Beyond GDP

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Contribution to Beyond GDP „Virtual Indicator Expo“

http://www.beyond-gdp.eu

Name of the indicator/method: **MDG Dashboard of Sustainability**

Summary prepared on 25.10.2007 by Jochen Jesinghaus, European Commission, DG JRC G-9 TP 36/170, Via Enrico Fermi 1, I-21020 Ispra (VA); email: Jochen.Jesinghaus@jrc.it

Why we need the Dashboard

The complexity of societies in the 21st century requires an adequate information system.
As Europeans, we are proud of our democratic system. However, a functioning democracy needs citizens who **understand** what their governments are doing.

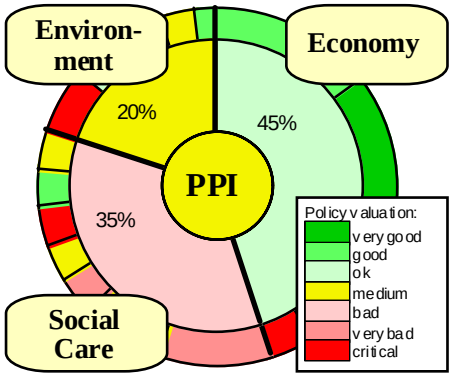
Currently, public debates on government performance are driven by two overwhelmingly dominant indicators: The GDP growth and the unemployment rates. Strangely enough, **GDP growth** is not even used in its original sense “*we got 2% richer, hooray!*” – in fact, practically all interpretations of GDP growth in the media relate to labour market prospects, i.e. economists and journalists interpret a high GDP growth rate as a chance to get lower unemployment in the next two or three years.

This media focus on GDP growth and unemployment is unhealthy for democracy. With the Dashboard software, we have developed a tool that makes a wealth of new indicators accessible. Today, some 250 “key indicators” can be downloaded from Eurostat’s Sustainable Development and Structural indicators website. However, journalists and ordinary citizens will find it virtually impossible to get simple answers to their questions from the 250+ data tables found there.

The Dashboard puts such “indicator batteries” into a meaningful tree structure, aggregates their scores in a simple, transparent way, and displays them in a user-friendly “street light colours” format; in addition, it gives the user at all times the option to “drill down” to the deepest level of detail. Here are the elements of the “Dashboard language” for presenting complex indicator sets:

1. *the size of a segment reflects the relative importance of the issue described by the indicator;*
2. *a colour code signals performance relative to other countries: green means “good”, red means “bad”;*
3. *the central circle (PPI, Policy Performance Index) summarizes the information of the component indicators.*

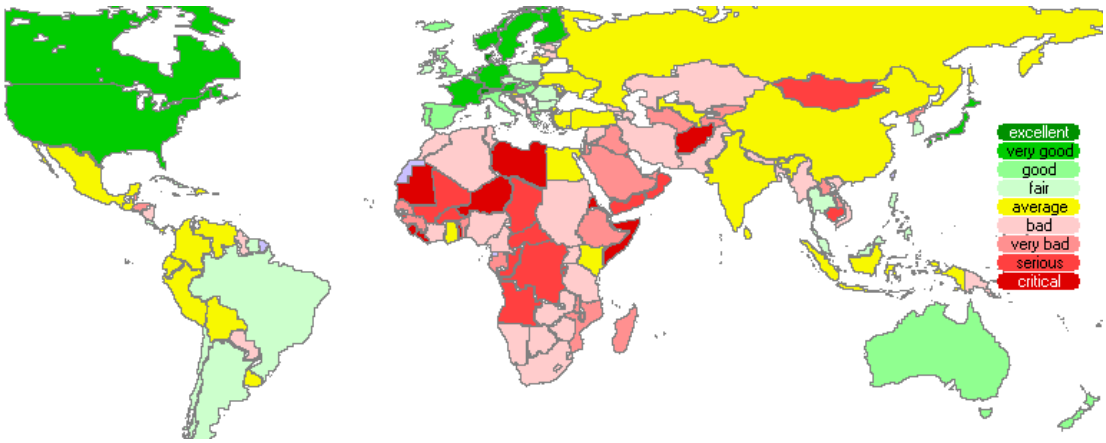
This “language” may seem a straight-jacket for many indicators; however, it is the only way to present very heterogenous indicators in a common format. The three SD pillars shown here are illustrative: the software is flexible and can accommodate other structures, e.g. the eight Millennium Development Goals.



