

AMSDE

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Short survey of relevant indexes and sets of indicators concerning development towards sustainability

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A complete list of the indexes and sets of indicators listed in this survey, is available on the ANPED website: www.anped.org.

I. Introduction

In The 2008 Annual Report on Sustainable Development Work in the OECD it has been stated that there is no joint consideration of interactions across the economic, social and environmental policies and performance of countries. It is proposed that OECD country analyses assess how better integration of economic, environmental and social policy-making could enhance performance and the implementation of policy reforms.

The AMSDE welcomed in its annual meeting on 19 and 20 October 2009 the recent work conducted in the area of sustainable development statistics and measurement within and outside of the OECD. The AMSDE concluded that it should continue its work in this area to better integrate the concept of sustainable development into various work processes and to serve as a platform to share relevant work among member countries.

AMSDE discussed in this meeting the *Assessment of OECD Country / Peer Reviews from a Sustainable Development Perspective*. The report recommends a.o.

- A uniform reference to OECD strategies & other policy guidelines is required, from the perspective of sustainable development, for all country reviews.
- Propositions could be made to the Economic and Development Review Committees, that Sustainable Development will be taken up as a theme in the structural issues of Economic Surveys.
- At national level sustainable development should be taken up as a theme in the structural issues section of their next Economic Survey (cf. Norway).
- In its guidance documentation on conducting Regulatory Reform Reviews, the Ad Hoc Multidisciplinary Group on Regulatory Reform might make a more explicit reference to the environmental and social pillars of sustainable development.

September 2009 the Stiglitz-Sen-Fitoussi report was launched. Its main message is: *“The time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people’s well-being. And measures of well-being should be put in a context of sustainability.”*

There is a huge distance between standard measures of important socio economic variables like growth, inflation, inequalities etc... and widespread perceptions. [...] Our statistical apparatus, which may have served us well in a not too distant past, is in need of serious revisions.'

Amartya Sen, Joseph Stiglitz and Jean-Paul Fitoussi

Further relevant reports and actions are mentioned in the document which AMSDE prepared for the coming seminar on 5 February 2010 (originally 29 January): Background Info_29 Jan 2010 seminar.

In view of the mentioned developments and earlier proposals, AMSDE recognizes the urgent need for Sustainable Development indicators, even more in the Beyond GDP era, as an essential and indispensable theme in the work of OECD.

The GDP does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It allows neither for the justice in our courts, nor the justness in our dealings with one another. The Gross Domestic Product measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to country. It measures everything, in short, except that which makes life worthwhile.

Robert Kennedy

Thus two questions have to be addressed by AMSDE:

- Define an index or a set of indicators which measures a country's progress to a sustainable society. Beside specific requirements which any country may have, there is a need for a uniform set of indicators to enable benchmarking of countries.
- Suggest an economic indicator that better reflects the progress of a country's economy and its contribution to the overall level of well-being enjoyed by its citizens.

Though much work already has been done in this respect, another survey has been done to support AMSDE delegates in their decisions concerning the required indicators. It offers an overview – though certainly not complete – of relevant existing sets of indicators, reflecting Wellbeing and Sustainable Development (to some extent). Section II lists 26 sets, Section III summarizes the main characteristics of the 26 sets at a glance and Section IV formulates a few conclusions and recommendations.

Better measures lead to
better policies.

.....

II. Overview sets of indicators

Development

1. HDI – Human Development Index

1. Organisation: United Nations Development Programme.
2. Goal: To measure the level of development – and the progress over time – of a country.
3. Scope: HDI comprises three elements:
 - Life expectancy at birth
 - GDP per capita, i.e. decent standard of living.
 - Knowledge
 - Gross enrolment rate
 - Adult literacy rate.
4. Frequency: Started in 1990. Yearly updates. Most recent edition is autumn 2009.
5. Dissemination: Published in the annual Human Development Report, for sale as hard copy, downloadable for free from the website.
6. Number of indicators: 3.
7. Number of countries: (nearly) all countries.
8. Characteristics: HDI probably is the most well-known and mostly used index. It shows at a glance the level of development as defined by the 3 elements. These elements are aggregated into one figure for the HDI on a scale from 0 to 1.
HDI doesn't particularly focus on sustainability, but on human development in general.
However, HDI is particularly relevant for developing countries. The discriminating capacity for High developed countries is much less.
The annual Human Development Report comprises many other relevant data.
9. Website: www.hdr.undp.org

HDI 2009 (values 2007) on a scale from 0 to 1:

OECD	0.932
EU	0.937
Maximum	0.971 Norway
Minimum	0.340 Niger

2. CDI – Commitment to Development Index

1. Organisation: Center for Global Development.
2. Goal: To rate (rich) countries on how much they help poor countries to build prosperity, good government, and security. As the Center states itself: “The Commitment to Development Index reminds the world that reducing poverty in developing countries is about far more than giving money.”
3. Scope:
 - Aid
 - Trade
 - Investment
 - Migration
 - Environment
 - Security
 - Technology.
4. Frequency: Started in 2003, annual updates.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 7. Each of the 7 indicators has underlying data to calculate the indicator.
7. Number of countries: 22, rich, countries.
8. Characteristics: CDI focuses on development, rather than on Human or Environmental Wellbeing.
Data are available per indicator. Indicators are calculated on a comparable scale from 0 – 10. The 7 indicators are aggregated into one overall index, the CDI.
9. Website: http://www.cgdev.org/section/initiatives/_active/cdi/

