

Conference on Measuring and Fostering the Progress of Societies A New Approach for CIS and Eastern European Countries

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The Sustainable Society Index – SSI

a novel tool for measuring progress towards sustainability

by Geurt van de Kerk and Ciprian Popovici

Abstract

Being aware of the importance of sustainability of life on earth is one thing. Another thing is to know the actual level of sustainability – for instance of your own country – and to measure progress towards full sustainability. In order to achieve this goal, we have developed the Sustainable Society Index – SSI. The SSI has been published for the first time in 2006, presenting the results for 150 countries.

Mid 2008 the SSI-Romania-2008 has been presented, a tailor-made index for Romania, on national level. Now we're in the process of developing the index on regional level, for all eight regions of Romania.

The SSI is a useful tool to measure the actual level of sustainability, to set policy targets and to monitor the progress on the way towards sustainability.

1. The concept of the SSI

The notion of what is meant by sustainability differs strongly among people. For many people the basic idea of sustainability focuses greatly on depletion of resources. Others include in sustainability (irreversible) pollution, conservation of nature and other environmental and ecological aspects. And still others include the aspects of quality of human life, the human well-being. From an anthropocentric point of view sustainability comprises all three elements:

1. depletion of resources → in order not to leave next generations empty-handed
2. environmental and ecological aspects → in order to enable present and next generations to live in a clean and healthy environment, in harmony with nature;
3. quality of life → in order to ensure human wellbeing for present and next generations.

Sustainability without quality of life makes no sense and quality of life without sustainability has no perspective. Thus all three elements are important for development towards a sustainable world. It is for this reason that IUCN, UNEP and WWF, already over fifteen years ago, defined sustainable development as 'Improving the quality of life of humans while living within the carrying capacity of supporting ecosystems'. And even a couple of years earlier, the WCED, the United Nations World Commission on Environment and Development, published the well-known and worldwide respected definition of the Brundtland Commission.

The newly developed SSI is based on this solid definition. In order to express that sustainability includes human well-being, we have extended the original Brundtland definition by adding a provision so that the qualitative aspects of human life are explicitly included. We have thus formulated the Brundtland+ definition as follows:

A sustainable society is a society

- *that meets the needs of the present generation,*
- *that does not compromise the ability of future generations to meet their own needs,*
- *and in which each human being has the opportunity to develop itself in freedom, within a well-balanced society and in harmony with its surroundings.*

Starting from the Brundtland+ definition, 22 indicators have been determined, covering sustainability in its broad sense. The 22 indicators are clustered into 5 categories as shown below.

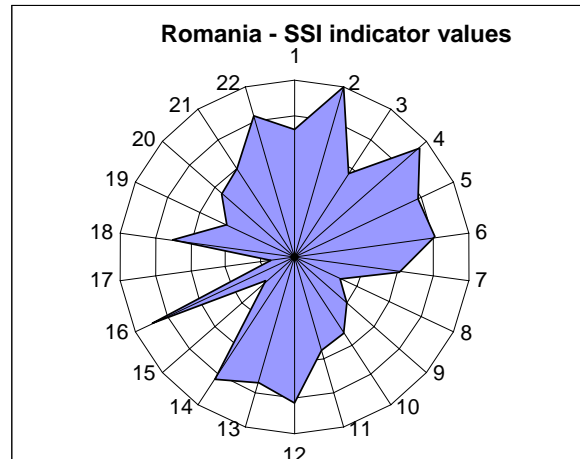
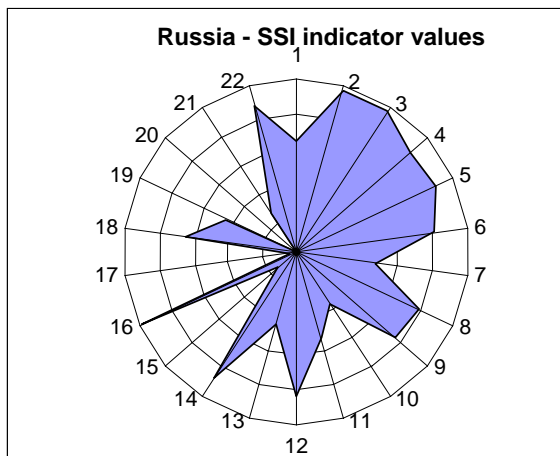
I Personal Development		IV Sustainable Use of Resources
1 Healthy Life		15 Waste Recycling
2 Sufficient Food		16 Use of Renewable Water Resources
3 Sufficient to Drink		17 Consumption of Renewable Energy
4 Safe Sanitation		
5 Education Opportunities		V Sustainable World
6 Gender Equality		18 Forest Area
		19 Preservation of Biodiversity
II Clean Environment		20 Emission of Greenhouse Gases
7 Air Quality		21 Ecological Footprint
8 Surface Water Quality		22 International Cooperation
9 Land Quality		
III Well-balanced Society		
10 Good Governance		
11 Unemployment		
12 Population Growth		
13 Income Distribution		
14 Public Debt		