What exactly is the Dashboard of Sustainability?

Over ten years ago, in 1996, IISD convened the Consultative Group on Sustainable Development Indices (CGSDI[1]) with the "overarching goal .. to help arrive at an internationally accepted **Sustainable Development Index** (SDI)". After four years of intensive debate, the dashboard metaphor was adopted: Steering a society into the 21st century needs a dashboard, i.e. a panel of instruments that allows the "pilots" to monitor all essential trends. It took some more years to translate the idea into an operational instrument; the first prototype Dashboard was presented at the 2002 Johannesburg World Summit on Sustainable Development (WSSD). Since then, many new features have been added, and many indicator sets have been translated into the Dashboard format.

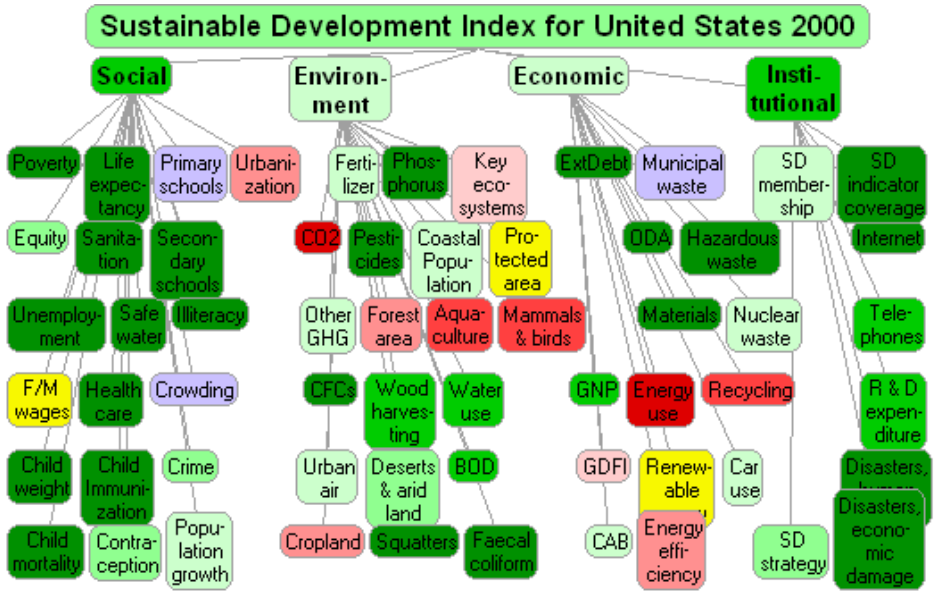
At present (November 2007), a Google phrase search for "Dashboard of Sustainability" (DoS) yields about 1,000 page hits, and about one-hundred for "MDG Dashboard". Most pages refer implicitly to the DoS as some kind of "Global Sustainability Index". Actually, the story is a little bit more complex: The DoS is both a software tool for displaying complex indicator sets, **and** the application of this tool to one particularly important indicator set, i.e. the **United Nations Commission on Sustainable Development** indicators. Below is a colour-coded map (green is good, red is bad) showing what happens when we aggregate the 60 UN CSD indicators to a "Global Sustainability Index".



