capacity

Environmental Information

Variable Name: Number of ESI Variables Missing from a Subset of All Variables

Variable Code: ESIMIS **Variable Number:** 50

Units: Percentage

Reference Year: 2001

Source: 2001 Environmental Sustainability Index data set

Logic: The more ESI variables a country is missing, the poorer the availability of environmental information in general.

Details: We counted the number of missing variables from the set of variables for which it could reasonably be expected that any country could have coverage if it wanted to: GMS_EC, GMS_PH, GMS_SS, NO2, PRTBRD, PRTMAM, SO2, TSP, GMS_DO, BODWAT, CARSKM, COALKM, FOREST, FERTHA, GR2050, NOXKM, NUKE, PESTHA, PRESS, SO2KM, TFR, VOCKM, DISINT, DISRES, U5MORT, CALOR, WATSUP, CIVLIB, ENEFF, ARTPOP, EIA, GASPR, ISO14, IUCN, PLANS, PRAREA, RDEXP, RDPERS, RENEWP, SDINFO, CFC, CO2_EM, CO2HIS, SO2EXP, CITES, EIONUM, FOOT, FSC, GEF, MONFUN, VIENNA.

Median: 12 **Minimum:** 0 **Maximum:** 18

Albania	14.00	Greece	8.00	Norway	2.00
Algeria	14.00	Guatemala	12.00	Pakistan	9.00
Argentina	3.00	Haiti	18.00	Panama	12.00
Armenia	17.00	Honduras	14.00	Papua New Guinea	16.00
Australia	7.00	Hungary	0.00	Paraguay	14.00
Austria	6.00	Iceland	12.00	Peru	15.00
Azerbaijan	17.00	India	5.00	Philippines	5.00
Bangladesh	11.00	Indonesia	6.00	Poland	2.00
Belarus	12.00	Iran	9.00	Portugal	2.00
Belgium	8.00	Ireland	10.00	Romania	7.00
Benin	17.00	Israel	11.00	Russian Federation	4.00
Bhutan	17.00	Italy	8.00	Rwanda	18.00
Bolivia	15.00	Jamaica	14.00	Saudi Arabia	18.00
Botswana	15.00	Japan	3.00	Senegal	12.00
Brazil	4.00	Jordan	11.00	Singapore	12.00
Bulgaria	5.00	Kazakhstan	16.00	Slovak Republic	6.00
Burkina Faso	15.00	Kenya	14.00	Slovenia	8.00
Burundi	17.00	Korea, South	2.00	South Africa	6.00
Cameroon	15.00	Kuwait	17.00	Spain	7.00
Canada	1.00	Kyrgyz Republic	16.00	Sri Lanka	13.00
Central African Republic	17.00	Latvia	10.00	Sudan	13.00
Chile	5.00	Lebanon	17.00	Sweden	5.00
China	5.00	Libya	16.00	Switzerland	3.00
Colombia	6.00	Lithuania	5.00	Syria	14.00
Costa Rica	7.00	Macedonia	13.00	Tanzania	15.00
Croatia	11.00	Madagascar	14.00	Thailand	5.00
Cuba	8.00	Malawi	16.00	Togo	16.00
Czech Republic	8.00	Malaysia	4.00	Trinidad and Tobago	16.00
Denmark	7.00	Mali	13.00	Tunisia	12.00
Dominican Republic	17.00	Mauritius	14.00	Turkey	6.00
Ecuador	9.00	Mexico	4.00	Uganda	14.00
Egypt	8.00	Moldova	12.00	Ukraine	11.00
El Salvador	10.00	Mongolia	12.00	United Kingdom	2.00
Estonia	11.00	Morocco	12.00	United States	5.00
Ethiopia	16.00	Mozambique	16.00	Uruguay	12.00
Fiji	17.00	Nepal	14.00	Uzbekistan	16.00
Finland	1.00	Netherlands	1.00	Venezuela	8.00
France	4.00	New Zealand	4.00	Vietnam	16.00
Gabon	17.00	Nicaragua	12.00	Zambia	16.00
Germany	6.00	Niger	17.00	Zimbabwe	12.00
Ghana	12.00	Nigeria	14.00		

Social and Institutional Capacity

Eco-efficiency

Variable Name: Energy Efficiency (total energy consumption per unit GDP)

Variable Code: ENEFF **Variable Number:** 51

Units: Billion Btu/Million Dollars GDP

Reference Year: 1998

Source: US Energy Information Agency, <http://www.eia.doe.gov/emeu/international/contents.html>, site visited September 2000.

Logic: The more eco-efficient an economy is, the higher its resource productivity and the less energy it needs to produce goods and services.

Details:

Median: 15.37 **Minimum:** 2.76 **Maximum:** 101.19

Albania		Greece	12.95	Norway	12.17
Algeria	18.64	Guatemala	11.52	Pakistan	30.70
Argentina	12.22	Haiti	8.78	Panama	18.70
Armenia	19.26	Honduras	8.97	Papua New Guinea	10.57
Australia	11.46	Hungary	32.29	Paraguay	15.32
Austria	7.09	Iceland	14.49	Peru	10.81
Azerbaijan	101.19	India	28.13	Philippines	19.74
Bangladesh	13.15	Indonesia	22.96	Poland	45.05
Belarus	39.21	Iran	26.89	Portugal	11.77
Belgium	11.83	Ireland	6.85	Romania	58.39
Benin		Israel	9.96	Russian Federation	74.19
Bhutan	15.29	Italy	6.66	Rwanda	6.13
Bolivia	18.41	Jamaica	35.58	Saudi Arabia	35.11
Botswana	9.33	Japan	6.55	Senegal	7.87
Brazil	14.01	Jordan	34.52	Singapore	20.41
Bulgaria	60.71	Kazakhstan	76.93	Slovak Republic	63.95
Burkina Faso	2.76	Kenya	15.41	Slovenia	11.26
Burundi	6.93	Korea, South	17.91	South Africa	37.92
Cameroon	6.74	Kuwait	30.81	Spain	8.73
Canada	17.54	Kyrgyz Republic	66.03	Sri Lanka	13.70
Central African Republic		Latvia	25.01	Sudan	5.36
Chile	16.63	Lebanon	41.21	Sweden	9.14
China	39.10	Libya	23.64	Switzerland	5.19
Colombia	23.98	Lithuania	54.92	Syria	22.36
Costa Rica	16.13	Macedonia	67.74	Tanzania	8.53
Croatia		Madagascar	6.69	Thailand	19.29
Cuba	39.37	Malawi	9.36	Togo	8.51
Czech Republic	56.22	Malaysia	22.88	Trinidad and Tobago	76.60
Denmark	4.84	Mali	4.15	Tunisia	16.63
Dominican Republic	18.68	Mauritius	9.11	Turkey	13.85
Ecuador	27.57	Mexico	17.72	Uganda	3.40
Egypt	31.03	Moldova	47.38	Ukraine	96.53
El Salvador	13.75	Mongolia	44.24	United Kingdom	8.59
Estonia	16.09	Morocco	12.82	United States	13.41
Ethiopia	3.93	Mozambique	12.59	Uruguay	12.86
Fiji	13.10	Nepal	7.38	Uzbekistan	88.73
Finland	8.37	Netherlands	11.01	Venezuela	44.11
France	7.39	New Zealand	15.09	Vietnam	64.57
Gabon	11.04	Nicaragua	36.46	Zambia	28.31
Germany	7.28	Niger	6.40	Zimbabwe	22.34
Ghana	13.20	Nigeria	23.66		

Social and Institutional Capacity

Eco-efficiency

Variable Name: Renewable Energy Production as a Percentage of Total Energy Consumption

Variable Code: RENEWP **Variable Number:** 52

Units: Renewable Energy Production as a Percent of Total Energy Consumption

Reference Year: 1998

Source: US Energy Information Agency, <http://www.eia.doe.gov/emeu/international/contents.html>, site visited September 2000.

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

Details: Hydroelectric, biomass, geothermal, solar and wind electric power production is calculated as a percentage of total energy consumption. Some countries exceed 100 percent because they are net exporters of renewable energy. A logarithmic transformation of this variable was used in calculating the ESI.