CDI values on a scale from 0 to 10, for 22 countries:

	2003	2009
Maximum	5.6	7.0
Average	4.1	5.2
Minimum	2.4	2.8

3. MDI – Millennium Development Indicators

1. Organisation: United Nations Development Programme.
2. Goal: The Millennium Development Goals (MDGs) comprise eight goals to be achieved by 2015 that respond to the world's main development challenges. The MDGs are drawn from the actions and targets contained in the **Millennium Declaration** that was adopted by 189 nations, and signed by 147 heads of state and governments during the UN Millennium Summit in September 2000.
3. Scope:
 - Goal 1: Eradicate extreme poverty and hunger
 - Goal 2: Achieve universal primary education
 - Goal 3: Promote gender equality and empower women
 - Goal 4: Reduce child mortality
 - Goal 5: Improve maternal health
 - Goal 6: Combat HIV/AIDS, malaria and other diseases
 - Goal 7: Ensure environmental sustainability
 - Goal 8: Develop a Global Partnership for Development.
4. Frequency: Progress reports are published, but not on annual basis. The latest reports date from 2008 and 2009. Data are available in the online database MDG Monitor for 1990 – 2009.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 8 goals with 21 quantified targets, measured by 60 indicators.
7. Number of countries: All countries, though with a quite different number of available data per country.
8. Characteristics: MDGs aim at development achievements, not particularly on sustainability. However, many indicators are related to development towards sustainability. Data are available per indicator. Indicators are not calculated on a comparable scale.
9. Website:
<http://www.undp.org/mdg/>
<http://mdgs.un.org/unsd/mdg/Default.aspx>

Overall Wellbeing

4. WoN – Wellbeing of Nations

1. Organisation: Robert Prescott-Allen, in cooperation with IDRC, IUCN, IIED, FAO, UNEP and Map Maker Ltd.
2. Goal: The Wellbeing of Nations is intended to promote high levels of human and ecosystem wellbeing, to demonstrate the practicality and potential of the Wellbeing Assessment method, and to encourage countries, communities, and corporations to undertake their own wellbeing assessments.
3. Scope: Human and Ecosystem Wellbeing both comprise five categories:
 - I. **Human Wellbeing**
 - Health and Population
 - Wealth
 - Knowledge and Culture
 - Community
 - Equity
 - II. **Ecosystem Wellbeing**
 - Land
 - Water
 - Air
 - Species and Genes
 - Resource Use.
4. Frequency: Published only once, in 2001. No updates are foreseen.
5. Dissemination: For sale as hard copy.
6. Number of indicators: 10 themes, 17 categories and 54 indicators.
7. Number of countries: 180.
8. Characteristics: It is the first global assessment of sustainability, combining Human Wellbeing and Ecosystem Wellbeing. However, Economic Wellbeing is lacking. Indicators are aggregated into categories, themes and finally into Human Wellbeing and Ecosystem Wellbeing. These two figures are aggregated into one single figure for the Wellbeing of Nations, on a scale from 0 to 100.
9. Website: <http://www.iucn.org>

WoN values, on a scale from 0 to 100, for 30 OECD countries

	Human Wellbeing Index	Environm. Wellbeing Index	Wellbeing Index
Maximum	82	49	64
Average	73	33	52.8
Minimum	45	20	33

5. SSI – Sustainable Society Index

1. Organisation: Sustainable Society Foundation.
2. Goal: Measuring the level of sustainability of a country and the distance to sustainability.
3. Scope: The SSI is based on the (extended) Brundtland definition. Recently the SSI has been redesigned. The new SSI comprises three clusters:
 - I. **Human Wellbeing**
 - Basic Needs
 - Personal Development
 - Well-balanced Society
 - II. **Environmental Wellbeing**
 - Healthy Environment
 - Climate and Energy
 - Natural Resources
 - III. **Safeguard to Wellbeing**
 - Preparing for the future
 - Economy.
4. Frequency: Started in 2006. Biennial updates. Most recent edition is autumn 2008.
5. Dissemination: For sale as hard copy, downloadable for free from the website.
6. Number of indicators: 3 clusters, 8 categories and 24 indicators.
7. Number of countries: 151 countries.
8. Characteristics: SSI focuses on sustainability in its broad sense, on national and regional level, covering Human and Environmental Wellbeing. Economic Wellbeing is included not as a goal in itself, but as part of Safeguard to Wellbeing. SSI shows at a glance the level of sustainability of a country or region. It offers both an aggregated value for the overall index as well as underlying values for the 8 categories and the 24 indicators.
9. Website: www.sustainablesocietyindex.com

SSI values (original set up) on a scale from 0 to 10, as well as Quality of Life (Q) and Sustainability (S):