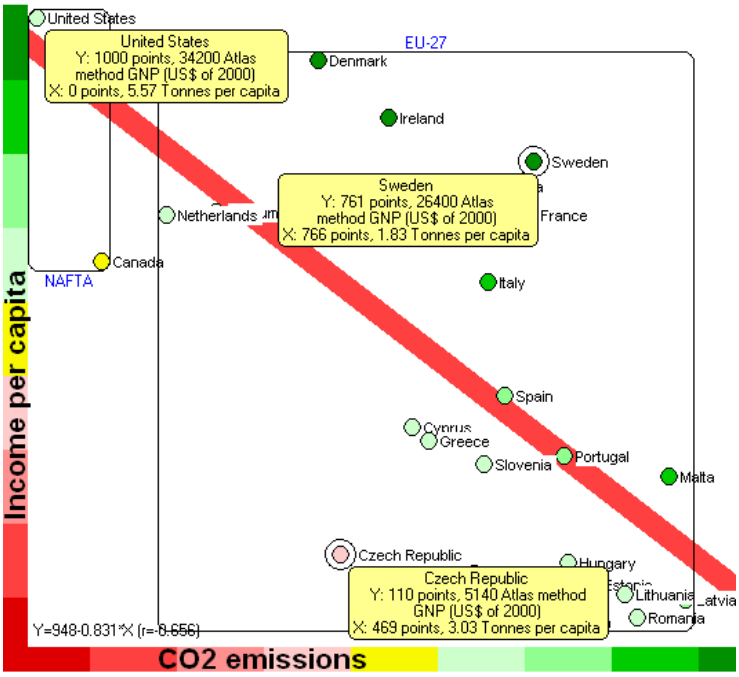
The colours shown on the map are obtained as follows: We calculate for each of the 60 indicators a score from 0-1000 points, using the formula **Score**=1000*(x-worst)/(best-worst). Example "Life expectancy in the U.S.": best=80.7 (Japan), worst=38.1 (Sierra Leone); for a value of 76.8 years, the U.S. receive 907 points: P=1000*(76.8-38.1)/(80.7-38.1). For each of the four SD pillars (economic,

[1] Alan **AtKisson** (Redefining Progress), David **Berry** (Director of the Interagency Working Group on Sustainable Development Indicators, U.S. Government), Arthur L. **Dahl** (Coordinator, UN System-wide Earthwatch, UNEP), Edgar E. **Gutierrez-Espeleta (**Director of the Development Observatory at the University of Costa Rica), Allen **Hammond** (Director of the Indicator Program at the World Resources Institute, WRI), Peter **Hardi** (Director of IISD Indicators Program, CGSDI co-ordinator), Jochen **Jesinghaus** (European Commission, Eurostat & JRC), the late Donella H. **Meadows** (lead author of "*Limits to Growth*", the 1972 report to the Club of Rome), Bedrich **Moldan** (Chairman UN CSD-9 and former Czech Republic Environment Minister), Yuichi **Moriguchi** (Head, Resources Management Section, Social and Environmental Systems Division, National Institute for Environmental Studies, Japan), Adil **Najam** (Boston University, Associate Director of the MIT-Harvard Program on Public Disputes at the Program on Negotiation, Pakistan/USA), and John **O'Connor** (former Head of the World Bank's indicator team).

social, environmental, institutional), the sum of the scores is divided by the number of indicators. The overall score is the sum of the "pillar scores" divided by four.



Since the overall results shown on the map above may or may not meet the intuitive expectations of the audience, we show to the left the breakdown for the United States (with CO_2 and energy use as particularly weak issues).