Albania	64.39	Greece	3.16	Norway	64.03
Algeria	0.04	Guatemala	19.36	Pakistan	12.88
Argentina	13.75	Haiti	15.12	Panama	24.26
Armenia	17.38	Honduras	26.53	Papua New Guinea	12.55
Australia	4.57	Hungary	0.15	Paraguay	533.89
Austria	29.81	Iceland	64.83	Peru	27.21
Azerbaijan	3.18	India	6.41	Philippines	18.90
Bangladesh	1.72	Indonesia	3.22	Poland	1.41
Belarus	0.02	Iran	1.68	Portugal	15.19
Belgium	0.55	Ireland	2.32	Romania	9.84
Benin	0.00	Israel	0.05	Russian Federation	6.02
Bhutan	265.37	Italy	6.80	Rwanda	13.16
Bolivia	12.34	Jamaica	3.20	Saudi Arabia	0.00
Botswana	0.00	Japan	5.72	Senegal	0.00
Brazil	38.38	Jordan	0.15	Singapore	0.00
Bulgaria	3.31	Kazakhstan	3.30	Slovak Republic	5.03
Burkina Faso	7.46	Kenya	28.99	Slovenia	11.66
Burundi	18.93	Korea, South	0.64	South Africa	0.37
Cameroon	38.32	Kuwait	0.00	Spain	7.62
Canada	29.29	Kyrgyz Republic	50.45	Sri Lanka	23.92
Central African Republic	17.66	Latvia	20.05	Sudan	14.92
Chile	17.42	Lebanon	4.13	Sweden	35.06
China	6.22	Libya	0.00	Switzerland	29.37
Colombia	25.71	Lithuania	2.08	Syria	12.59
Costa Rica	48.04	Macedonia	8.32	Tanzania	27.81
Croatia	14.51	Madagascar	23.33	Thailand	3.15
Cuba	3.95	Malawi	43.57	Togo	0.50
Czech Republic	1.49	Malaysia	1.80	Trinidad and Tobago	0.08
Denmark	4.81	Mali	19.46	Tunisia	0.14
Dominican Republic	12.20	Mauritius	2.91	Turkey	15.18
Ecuador	19.53	Mexico	6.18	Uganda	38.22
Egypt	6.89	Moldova	2.59	Ukraine	1.92
El Salvador	23.93	Mongolia	0.00	United Kingdom	1.20
Estonia	0.02	Morocco	5.52	United States	4.51
Ethiopia	35.10	Mozambique	34.23	Uruguay	63.55
Fiji	26.11	Nepal	31.67	Uzbekistan	3.64
Finland	19.11	Netherlands	1.11	Venezuela	20.74
France	6.50	New Zealand	37.24	Vietnam	25.36
Gabon	12.79	Nicaragua	27.29	Zambia	83.66
Germany	2.04	Niger	0.00	Zimbabwe	6.89
Ghana	55.36	Nigeria	6.11		

Social and Institutional Capacity

Reducing Public Choice Distortions

Variable Name: Price of Premium Gasoline

Variable Code: GASPR Variable Number: 53

Units: US Dollars/Liter

Reference Year: 1998 (last quarter)

Source: Gesellschaft fuer Technische Zusammenarbeit (GTZ), *Fuel Prices and Taxation*, Frankfurt: GTZ, May 1999.

Logic: Unsubsidized gasoline prices are an indicator that appropriate price signals are being sent and that environmental externalities have been internalized. Artificially low prices encourage wasteful consumption and thus air pollution and greenhouse gas emissions.

Details:

Median: 0.53 Minimum: 0.08 Maximum: 1.21

Albania	0.86	Greece	0.65	Norway	1.21
Algeria	0.31	Guatemala	0.41	Pakistan	0.46
Argentina	0.94	Haiti	0.59	Panama	0.41
Armenia	0.49	Honduras	0.50	Papua New Guinea	0.41
Australia	0.46	Hungary	0.72	Paraguay	0.47
Austria	1.04	Iceland	1.12	Peru	0.55
Azerbaijan	0.46	India	0.56	Philippines	0.34
Bangladesh	0.47	Indonesia	0.16	Poland	0.54
Belarus	0.34	Iran	0.08	Portugal	1.02
Belgium	1.12	Ireland	1.02	Romania	0.53
Benin	0.39	Israel	0.86	Russian Federation	0.28
Bhutan	0.59	Italy	1.19	Rwanda	0.72
Bolivia	0.53	Jamaica	0.37	Saudi Arabia	0.16
Botswana	0.31	Japan	1.02	Senegal	0.71
Brazil	0.80	Jordan	0.42	Singapore	0.72
Bulgaria	0.66	Kazakhstan	0.30	Slovak Republic	0.61
Burkina Faso	0.68	Kenya	0.70	Slovenia	0.66
Burundi	0.72	Korea, South	0.93	South Africa	0.43
Cameroon	0.64	Kuwait	0.17	Spain	0.84
Canada	0.41	Kyrgyz Republic	0.47	Sri Lanka	0.84
Central African Republic	0.81	Latvia	0.55	Sudan	0.33
Chile	0.49	Lebanon	0.35	Sweden	1.09
China	0.28	Libya	0.22	Switzerland	0.86
Colombia	0.24	Lithuania	0.51	Syria	0.45
Costa Rica	0.41	Macedonia	0.70	Tanzania	0.63
Croatia	0.67	Madagascar	0.47	Thailand	0.30
Cuba	0.50	Malawi	0.51	Togo	0.42
Czech Republic	0.72	Malaysia	0.28	Trinidad and Tobago	0.39
Denmark	1.05	Mali	0.77	Tunisia	0.60
Dominican Republic	0.40	Mauritius		Turkey	0.78
Ecuador	0.38	Mexico	0.36	Uganda	0.86
Egypt	0.29	Moldova	0.45	Ukraine	0.49
El Salvador	0.54	Mongolia	0.23	United Kingdom	1.11
Estonia	0.45	Morocco	0.79	United States	0.32
Ethiopia	0.36	Mozambique	0.55	Uruguay	0.90
Fiji	0.50	Nepal	0.59	Uzbekistan	0.11
Finland	1.17	Netherlands	1.14	Venezuela	0.14
France	1.11	New Zealand	0.64	Vietnam	0.35
Gabon	0.63	Nicaragua	0.47	Zambia	0.53
Germany	0.96	Niger	0.76	Zimbabwe	0.26
Ghana	0.32	Nigeria	0.13		

Social and Institutional Capacity

Reducing Public Choice Distortions

Variable Name: Subsidies for Energy or Materials Usage

Variable Code: WEFSUB

Variable Number: 54

Units: Survey Responses Ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)

Reference Year: 2000

Source: Michael E. Porter et al, *The Global Competitiveness Report 2000*, Oxford: Oxford University Press, 2000.

Logic: Subsidies encourage wasteful consumption of energy and materials.

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

Median: 4.45

Minimum: 2.60

Maximum: 6.20

Albania		Greece	4.20	Norway	4.50
Algeria		Guatemala		Pakistan	
Argentina	5.10	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	5.20	Hungary	4.40	Paraguay	
Austria	5.10	Iceland	5.10	Peru	5.50
Azerbaijan		India	3.00	Philippines	4.20
Bangladesh		Indonesia	2.90	Poland	3.70
Belarus		Iran		Portugal	4.40
Belgium	4.90	Ireland	5.20	Romania	
Benin		Israel	5.10	Russian Federation	4.20
Bhutan		Italy	4.40	Rwanda	
Bolivia	5.40	Jamaica		Saudi Arabia	
Botswana		Japan	4.60	Senegal	
Brazil	4.60	Jordan	4.40	Singapore	5.30
Bulgaria	3.50	Kazakhstan		Slovak Republic	3.50
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	4.10	South Africa	4.60
Cameroon		Kuwait		Spain	4.40
Canada	4.80	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	5.10	Lebanon		Sweden	4.70
China	4.00	Libya		Switzerland	5.10
Colombia	4.40	Lithuania		Syria	
Costa Rica	4.20	Macedonia		Tanzania	
Croatia		Madagascar		Thailand	3.80
Cuba		Malawi		Togo	
Czech Republic	4.40	Malaysia	4.40	Trinidad and Tobago	
Denmark	5.10	Mali		Tunisia	
Dominican Republic		Mauritius	4.50	Turkey	4.60
Ecuador	2.60	Mexico	4.10	Uganda	
Egypt	4.00	Moldova		Ukraine	3.50
El Salvador	3.90	Mongolia		United Kingdom	5.20
Estonia		Morocco		United States	4.60
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	6.20	Netherlands	5.30	Venezuela	3.60
France	5.00	New Zealand	6.10	Vietnam	3.70
Gabon		Nicaragua		Zambia	
Germany	4.60	Niger		Zimbabwe	3.60
Ghana		Nigeria			

Social and Institutional Capacity

Reducing Public Choice Distortions

Variable Name: Reducing Corruption

Variable Code: GRAFT **Variable Number:** 55

Units: Standardized Scale in which high values represent low levels of corruption.