Data from scientific institutes and international organisations for these indicators was collected for as many countries as possible from public sources. Of the world-total of 193 countries, 43 had to be left out due to lack of data. The bigger of those are Afghanistan, Djibouti, Eritrea, Somalia and Surinam. But mostly it concerns smaller countries, including small island states.

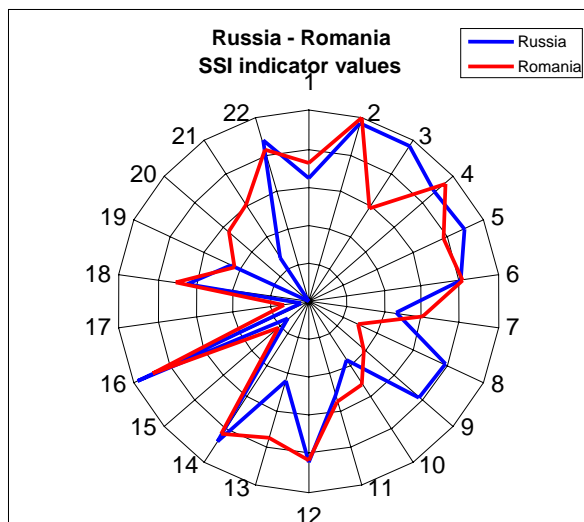
Each indicator has been expressed on a scale from 0 to 10. A 10 expresses 'full sustainability' and a 0 no sustainability at all. Mathematical formulas have been used for the calculation of each indicator, in line with the characteristics of the indicator. This quantitative approach allows integration into the 5 categories and finally into the single sustainability index.

2. Results

The overall score of the SSI gives a first impression of the level of a country's sustainability, though no more than that. It is necessary to have a close look at the values behind this score. For instance, the overall SSI scores of Russia and Romania are nearly the same: a 5.4 for Russia and a 5.7 for Romania. However, when looking at the underlying figures, one sees significant differences between the two countries.

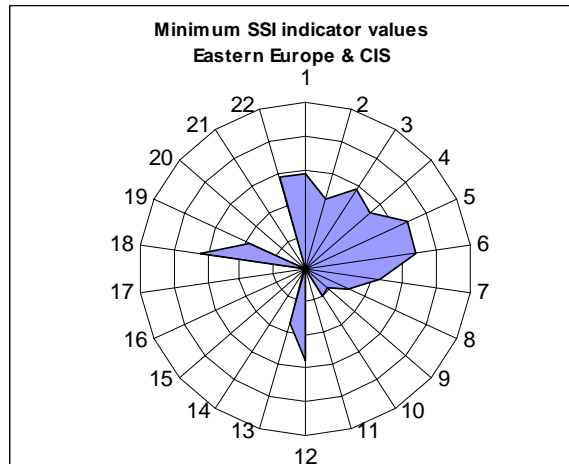
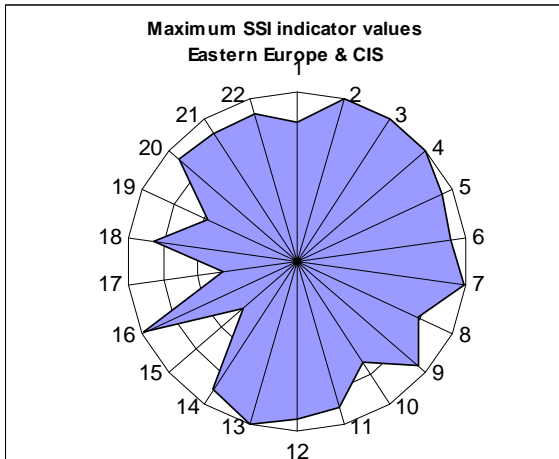


The mutual differences can be elucidated as shown in the spider web below.