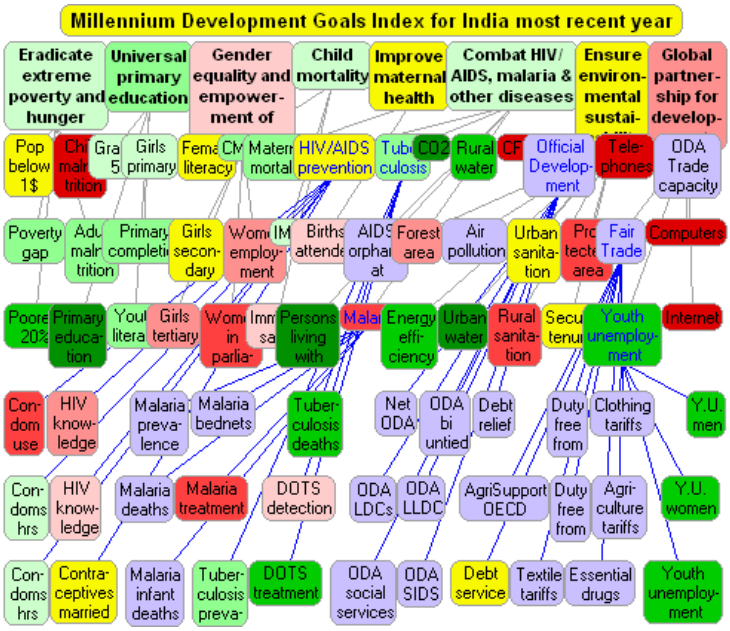
One key feature of the Dashboard is the analysis of **linkages** between indicators – for example between income and CO_2 emissions. Sweden scores "good" for "Income per capita" (Y axis, 761 points for 26400 Atlas method GNP (US$ of 2000)) and "good" for CO2 (X axis, 766 points). In contrast, Czech Republic gets a "critical" for "Income per capita" (Y=110 points for 5140 Atlas method GNP (US$ of 2000)) and "average" for CO2 (X=766 points). Note that Sweden, a country with pretty cold climate, manages to combine high wealth with low CO_2 emissions.

The example of the UN CSD set demonstrates the difficulties that indicator experts encounter when trying to measure "Sustainable Development": Would you agree with the overall structure, i.e. the four pillars of SD? Would you agree with the indicator set (e.g. nuclear waste, recycling, energy use as "economic" indicators)? Do you trust the data – for example, would you have expected the U.S. in the green zone for "car use"? The Dashboard is a powerful tool, but it reveals merciless the weak points of indicator sets, simply by displaying them in a format that users can **understand**.

The graphs above have been created “on the fly” based on 2000 data compiled by John O’Connor, former Head of the World Bank’s environmental indicators division. In the meantime, the data have become pretty stale, and UN CSD has adopted a new set of 50 “core” indicators structured by 14 themes: *1. Poverty, 2. Natural hazards, 3. Economic development, 4. Governance, 5. Atmosphere, 6. Global economic partnership, 7. Health, 8. Land, 9. Consumption and production patterns, 10. Education, 11. Oceans, seas and coasts, 12. Demographics, 13. Freshwater, 14. Biodiversity*.

There is little hope, though, that anybody will perform in the near future a data compilation based on the new CSD set; therefore, for didactic purposes we still keep the old CSD set online.

After the 2000 Millennium Summit, a new set of indicators emerged as a global standard: The **Millennium Development Goals** indicators. Nowadays, the downloadable Dashboard package contains this new set of approx. 60 indicators for over 200 countries and 15 years. The data come directly from the MDG site of the United Nations Statistics Division, and we update them every one or two months. Apparently, the MDG Dashboard is a popular alternative to downloading an 8 MB Excel spreadsheet: a Google search for Millennium Development Goals Indicators puts the MDG Dashboard on rank 2, directly behind the official UN MDG site but before UNDP, OECD, WHO, World Bank and a number of other prominent institutions. Below an example from the MDG Dashboard:



Not surprisingly, the MDG set differs a lot from the CSD set, with less focus on environmental and more focus on social and economic issues. The Dashboard displays detailed info for each indicator when hovering over the respective label. Example: *Births attended by skilled health personnel: 42.5 %; Source: UNICEF estimates; 390 points for India 2000e; Valuation: "bad", Rank 94 of 119; best South Korea, worst Ethiopia; Estimated.* The last word, “Estimated”, is one of over 20,000 footnotes included in the MDG Dashboard.

State of play & next steps

The Dashboard’s Wikipedia page lists over 20 translated indicator sets. New features are still being added to the software, e.g. an interactive browser interface for the MDG set. Currently, the team at JRC tries to translate most of Eurostat’s 250+ Sustainable Development and Structural indicators into the Dashboard format, using a tree with four Agenda 21 style main pillars, each containing seven sub-indices, each hosting on average seven indicators. This structure will accommodate 4*7*7=196 indicators, and serve as a “Virtual Laboratory” for studying possible options for going “Beyond GDP”, i.e. for challenging GDP growth with an adequately detailed “Societal Progress Indicator”.