Reference Year: 2000

Source: Dataset from “Aggregating Governance Indicators” and “Governance Matters”, Kaufmann D., Kraay A. and Zoido-Lobaton P., May 2000, 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.

Details:

Median: -0.28 **Minimum:** -1.57 **Maximum:** 2.13

Albania	-0.99	Greece	0.82	Norway	1.69
Algeria	-0.88	Guatemala	-0.82	Pakistan	-0.77
Argentina	-0.27	Haiti	-0.53	Panama	-0.46
Armenia	-0.80	Honduras	-0.94	Papua New Guinea	-0.85
Australia	1.60	Hungary	0.61	Paraguay	-0.96
Austria	1.46	Iceland	1.83	Peru	-0.20
Azerbaijan	-1.00	India	-0.31	Philippines	-0.23
Bangladesh	-0.29	Indonesia	-0.80	Poland	0.49
Belarus	-0.65	Iran	-0.85	Portugal	1.22
Belgium	0.67	Ireland	1.57	Romania	-0.46
Benin	-0.78	Israel	1.28	Russian Federation	-0.62
Bhutan		Italy	0.80	Rwanda	
Bolivia	-0.44	Jamaica	-0.12	Saudi Arabia	-0.58
Botswana	0.54	Japan	0.72	Senegal	-0.24
Brazil	0.06	Jordan	0.14	Singapore	1.95
Bulgaria	-0.56	Kazakhstan	-0.87	Slovak Republic	0.03
Burkina Faso	-0.37	Kenya	-0.65	Slovenia	1.02
Burundi		Korea, South	0.16	South Africa	0.30
Cameroon	-1.10	Kuwait	0.62	Spain	1.21
Canada	2.06	Kyrgyz Republic	-0.76	Sri Lanka	-0.12
Central African Republic		Latvia	-0.26	Sudan	-1.02
Chile	1.03	Lebanon	-0.40	Sweden	2.09
China	-0.29	Libya	-0.88	Switzerland	2.07
Colombia	-0.49	Lithuania	0.03	Syria	-0.79
Costa Rica	0.58	Macedonia	-0.52	Tanzania	-0.92
Croatia	-0.46	Madagascar	-0.47	Thailand	-0.16
Cuba	0.27	Malawi	-0.19	Togo	-0.24
Czech Republic	0.38	Malaysia	0.63	Trinidad and Tobago	0.51
Denmark	2.13	Mali	-0.48	Tunisia	0.02
Dominican Republic	-0.77	Mauritius	0.34	Turkey	-0.35
Ecuador	-0.82	Mexico	-0.28	Uganda	-0.47
Egypt	-0.27	Moldova	-0.39	Ukraine	-0.89
El Salvador	-0.35	Mongolia	-0.15	United Kingdom	1.71
Estonia	0.59	Morocco	0.13	United States	1.41
Ethiopia	-0.44	Mozambique	-0.53	Uruguay	0.43
Fiji	0.81	Nepal		Uzbekistan	-0.96
Finland	2.08	Netherlands	2.03	Venezuela	-0.72
France	1.28	New Zealand	2.07	Vietnam	-0.33
Gabon	-1.02	Nicaragua	-0.84	Zambia	-0.61
Germany	1.62	Niger	-1.57	Zimbabwe	-0.32
Ghana	-0.30	Nigeria	-0.95		

Global Stewardship

International Commitment

Variable Name: Number of Memberships in Environmental Intergovernmental Organizations

Variable Code: EIONUM **Variable Number:** 56

Units: Number of Memberships

Reference Year: 1998

Source: Organizational Memberships from Yearbook of International Organizations. Digital data set provided by Center for International Development and Conflict Management, University of Maryland.

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

Details: 100 intergovernmental organizations were coded as “environmental” by CIESIN. (List available upon request)

Median: 12 **Minimum:** 2 **Maximum:** 35

Albania	6.00	Greece	23.00	Norway	26.00
Algeria	14.00	Guatemala	13.00	Pakistan	14.00
Argentina	15.00	Haiti	8.00	Panama	14.00
Armenia	4.00	Honduras	9.00	Papua New Guinea	11.00
Australia	19.00	Hungary	15.00	Paraguay	9.00
Austria	20.00	Iceland		Peru	15.00
Azerbaijan	5.00	India	23.00	Philippines	14.00
Bangladesh	7.00	Indonesia	15.00	Poland	16.00
Belarus	5.00	Iran	11.00	Portugal	21.00
Belgium	26.00	Ireland	19.00	Romania	13.00
Benin	10.00	Israel	12.00	Russian Federation	22.00
Bhutan	2.00	Italy	26.00	Rwanda	5.00
Bolivia	15.00	Jamaica	10.00	Saudi Arabia	8.00
Botswana	6.00	Japan	24.00	Senegal	14.00
Brazil	20.00	Jordan	11.00	Singapore	8.00
Bulgaria	11.00	Kazakhstan	5.00	Slovak Republic	12.00
Burkina Faso	9.00	Kenya	17.00	Slovenia	11.00
Burundi	5.00	Korea, South	16.00	South Africa	13.00
Cameroon	18.00	Kuwait	10.00	Spain	27.00
Canada	18.00	Kyrgyz Republic	3.00	Sri Lanka	14.00
Central African Republic	7.00	Latvia	8.00	Sudan	15.00
Chile	10.00	Lebanon	10.00	Sweden	27.00
China	12.00	Libya	10.00	Switzerland	24.00
Colombia	16.00	Lithuania	8.00	Syria	15.00
Costa Rica	12.00	Macedonia	6.00	Tanzania	16.00
Croatia	9.00	Madagascar	9.00	Thailand	16.00
Cuba	13.00	Malawi	12.00	Togo	13.00
Czech Republic	12.00	Malaysia	16.00	Trinidad and Tobago	12.00
Denmark	26.00	Mali	12.00	Tunisia	16.00
Dominican Republic	10.00	Mauritius	10.00	Turkey	14.00
Ecuador	17.00	Mexico	15.00	Uganda	13.00
Egypt	21.00	Moldova	5.00	Ukraine	8.00
El Salvador	10.00	Mongolia	5.00	United Kingdom	28.00
Estonia	8.00	Morocco	18.00	United States	23.00
Ethiopia	9.00	Mozambique	6.00	Uruguay	11.00
Fiji	8.00	Nepal	6.00	Uzbekistan	5.00
Finland	25.00	Netherlands	30.00	Venezuela	16.00
France	35.00	New Zealand	12.00	Vietnam	8.00
Gabon	13.00	Nicaragua	12.00	Zambia	10.00
Germany	34.00	Niger	10.00	Zimbabwe	11.00
Ghana	13.00	Nigeria	17.00		

Global Stewardship

International Commitment

Variable Name: Percentage of CITES Reporting Requirements Met

Variable Code: CITES **Variable Number:** 57

Units: Percent of Requirements Met

Reference Year: 2000

Source: Convention on International Trade in Endangered Species of Wild Fauna and Flora, Report on National Reports Required Under Article VIII, Paragraph 7(a), of the Convention, Eleventh Meeting of the Conference of the Parties, Gigiri, Kenya, April 2000, available at <http://www.unep-wcmc.org/CITES/eng/cop/11/docs/19.pdf>, site visited November 2000.