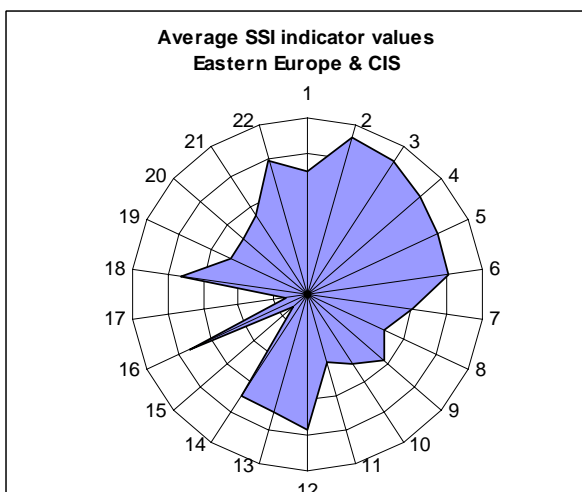
Romania scores better on Income Distribution, Emission of Greenhouse Gases and Ecological Footprint. Russia scores better on Sufficient to Drink, on Water Quality and Land Quality and on Use of Renewable Water Resources. This illustrates that it is not only the overall score which is important, but also – and even more – the underlying figures. They tell the story more exactly.

Comparing the results for all Eastern European and CIS countries, we can present the maximum and the minimum values for each indicator.



At least one country scores relatively high for each indicator, apart from Waste Recycling, Consumption of Renewable Energy and Preservation of Biodiversity. The spider web with the minimum values shows that only few indicators have relatively high scores for all countries. Education Opportunities, Gender Equality and Forest Area are the only ones with a score higher than 6. The minimum for all other indicators is lower, often much lower.

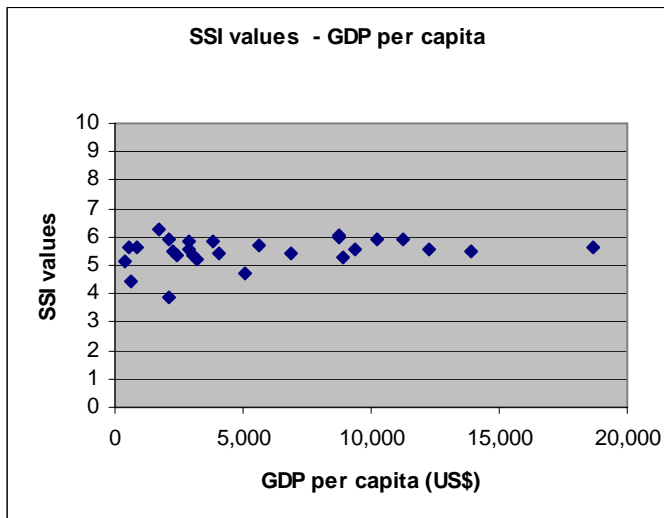
Focusing on the average values of the countries mentioned before, the following picture emerges.



From the point of view of sustainability, roughly spoken all indicators need much attention. The indicators of category Personal Development score the best. However, none of them have reached the level of full sustainability. That means still large numbers of people are lagging behind in various fields of Personal Development. The lowest scores are for Waste Recycling and Consumption of Renewable Energy, with a disappointing 1.2 for both. The first means that raw materials are depleted more rapidly; the latter a rapid depletion of fossil energy sources and a high contribution to climate change.

3. The SSI and GDP per capita

The most widespread economic indicator: GDP per capita, the Gross Domestic Product, is not included in the SSI, since only few people still consider GDP an informative indicator for sustainability. The graph below shows clearly that there is no statistical relationship between GDP per capita and SSI values.



Other indicators, the ISEW (Index for Sustainable Economic Welfare) or the Dutch DNI (Duurzaam Nationaal Inkomen, Sustainable National Income), would be much better economic indicators. Unfortunately they cannot be used for the SSI on a world-wide scale since these two indicators are available for no more than a couple of countries. Nevertheless, since GDP is the indicator most commonly used by politicians, for SSI-Romania-2008 it has been included; not in the basic set of indicators, but as additional information.

4. The SSI and specific information per country

For the development of SSI-Romania-2008, beside GDP per capita, more additional indicators have been presented:

- Poverty Rate
- Research and Development
- Transport
- Organic Farming.

These indicators give specific information about the developments in Romania. Other countries may wish to present the same additional indicators or maybe others, depending and the specific situation of each country.