Logic: Preparing and submitting national reports is a fundamental responsibility under CITES. The degree to which a country fulfills this responsibility is an indication of how seriously it takes its commitment to protection of endangered species.

Details:

Median: 75 **Minimum:** 0 **Maximum:** 100

Albania	0.00	Greece	100.00	Norway	87.00
Algeria	60.00	Guatemala	89.50	Pakistan	78.30
Argentina	88.90	Haiti	0.00	Panama	81.00
Armenia	0.00	Honduras	21.40	Papua New Guinea	73.90
Australia	100.00	Hungary	85.70	Paraguay	68.20
Austria	100.00	Iceland	0.00	Peru	75.00
Azerbaijan	0.00	India	100.00	Philippines	83.30
Bangladesh	70.60	Indonesia	95.00	Poland	88.90
Belarus	50.00	Iran	69.60	Portugal	72.20
Belgium	100.00	Ireland	0.00	Romania	40.00
Benin	26.70	Israel	52.60	Russian Federation	78.30
Bhutan	0.00	Italy	100.00	Rwanda	16.70
Bolivia	60.00	Jamaica	50.00	Saudi Arabia	0.00
Botswana	90.50	Japan	89.50	Senegal	81.80
Brazil	54.20	Jordan	35.00	Singapore	100.00
Bulgaria	62.50	Kazakhstan	0.00	Slovak Republic	100.00
Burkina Faso	55.60	Kenya	65.00	Slovenia	0.00
Burundi	27.30	Korea, South	100.00	South Africa	95.80
Cameroon	72.20	Kuwait	0.00	Spain	100.00
Canada	95.80	Kyrgyz Republic	0.00	Sri Lanka	70.00
Central African Republic	47.40	Latvia	100.00	Sudan	56.30
Chile	75.00	Lebanon	0.00	Sweden	100.00
China	100.00	Libya	0.00	Switzerland	100.00
Colombia	83.30	Lithuania	0.00	Syria	0.00
Costa Rica	83.30	Macedonia	0.00	Tanzania	84.20
Croatia	0.00	Madagascar	87.50	Thailand	68.80
Cuba	88.90	Malawi	77.80	Togo	75.00
Czech Republic	100.00	Malaysia	85.70	Trinidad and Tobago	66.70
Denmark	95.50	Mali	100.00	Tunisia	100.00
Dominican Republic	100.00	Mauritius	87.50	Turkey	66.70
Ecuador	70.80	Mexico	87.50	Uganda	50.00
Egypt	19.00	Moldova	0.00	Ukraine	0.00
El Salvador	33.30	Mongolia	100.00	United Kingdom	100.00
Estonia	85.70	Morocco	60.90	United States	87.50
Ethiopia	90.00	Mozambique	77.80	Uruguay	62.50
Fiji	0.00	Nepal	75.00	Uzbekistan	50.00
Finland	82.60	Netherlands	100.00	Venezuela	76.20
France	100.00	New Zealand	100.00	Vietnam	40.00
Gabon	70.00	Nicaragua	90.90	Zambia	72.20
Germany	100.00	Niger	50.00	Zimbabwe	88.90
Ghana	87.00	Nigeria	45.80		

Global Stewardship

International Commitment

Variable Name: Levels of Participation in the Vienna Convention/ Montreal Protocol

Variable Code: VIENNA **Variable Number:** 58

Units: Index Ranging from 0 (no participation) to 3 (high levels of participation)

Reference Year: 2000

Source: United Nations Environment Program, The Ozone Secretariat, <http://www.unep.org/ozone/ratif.htm>, site visited November 2000.

Logic: The number of protocols and amendments that a country has acceded to or ratified under the Vienna Convention is an indication of its commitment to fight ozone depletion.

Details: The index assigned values as follows. Countries received a score of zero if they were not signatory to the Vienna Convention. They received a score of 1 if they had ratified the Montreal Protocol only. They received a score of 2 if they ratified the above plus the London Amendment. They received a score of 2.5 if they ratified the above plus the Copenhagen Amendment. They received a score of 3 if they ratified the above plus the Montreal Amendment.

Median: 2.50 **Minimum:** 0 **Maximum:** 3

Albania	1.00	Greece	2.50	Norway	3.00
Algeria	2.50	Guatemala	1.00	Pakistan	2.50
Argentina	2.50	Haiti	2.00	Panama	3.00
Armenia	1.00	Honduras	1.00	Papua New Guinea	2.00
Australia	3.00	Hungary	3.00	Paraguay	2.00
Austria	3.00	Iceland	3.00	Peru	2.50
Azerbaijan	3.00	India	2.00	Philippines	2.00
Bangladesh	2.00	Indonesia	2.50	Poland	3.00
Belarus	2.00	Iran	2.50	Portugal	2.50
Belgium	2.50	Ireland	2.50	Romania	2.00
Benin	2.50	Israel	2.50	Russian Federation	2.00
Bhutan	0.00	Italy	2.50	Rwanda	0.00
Bolivia	3.00	Jamaica	2.50	Saudi Arabia	2.50
Botswana	2.50	Japan	2.50	Senegal	3.00
Brazil	2.50	Jordan	3.00	Singapore	3.00
Bulgaria	3.00	Kazakhstan	1.00	Slovak Republic	3.00
Burkina Faso	2.50	Kenya	2.50	Slovenia	3.00
Burundi	1.00	Korea, South	3.00	South Africa	2.00
Cameroon	2.50	Kuwait	2.50	Spain	3.00
Canada	3.00	Kyrgyz Republic	1.00	Sri Lanka	3.00
Central African Republic	1.00	Latvia	2.50	Sudan	1.00
Chile	3.00	Lebanon	3.00	Sweden	3.00
China	2.00	Libya	1.00	Switzerland	2.50
Colombia	2.50	Lithuania	2.50	Syria	3.00
Costa Rica	2.50	Macedonia	3.00	Tanzania	2.00
Croatia	3.00	Madagascar	1.00	Thailand	2.50
Cuba	2.50	Malawi	2.50	Togo	2.50
Czech Republic	3.00	Malaysia	2.50	Trinidad and Tobago	3.00
Denmark	2.50	Mali	2.00	Tunisia	3.00
Dominican Republic	1.00	Mauritius	2.50	Turkey	2.50
Ecuador	2.50	Mexico	2.50	Uganda	3.00
Egypt	3.00	Moldova	1.00	Ukraine	2.00
El Salvador	1.00	Mongolia	2.50	United Kingdom	2.50
Estonia	2.50	Morocco	2.50	United States	2.50
Ethiopia	1.00	Mozambique	2.50	Uruguay	3.00
Fiji	2.50	Nepal	2.00	Uzbekistan	2.50
Finland	2.50	Netherlands	3.00	Venezuela	2.50
France	2.50	New Zealand	3.00	Vietnam	2.50
Gabon	1.00	Nicaragua	2.50	Zambia	2.00
Germany	3.00	Niger	3.00	Zimbabwe	2.50
Ghana	2.00	Nigeria	1.00		

Global Stewardship

International Commitment

Variable Name: Compliance with Environmental Agreements

Variable Code: WEFAGR **Variable Number:** 59

Units: Survey Responses Ranging from 1 (Strongly Disagree) to 7 (Strongly Agree)

Reference Year: 2000

Source: Michael E. Porter et al, *The Global Competitiveness Report 2000*, Oxford: Oxford University Press, 2000.

Logic: Where compliance is a high priority, other things equal, global obligations are more effectively honored.

Details: Response to the statement: "Compliance with international environmental agreements is a high priority."

Median: 4.40 **Minimum:** 3 **Maximum:** 6.70

Albania		Greece	4.30	Norway	6.10
Algeria		Guatemala		Pakistan	
Argentina	3.40	Haiti		Panama	
Armenia		Honduras		Papua New Guinea	
Australia	5.20	Hungary	4.60	Paraguay	
Austria	6.30	Iceland	4.60	Peru	3.10
Azerbaijan		India	3.80	Philippines	3.50
Bangladesh		Indonesia	3.60	Poland	3.60
Belarus		Iran		Portugal	4.70
Belgium	5.00	Ireland	4.90	Romania	
Benin		Israel	4.40	Russian Federation	3.70
Bhutan		Italy	4.60	Rwanda	
Bolivia	3.10	Jamaica		Saudi Arabia	
Botswana		Japan	5.60	Senegal	
Brazil	4.20	Jordan	4.20	Singapore	5.70
Bulgaria	4.20	Kazakhstan		Slovak Republic	4.00
Burkina Faso		Kenya		Slovenia	
Burundi		Korea, South	4.40	South Africa	4.20
Cameroon		Kuwait		Spain	4.50
Canada	5.60	Kyrgyz Republic		Sri Lanka	
Central African Republic		Latvia		Sudan	
Chile	4.30	Lebanon		Sweden	6.40
China	4.80	Libya		Switzerland	6.00
Colombia	4.50	Lithuania		Syria	
Costa Rica	4.60	Macedonia		Tanzania	
Croatia		Madagascar		Thailand	3.60
Cuba		Malawi		Togo	
Czech Republic	4.90	Malaysia	4.30	Trinidad and Tobago	
Denmark	6.70	Mali		Tunisia	
Dominican Republic		Mauritius	4.10	Turkey	4.10
Ecuador	3.40	Mexico	4.10	Uganda	
Egypt	4.10	Moldova		Ukraine	3.70
El Salvador	3.00	Mongolia		United Kingdom	5.50
Estonia		Morocco		United States	5.30
Ethiopia		Mozambique		Uruguay	
Fiji		Nepal		Uzbekistan	
Finland	6.40	Netherlands	6.30	Venezuela	3.00
France	5.50	New Zealand	5.50	Vietnam	4.20
Gabon		Nicaragua		Zambia	
Germany	6.10	Niger		Zimbabwe	3.30
Ghana		Nigeria			

Global Stewardship

Global Scale Funding/Participation

Variable Name: Montreal Protocol Multilateral Fund participation

Variable Code: MONFUN **Variable Number:** 60

Units: Standardized Scale (Z score)

Reference Year: 2000

Source: Report of the Twelfth Meeting of the Sub-Committee on Monitoring, Evaluation and Finance UNEP/OzL.Pro/ExCom /32/3, and Montreal Protocol Unit (MPU), SEED/UNDP.

Logic: Managing global environmental problems requires active participation, both from donors and from funding recipients who implement projects. The Montreal Protocol Multilateral Fund is a major organized effort to finance reductions in production and consumption of ozone-depleting substances.

Details: This score combines payments (contributions to the Montreal Protocol Multilateral Fund and bilateral payments credited under the terms of the Fund) and receipts by countries from the Fund to implement CFC abatement projects. To make payments and receipts comparable, the two were first standardized, and countries were assigned the higher of the two possible Z scores. Payments were normalized by share of United Nations budget, and receipts were normalized by share of total Fund payments. Covers payments and receipts during 1991-1999.

Median: 0.10 **Minimum:** -0.30 **Maximum:** 10.61

Albania	-0.30	Greece	1.62	Norway	1.35
Algeria	-0.30	Guatemala	0.47	Pakistan	-0.29
Argentina	1.41	Haiti	-0.30	Panama	1.74
Armenia	-0.30	Honduras	-0.30	Papua New Guinea	-0.30
Australia	1.54	Hungary	2.15	Paraguay	0.40
Austria	1.26	Iceland	1.40	Peru	0.80
Azerbaijan	5.97	India	-0.19	Philippines	0.46
Bangladesh	-0.27	Indonesia	-0.10	Poland	1.30
Belarus	-0.30	Iran	-0.26	Portugal	0.55
Belgium	1.42	Ireland	1.29	Romania	-0.30
Benin	-0.30	Israel	0.87	Russian Federation	-0.30
Bhutan	-0.30	Italy	0.51	Rwanda	-0.30
Bolivia	-0.07	Jamaica	2.07	Saudi Arabia	-0.30
Botswana	-0.20	Japan	0.86	Senegal	-0.30
Brazil	0.54	Jordan	-0.25	Singapore	0.10
Bulgaria	10.61	Kazakhstan	-0.30	Slovak Republic	5.10
Burkina Faso	-0.30	Kenya	-0.21	Slovenia	-0.16
Burundi	-0.14	Korea, South	-0.30	South Africa	1.09
Cameroon	-0.30	Kuwait		Spain	1.23
Canada	1.75	Kyrgyz Republic	-0.30	Sri Lanka	0.30
Central African Republic	0.03	Latvia	-0.08	Sudan	-0.30
Chile	-0.28	Lebanon	0.63	Sweden	1.69
China	0.03	Libya	-0.30	Switzerland	1.44
Colombia	1.44	Lithuania	7.58	Syria	0.16
Costa Rica	2.51	Macedonia	-0.30	Tanzania	-0.24
Croatia	-0.30	Madagascar	-0.30	Thailand	1.10
Cuba	0.09	Malawi	-0.07	Togo	-0.30
Czech Republic	4.93	Malaysia	6.42	Trinidad and Tobago	2.68
Denmark	1.51	Mali	-0.30	Tunisia	-0.30
Dominican Republic	1.25	Mauritius	4.03	Turkey	-0.30
Ecuador	-0.21	Mexico	1.08	Uganda	-0.28
Egypt	1.37	Moldova	0.19	Ukraine	0.26
El Salvador	0.74	Mongolia	-0.30	United Kingdom	0.90
Estonia	-0.01	Morocco	0.57	United States	1.21
Ethiopia	-0.30	Mozambique	-0.24	Uruguay	3.32
Fiji	-0.30	Nepal	-0.30	Uzbekistan	0.58
Finland	1.64	Netherlands	1.20	Venezuela	1.57
France	0.86	New Zealand	1.67	Vietnam	-0.21
Gabon	1.62	Nicaragua	-0.30	Zambia	-0.18
Germany	0.97	Niger	-0.29	Zimbabwe	-0.29
Ghana	0.21	Nigeria	0.03		

Global Stewardship

Global Scale Funding/Participation Cooperation

Variable Name: Global Environmental Facility Participation

Variable Code: GEF **Variable Number:** 61

Units: Standardized Scale (Z score)

Reference Year: 2000

Source: “GEF Projects – Allocations and Disbursements” www.gefweb.org/Allocations_Disbursements.pdf and “GEF Council December 8-10, 1999, Agenda Item 10, DRAFT ANNUAL REPORT 1999 VOLUME II: FINANCIAL STATEMENT” www.gefweb.org/COUNCIL/GEF_C14/gef_c14_8.pdf

Logic: Managing global environmental problems requires active participation, from both donors and recipients. The GEF represents the most significant global-scale effort to support world-wide environmental protection efforts.

Details: This score combines payments and receipts. To make payments and receipts comparable, the two were first standardized, and countries were assigned the higher of the two possible Z scores. Payments were normalized by share of United Nations budget, and receipts were normalized by share of total GEF payments. Covers payments and receipts during through the entire Phase I period and through October 30, 2000 of Phase 2.