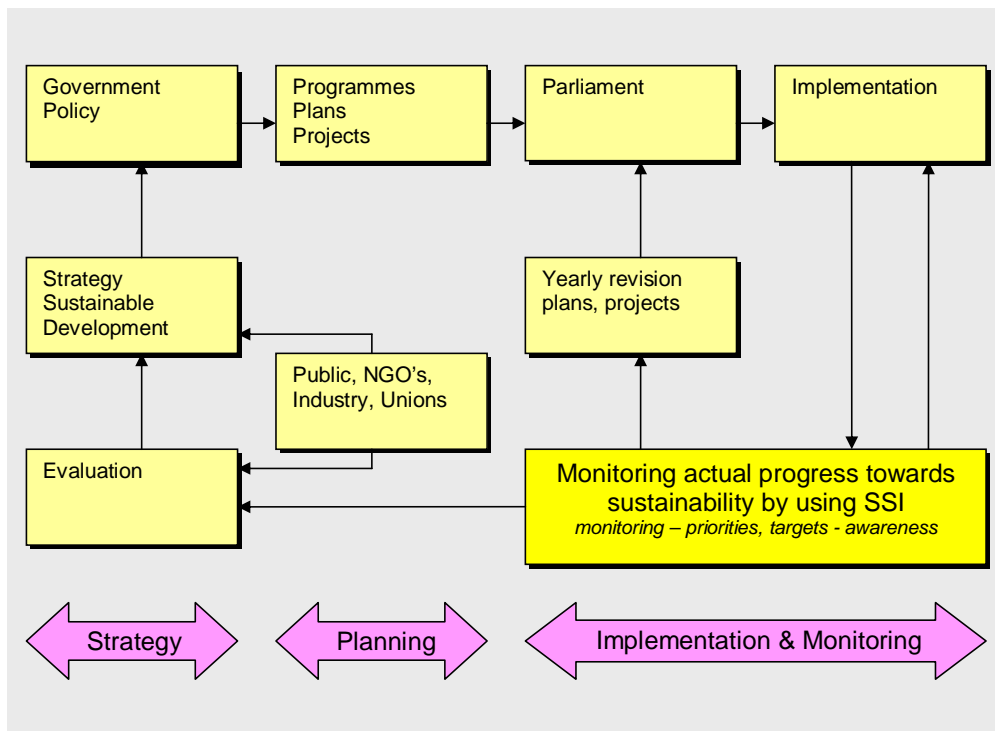
The OECD Factbook gives a list of 100 indicators. These are most valuable for politicians as information in a wide range of fields. However, to be able to show at a glance the level of sustainability, as the SSI does, a limited number of indicators is compulsory.

5. The usage of the SSI

The SSI and its underlying data show at a glance how sustainable a society is: what is going well and where bottlenecks are experienced. It is thus a practical tool for several purposes and for setting and achieving a number of objectives, such as:

- To enlarge the awareness of people about the extent of (un)sustainability of their own country.
- As a monitoring and policy instrument for national and regional governments. For instance at national level, each indicator can be assigned to a specific ministry. This ministry will be responsible for the development towards sustainability with respect to this indicator. Frequent monitoring of progress will stimulate to reach the objectives set according to an agreed time schedule.
- As a benchmark instrument for comparing countries and regions, and thus stimulating each other to make progress on the way to sustainability.
- For educational purposes at all levels.
- For NGOs to set and monitor their sustainability strategy and to communicate this to the public.

To explain the use as a policy and monitoring instrument a simplified diagram of the policy cycle with respect to sustainable development has been developed.



The SSI can monitor the results of projects and programmes with respect to the contribution to sustainability. For example, what is the actual progress towards sustainability? Or will the targets set by the government be met in time? This will be an input for the revision of projects and for the revision of strategies.

6. Epilogue

The SSI will be updated, if possible, every two years. The next update is to be published end 2008.

Questions, remarks and comments are most welcome. They can be sent to geurt@nederlandduurzaam.nl.

Results for each of the CIS and Eastern European countries are available at www.sustainablesocietyindex.com/oecd-moscow/results

The publication *Romania, on its way to a sustainable society* with the results of SSI-Romania-2008 – can be downloaded for free – in English and in Romanian – on www.romaniadurabila.net.

All results of the SSI-2006 for 150 countries are available at www.sustainablesocietyindex.com.