Median: -0.05 **Minimum:** -0.17 **Maximum:** 6.01

Albania	-0.17	Greece	0.14	Norway	0.96
Algeria	-0.12	Guatemala	-0.05	Pakistan	1.92
Argentina	-0.11	Haiti	-0.17	Panama	0.15
Armenia	-0.08	Honduras	-0.03	Papua New Guinea	0.46
Australia	0.26	Hungary	0.09	Paraguay	-0.17
Austria	0.30	Iceland	-0.17	Peru	-0.04
Azerbaijan	0.21	India	0.45	Philippines	0.07
Bangladesh	6.01	Indonesia	-0.17	Poland	0.03
Belarus	0.13	Iran	-0.17	Portugal	0.12
Belgium	0.47	Ireland	0.06	Romania	-0.11
Benin	0.07	Israel	-0.17	Russian Federation	-0.13
Bhutan	2.80	Italy	0.29	Rwanda	-0.17
Bolivia	0.19	Jamaica	0.52	Saudi Arabia	-0.17
Botswana	-0.17	Japan	0.27	Senegal	-0.08
Brazil	-0.11	Jordan	0.81	Singapore	-0.17
Bulgaria	0.33	Kazakhstan	-0.17	Slovak Republic	3.36
Burkina Faso	-0.15	Kenya	-0.16	Slovenia	1.13
Burundi	-0.17	Korea, South	-0.17	South Africa	-0.10
Cameroon	-0.05	Kuwait	-0.17	Spain	-0.02
Canada	0.53	Kyrgyz Republic	-0.17	Sri Lanka	-0.03
Central African Republic	-0.06	Latvia	0.12	Sudan	-0.17
Chile	-0.14	Lebanon	0.13	Sweden	1.02
China	-0.05	Libya	-0.17	Switzerland	0.64
Colombia	-0.17	Lithuania	1.05	Syria	-0.17
Costa Rica	1.47	Macedonia	-0.17	Tanzania	-0.17
Croatia	-0.17	Madagascar	-0.02	Thailand	-0.12
Cuba	-0.08	Malawi	-0.17	Togo	-0.17
Czech Republic	0.98	Malaysia	-0.17	Trinidad and Tobago	-0.17
Denmark	0.95	Mali	-0.10	Tunisia	-0.10
Dominican Republic	-0.02	Mauritius	1.40	Turkey	0.11
Ecuador	0.17	Mexico	-0.01	Uganda	-0.02
Egypt	0.72	Moldova	-0.17	Ukraine	-0.15
El Salvador	-0.12	Mongolia	0.56	United Kingdom	0.41
Estonia	-0.17	Morocco	-0.17	United States	0.19
Ethiopia	-0.17	Mozambique	-0.08	Uruguay	0.62
Fiji	-0.17	Nepal	-0.11	Uzbekistan	-0.16
Finland	0.71	Netherlands	0.79	Venezuela	-0.16
France	0.31	New Zealand	0.39	Vietnam	-0.14
Gabon	-0.17	Nicaragua	0.02	Zambia	-0.17
Germany	0.37	Niger	-0.15	Zimbabwe	0.19
Ghana	0.02	Nigeria	-0.17		

Global Stewardship

Global Scale Funding/Participation

Variable Name: FSC Accredited Forest Area as a Percentage of Total Forest Area

Variable Code: FSC **Variable Number:** 62

Units: FSC Forest Area as Percent of Total Forest Area

Reference Year: 2000

Source: Forest Stewardship Council, personal communication.

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

Details: A logarithmic transformation of this variable was used in calculating the ESI.

Median: 0 **Minimum:** 0 **Maximum:** 36

Albania	0.00	Greece	0.00	Norway	0.00
Algeria	0.00	Guatemala	3.00	Pakistan	0.00
Argentina	0.00	Haiti	0.00	Panama	0.00
Armenia	0.00	Honduras	0.50	Papua New Guinea	0.01
Australia	0.00	Hungary	0.00	Paraguay	0.00
Austria	0.00	Iceland	0.00	Peru	0.00
Azerbaijan	0.00	India	0.00	Philippines	0.00
Bangladesh	0.00	Indonesia	0.10	Poland	30.00
Belarus	0.00	Iran	0.00	Portugal	0.00
Belgium	0.30	Ireland	0.00	Romania	0.00
Benin	0.00	Israel	0.00	Russian Federation	0.00
Bhutan	0.00	Italy	0.10	Rwanda	0.00
Bolivia	1.30	Jamaica	0.00	Saudi Arabia	0.00
Botswana	0.00	Japan	0.00	Senegal	0.00
Brazil	0.10	Jordan	0.00	Singapore	0.00
Bulgaria	0.00	Kazakhstan	0.00	Slovak Republic	0.00
Burkina Faso	0.00	Kenya	0.00	Slovenia	0.00
Burundi	0.00	Korea, South	0.00	South Africa	9.00
Cameroon	0.00	Kuwait	0.00	Spain	0.00
Canada	0.08	Kyrgyz Republic	0.00	Sri Lanka	0.11
Central African Republic	0.00	Latvia	0.00	Sudan	0.00
Chile	0.00	Lebanon	0.00	Sweden	33.00
China	0.00	Libya	0.00	Switzerland	4.00
Colombia	0.00	Lithuania	0.00	Syria	0.00
Costa Rica	3.00	Macedonia	0.00	Tanzania	0.00
Croatia	1.58	Madagascar	0.00	Thailand	0.00
Cuba	0.00	Malawi	0.00	Togo	0.00
Czech Republic	4.00	Malaysia	0.40	Trinidad and Tobago	0.00
Denmark	0.00	Mali	0.00	Tunisia	0.00
Dominican Republic	0.00	Mauritius	0.00	Turkey	0.00
Ecuador	0.00	Mexico	0.30	Uganda	0.00
Egypt	0.00	Moldova	0.00	Ukraine	0.38
El Salvador	0.00	Mongolia	0.00	United Kingdom	36.00
Estonia	0.00	Morocco	0.00	United States	0.80
Ethiopia	0.00	Mozambique	0.00	Uruguay	0.00
Fiji	0.00	Nepal	0.00	Uzbekistan	0.00
Finland	0.00	Netherlands	20.00	Venezuela	0.00
France	0.01	New Zealand	0.03	Vietnam	0.00
Gabon	0.00	Nicaragua	0.00	Zambia	0.00
Germany	0.80	Niger	0.00	Zimbabwe	0.80
Ghana	0.00	Nigeria	0.00		

Global Stewardship

Protecting the Global Commons

Variable Name: Ecological Footprint “Deficit”

Variable Code: FOOT **Variable Number:** 63

Units: Area Units (hectares of biologically productive space with world-average productivity)/person

Reference Year: 1996

Source: World Wide Fund for Nature (WWF), *Living Planet Report 2000*, Gland, Switzerland: WWF, 2000.

Logic: The ecological footprint is a measure of a country’s impact on global environmental resources. A negative number (deficit) indicates that a country requires more land area than it actually has in order to support its economy, and a positive number means that it has a surplus of biologically productive land.

Details: The amount by which the ecological footprint of the country’s population exceeds the biological capacity of the space available to that population.

Median: -0.53 **Minimum:** -12.21 **Maximum:** 31.72

Albania	-0.48	Greece	-3.83	Norway	0.01
Algeria	-1.21	Guatemala	0.36	Pakistan	-0.40
Argentina	1.31	Haiti	-0.48	Panama	1.82
Armenia	-0.47	Honduras	0.83	Papua New Guinea	30.20
Australia	0.93	Hungary	-1.94	Paraguay	2.68
Austria	-1.30	Iceland		Peru	7.90
Azerbaijan	-1.54	India	-0.32	Philippines	-0.54
Bangladesh	-0.52	Indonesia	1.70	Poland	-3.05
Belarus	-1.80	Iran	-1.71	Portugal	-2.76
Belgium		Ireland	-2.72	Romania	-1.10
Benin	0.58	Israel	-4.64	Russian Federation	-1.26
Bhutan	1.82	Italy	-3.59	Rwanda	-0.48
Bolivia	11.96	Jamaica	-1.95	Saudi Arabia	-5.74
Botswana	0.24	Japan	-5.08	Senegal	-0.11
Brazil	8.96	Jordan	-1.50	Singapore	-12.21
Bulgaria	-1.80	Kazakhstan	-2.40	Slovak Republic	-1.92
Burkina Faso	-0.11	Kenya	-0.59	Slovenia	-2.77
Burundi	-0.25	Korea, South	-4.86	South Africa	-2.65
Cameroon	3.35	Kuwait	-9.67	Spain	-2.98
Canada	3.50	Kyrgyz Republic	-0.37	Sri Lanka	-0.43
Central African Republic	13.38	Latvia	0.33	Sudan	0.62
Chile	-1.38	Lebanon	-2.50	Sweden	0.48
China	-0.96	Libya	-3.78	Switzerland	-4.33
Colombia	3.76	Lithuania	-1.04	Syria	-1.46
Costa Rica	-0.60	Macedonia	-2.05	Tanzania	0.33
Croatia	-0.17	Madagascar	2.00	Thailand	-1.35
Cuba	-0.98	Malawi	-0.10	Togo	0.00
Czech Republic	-3.37	Malaysia	0.29	Trinidad and Tobago	-1.66
Denmark	-4.19	Mali	0.41	Tunisia	-1.05
Dominican Republic	-0.34	Mauritius	-0.23	Turkey	-1.24
Ecuador	1.74	Mexico	-1.04	Uganda	0.13
Egypt	-1.06	Moldova	-0.77	Ukraine	-2.49
El Salvador	-0.87	Mongolia	1.37	United Kingdom	-4.46
Estonia	-3.10	Morocco	-0.57	United States	-6.66
Ethiopia	-0.18	Mozambique	0.35	Uruguay	0.22
Fiji		Nepal	-0.07	Uzbekistan	-1.70
Finland	1.32	Netherlands	-3.35	Venezuela	3.01
France		New Zealand	6.26	Vietnam	-0.30
Gabon	31.72	Nicaragua	2.96	Zambia	3.03
Germany	-3.01	Niger	-0.56	Zimbabwe	-0.77
Ghana	0.08	Nigeria	-0.43		

Global Stewardship

Protecting the Global Commons

Variable Name: CO2 Emissions (total times per capita)

Variable Code: CO2_EM **Variable Number:** 64

Units: Metric Tons

Reference Year: 1997

Source: Carbon Dioxide Information Analysis Center, available at <http://cdiac.esd.ornl.gov/>

Logic: Carbon dioxide is the most significant greenhouse gas. This variable combines total and per capita emissions, reflecting two ways to measure global responsibility.

Details: The indicator was obtained by multiplying the Total CO2 emissions from fossil-fuels (thousand metric tons of C) with the Per capita CO2 emissions (metric tons of carbon). A logarithmic transformation of this variable was used in calculating the ESI.

Median: 5780.36 **Minimum:** 0.61 **Maximum:** 8163271.04

Albania	60.48
Algeria	22,856.24
Argentina	39,510.45
Armenia	159.18
Australia	406,642.56
Austria	33,776.28
Azerbaijan	9,910.02
Bangladesh	334.15
Belarus	27,146.34
Belgium	78,193.06
Benin	8.12
Bhutan	5.35
Bolivia	1,121.76
Botswana	540.44
Brazil	37,759.68
Bulgaria	21,523.20
Burkina Faso	5.30
Burundi	0.61
Cameroon	32.35
Canada	591,793.80
Central African Republic	1.32
Chile	17,313.56
China	685,326.00
Colombia	8,533.46
Costa Rica	487.80
Croatia	6,020.40
Cuba	4,249.48
Czech Republic	108,858.75
Denmark	45,063.40
Dominican Republic	1,624.05
Ecuador	2,552.54
Egypt	13,721.34
El Salvador	372.25
Estonia	18,337.56
Ethiopia	5.17
Fiji	53.56
Finland	45,614.86
France	147,676.02
Gabon	727.20
Germany	629,798.28
Ghana	66.36

Greece	45,816.16
Guatemala	419.40
Haiti	18.95
Honduras	214.51
Hungary	24,763.44
Iceland	1,195.48
India	81,170.71
Indonesia	20,832.96
Iran	95,873.70
Ireland	27,025.92
Israel	41,445.46
Italy	215,966.62
Jamaica	3,396.48
Japan	793,571.64
Jordan	2,413.53
Kazakhstan	68,280.84
Kenya	108.78
Korea, South	297,587.55
Kuwait	107,585.64
Kyrgyz Republic	674.88
Latvia	2,001.60
Lebanon	5,891.00
Libya	24,935.34
Lithuania	4,389.43
Macedonia	4,287.99
Madagascar	3.28
Malawi	3.96
Malaysia	60,707.00
Mali	1.31
Mauritius	190.65
Mexico	105,961.84
Moldova	1,842.75
Mongolia	1,745.49
Morocco	2,784.64
Mozambique	6.06
Nepal	11.06
Netherlands	125,244.48
New Zealand	19,191.92
Nicaragua	149.58
Niger	9.06
Nigeria	4,935.70

Norway	77,574.00
Pakistan	4,605.84
Panama	1,608.53
Papua New Guinea	100.35
Paraguay	208.20
Peru	2,635.05
Philippines	5,669.72
Poland	235,670.11
Portugal	18,525.14
Romania	38,207.00
Russian Federation	1,035,132.40
Rwanda	2.70
Saudi Arabia	270,857.68
Senegal	85.50
Singapore	139,998.51
Slovak Republic	18,786.02
Slovenia	8,464.54
South Africa	192,966.36
Spain	111,861.12
Sri Lanka	230.56
Sudan	39.52
Sweden	18,899.70
Switzerland	16,875.04
Syria	11,319.57
Tanzania	13.46
Thailand	54,142.40
Togo	10.95
Trinidad and Tobago	28,116.55
Tunisia	2,225.09
Turkey	45,935.70
Uganda	2.92
Ukraine	197,841.19
United Kingdom	342,451.36
United States	8,163,271.04
Uruguay	661.05
Uzbekistan	33,523.20
Venezuela	115,074.00
Vietnam	1,739.25
Zambia	53.60
Zimbabwe	2,185.92

Global Stewardship

Protecting the Global Commons

Variable Name: Historic Cumulative CO2 Emissions

Variable Code: CO2HIS **Variable Number:** 65

Units: Metric Tons

Reference Year: 1997

Source: Carbon Dioxide Information Analysis Center, available at <http://cdiac.esd.ornl.gov/>

Logic: Given the long atmospheric lifetime of CO2, historic emissions represent an important factor in climate change.

Details: Historic carbon-dioxide emissions data were utilized, applying an annual decay rate of .9926, which is consistent with the estimate that 80 percent of any given carbon-dioxide emission remains in the atmosphere after 30 years. A logarithmic transformation of this variable was used in calculating the ESI.

Median: 16688.55 **Minimum:** 120.56 **Maximum:** 2961127.75

Albania	1,008.45
Algeria	60,924.54
Argentina	77,116.71
Armenia	1,546.22
Australia	173,397.53
Austria	33,683.03
Azerbaijan	17,231.66
Bangladesh	13,184.42
Belarus	34,313.61
Belgium	58,960.83
Benin	541.73
Bhutan	231.83
Bolivia	6,761.45
Botswana	1,751.77
Brazil	165,229.50
Bulgaria	28,401.88
Burkina Faso	527.05
Burundi	120.56
Cameroon	1,348.58
Canada	267,360.26
Central African Republic	129.53
Chile	30,130.43
China	1,962,527.17
Colombia	39,137.02
Costa Rica	2,864.11
Croatia	10,645.19
Cuba	16,621.52
Czech Republic	68,734.85
Denmark	34,223.47
Dominican Republic	7,501.50
Ecuador	13,506.01
Egypt	63,080.36
El Salvador	3,002.19
Estonia	10,458.04
Ethiopia	1,207.16
Fiji	438.15
Finland	31,674.15
France	196,669.68
Gabon	1,681.15
Germany	471,169.60
Ghana	2,583.21

Greece	47,768.68
Guatemala	4,206.87
Haiti	662.88
Honduras	2,464.83
Hungary	32,957.78
Iceland	1,191.47
India	573,969.71
Indonesia	142,539.06
Iran	168,386.62
Ireland	19,876.32
Israel	32,291.61
Italy	229,549.39
Jamaica	5,819.15
Japan	657,751.13
Jordan	8,442.42
Kazakhstan	72,319.25
Kenya	4,011.08
Korea, South	243,100.00
Kuwait	28,706.76
Kyrgyz Republic	3,610.49
Latvia	4,790.81
Lebanon	9,368.47
Libya	25,310.18
Lithuania	8,261.24
Macedonia	6,233.58
Madagascar	668.92
Malawi	432.39
Malaysia	75,572.63
Mali	265.02
Mauritius	937.48
Mexico	204,256.06
Moldova	5,992.58
Mongolia	4,309.27
Morocco	19,383.48
Mozambique	627.58
Nepal	1,154.62
Netherlands	91,134.14
New Zealand	16,755.58
Nicaragua	1,710.41
Niger	608.94
Nigeria	75,148.68

Norway	55,844.63
Pakistan	53,568.92
Panama	3,568.59
Papua New Guinea	1,321.14
Paraguay	2,160.88
Peru	15,100.14
Philippines	41,303.25
Poland	196,634.79
Portugal	28,783.64
Romania	63,170.06
Russian Federation	809,347.32
Rwanda	270.40
Saudi Arabia	81,328.47
Senegal	1,892.38
Singapore	42,257.25
Slovak Republic	21,389.96
Slovenia	8,266.72
South Africa	168,507.98
Spain	136,735.34
Sri Lanka	4,259.69
Sudan	2,072.70
Sweden	28,337.90
Switzerland	22,946.15
Syria	28,867.57
Tanzania	1,552.85
Thailand	120,899.06
Togo	524.13
Trinidad and Tobago	13,470.81
Tunisia	10,333.83
Turkey	114,672.43
Uganda	604.62
Ukraine	208,956.66
United Kingdom	297,179.93
United States	2,961,127.75
Uruguay	3,115.83
Uzbekistan	57,024.21
Venezuela	108,769.35
Vietnam	25,247.68
Zambia	1,420.11
Zimbabwe	10,267.46

Global Stewardship

Protecting the Global Commons

Variable Name: CFC Consumption (total times per capita)

Variable Code: CFC **Variable Number:** 66

Units: Ozone Depletion Potential (ODP) tons (Metric Tons x ODP)

Reference Year: MRYA 1996-98

Source: UNEP, Production and Consumption of Ozone Depleting Substances, 1986-1998, October 1999.

Logic: Emissions of CFCs contribute to the breakdown of the Earth's protective ozone layer and to global climate change. This variable combines total and per capita emission, reflecting the long atmospheric lifetime of CFCs.

Details: The indicator was obtained by multiplying the Total CFCs emissions (metric tons times ozone depletion potential) with the Per capita CFCs emissions (obtained by dividing the total CFCs emissions by the population in 1997). A logarithmic transformation of this variable was used in calculating the ESI.

Median: 3096.17 **Minimum:** 0 **Maximum:** 2096731.55

Albania		Greece		Norway	58.24
Algeria	81,627.89	Guatemala	2,225.37	Pakistan	11,091.52
Argentina	31,916.38	Haiti		Panama	43,976.07
Armenia		Honduras	1,638.72	Papua New Guinea	288.08
Australia	0.22	Hungary	0.10	Paraguay	2,509.55
Austria		Iceland	0.00	Peru	4,388.27
Azerbaijan	5,286.64	India	46,502.34	Philippines	105,641.32
Bangladesh	5,643.89	Indonesia	88,310.73	Poland	2,451.70
Belarus	6,331.14	Iran	480,228.61	Portugal	
Belgium		Ireland		Romania	15,021.65
Benin	34.82	Israel	0.00	Russian Federation	817,386.43
Bhutan		Italy		Rwanda	
Bolivia	272.19	Jamaica	15,736.64	Saudi Arabia	142,831.18
Botswana	31.81	Japan	101.31	Senegal	1,867.71
Brazil	588,838.63	Jordan	119,897.02	Singapore	84.33
Bulgaria	0.00	Kazakhstan		Slovak Republic	0.19
Burkina Faso	124.44	Kenya	2,214.78	Slovenia	0.00
Burundi	643.81	Korea, South	1,858,868.33	South Africa	619.83
Cameroon	4,855.01	Kuwait	135,805.16	Spain	
Canada	58.29	Kyrgyz Republic		Sri Lanka	3,420.18
Central African Republic	0.00	Latvia	214.94	Sudan	3,378.16
Chile	37,241.22	Lebanon	71,790.14	Sweden	
China	2,096,731.55	Libya	80,339.88	Switzerland	231.85
Colombia	37,414.36	Lithuania	2,919.55	Syria	279,497.02
Costa Rica	11,103.16	Macedonia	1,997.95	Tanzania	1,125.00
Croatia	1,649.37	Madagascar	739.80	Thailand	239,571.46
Cuba	39,953.99	Malawi	322.74	Togo	
Czech Republic	11.75	Malaysia	259,617.88	Trinidad and Tobago	19,060.25
Denmark		Mali	1,180.63	Tunisia	67,931.19
Dominican Republic	11,944.58	Mauritius	1,342.64	Turkey	236,217.77
Ecuador	6,197.71	Mexico	128,672.29	Uganda	6.05
Egypt	36,637.74	Moldova	365.59	Ukraine	23,739.77
El Salvador	6,433.23	Mongolia	157.67	United Kingdom	
Estonia	3,385.93	Morocco	29,193.18	United States	23,385.16
Ethiopia	24.80	Mozambique	26.24	Uruguay	11,525.63
Fiji	249.25	Nepal	37.69	Uzbekistan	121.02
Finland		Netherlands		Venezuela	602,347.63
France		New Zealand	0.00	Vietnam	3,272.79
Gabon	126.65	Nicaragua	292.60	Zambia	97.96
Germany		Niger	356.53	Zimbabwe	16,872.89
Ghana	134.00	Nigeria	218,257.67		

Global Stewardship

Protecting the Global Commons

Variable Name: S02 Exports

Variable Code: SO2EXP

Variable Number: 67

Units: 100 Metric Tons

Reference Year: 1997 (Asia) and 1998 (Europe)

Source: International Institute for Applied Systems Analysis, RAINS-ASIA and Co-operative Programme for monitoring and evaluation of the long range transmission of air pollutants in Europe (EMEP).

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

Details:

Median: 538

Minimum: 4.12

Maximum: 12300

Albania	307.00
Algeria	
Argentina	
Armenia	12.00
Australia	
Austria	175.00
Azerbaijan	
Bangladesh	238.00
Belarus	628.00
Belgium	832.00
Benin	
Bhutan	4.12
Bolivia	
Botswana	
Brazil	
Bulgaria	4,974.00
Burkina Faso	
Burundi	
Cameroon	
Canada	
Central African Republic	
Chile	
China	12,300.00
Colombia	
Costa Rica	
Croatia	367.00
Cuba	
Czech Republic	1,762.00
Denmark	326.00
Dominican Republic	
Ecuador	
Egypt	
El Salvador	
Estonia	496.00
Ethiopia	
Fiji	
Finland	245.00
France	2,537.00
Gabon	
Germany	4,448.00
Ghana	

Greece	2,029.00
Guatemala	
Haiti	
Honduras	
Hungary	2,348.00
Iceland	110.00
India	3,400.00
Indonesia	1,320.00
Iran	
Ireland	565.00
Israel	
Italy	3,876.00
Jamaica	
Japan	1,420.00
Jordan	
Kazakhstan	
Kenya	
Korea, South	438.00
Kuwait	
Kyrgyz Republic	
Latvia	155.00
Lebanon	
Libya	
Lithuania	363.00
Macedonia	71.00
Madagascar	
Malawi	
Malaysia	401.00
Mali	
Mauritius	
Mexico	
Moldova	143.00
Mongolia	69.00
Morocco	
Mozambique	
Nepal	188.00
Netherlands	425.00
New Zealand	
Nicaragua	
Niger	
Nigeria	

Norway	98.00
Pakistan	420.00
Panama	
Papua New Guinea	
Paraguay	
Peru	
Philippines	723.00
Poland	5,849.00
Portugal	1,349.00
Romania	2,768.00
Russian Federation	4,148.00
Rwanda	
Saudi Arabia	
Senegal	
Singapore	642.00
Slovak Republic	746.00
Slovenia	538.00
South Africa	
Spain	5,201.00
Sri Lanka	81.50
Sudan	
Sweden	144.00
Switzerland	94.00
Syria	
Tanzania	
Thailand	
Togo	
Trinidad and Tobago	
Tunisia	
Turkey	3,465.00
Uganda	
Ukraine	3,560.00
United Kingdom	5,591.00
United States	
Uruguay	
Uzbekistan	
Venezuela	
Vietnam	201.00
Zambia	
Zimbabwe	