	2006			2008		
	Q	S	SSI	Q	S	SSI
World maximum	8.46	7.21	6.99	8.55	7.09	7.02
World average	5.94	5.39	5.63	6.09	5.32	5.65
World minimum	2.70	1.65	3.87	3.87	1.70	4.10
OECD average	7.48	5.14	6.15	7.54	5.10	6.15
EU average	7.50	4.91	6.02	7.61	4.87	6.05

6. FSP – OECD Framework of Societal Progress

1. Organisation: OECD.
2. Goal: To offer a conceptual framework for measuring wellbeing in its broad sense, in order to encourage communities to consider for themselves what progress means in the 21st century and how progress can be measured.
3. Scope: FSP covers all aspects of wellbeing, with some emphasis on Human and Social Wellbeing.

I. Ecosystems Condition

Land
Freshwater
Oceans and Seas
Biodiversity
Atmosphere

IV. Governance

Human Rights
Civic Engagement
Security and Crime
Access to Services

II. Human Well-Being

Physical and mental health
Knowledge and understanding
Work and Leisure
Material Well-Being
Freedom and Self-Determination
Interpersonal relationships

V. Culture

Cultural heritage
Arts and Leisure

VI. Resource use

Resource extraction and consumption
Pollution

III. Economy

National Income
National Wealth

4. Frequency: The concept of FSP has been published as a Draft OECD Working Paper, September 2009.
5. Dissemination: Available on the website.
6. Number of indicators: 6 broad domains and 21 separate dimensions of progress.
7. Number of countries: not applicable.
8. Characteristics: FSP draws on the work of Robert Prescott-Allen (see 4. WoN). FSP pretends to be not more than a conceptual starting point, to enable others to develop their own concept for measuring progress. None of the indicators are defined (e.g. physical and mental health is a dimension of wellbeing, but there is no recommendation on how that should be measured). Some dimensions (e.g. cultural heritage) need further elaboration to ensure data availability.
9. Website: <http://www.oecd.org/dataoecd/40/46/43631612.pdf>

Human Wellbeing

7. CHQ – Calvert-Henderson Quality of Life Indicators

1. Organisation: Sustainable Measures Inc. maintains and updates the Calvert-Henderson Quality of Life Indicators website under the direction of Calvert, Henderson and the Advisory Board.
2. Goal: To contribute to the worldwide effort to develop comprehensive statistics of national well-being that go beyond traditional macroeconomic indicators.
3. Scope: CHQ comprises twelve wellbeing indicators:
 - Education
 - Employment
 - Energy
 - Environment
 - Health
 - Human Rights
 - Income
 - Infrastructure
 - National Security
 - Public Safety
 - Re-Creation
 - Shelter.
4. Frequency: Developed in 1994. First published in 2000.
5. Dissemination: Hard copy for sale.
6. Number of indicators: 12.
7. Number of countries: 1, USA.
8. Characteristics: Though focusing on Quality of Life, CHQ also covers environmental as well as economic issues.
9. Website: <http://www.calvert-henderson.com/>

8. CIW – Canadian Index of Wellbeing

1. Organisation: Institute of Wellbeing, Canada.
2. Goal: To generate comparable information on Wellbeing that will help to achieve policy goals in order to improve the Wellbeing of all Canadian people.
3. Scope: CIW comprises eight wellbeing categories:
 - Arts, Culture & Recreation
 - Community Vitality
 - Democratic Engagement
 - Education
 - Environment
 - Healthy Populations
 - Living Standards
 - Time Use
4. Frequency: First report published in 2009. Yearly updates are planned.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: On average 10 indicators per category, for the three elaborated categories so far. Thus the CIW might end up with some 80 indicators.
7. Number of countries: 1, Canada.
8. Characteristics: CIW offers a detailed description of Human Wellbeing, while little focus on Environmental Wellbeing.
9. Website: www.cic.ca

9. AUW – Australian Unity Wellbeing Index

1. Organisation: The Australian Unity Wellbeing Index is a joint project between Australian Unity and Deakin University's Australian Centre on Quality of Life.
2. Goal: The AUW investigates additional factors impacting on our lives, filling the void not covered by economic considerations and producing a complete view of Australians' wellbeing. Unlike traditional economic indicators of quality of life such as the Gross Domestic Product (GDP), the AUW is a subjective measure that investigates how Australians *feel* about their life and life in Australia.
3. Scope: AUW comprises two elements: Personal Wellbeing and National Wellbeing

I. Personal Wellbeing

- Standard of living
- Health
- Achievements in life
- Personal relationships
- How safe you feel
- Community connectedness
- Future security
- Spirituality / religion

II. National Wellbeing

- Economic situation
- State of the environment
- Social conditions
- How Australia is governed
- Business
- National security.

4. Frequency: Half yearly updates, March and October.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 14 indicators, 8 for Human Wellbeing and 6 for National Wellbeing.
7. Number of countries: 1, Australia.
8. Characteristics: AUW focuses on Human Wellbeing, with little attention for Environmental and Economic Wellbeing.

Indicators are calculated on a scale from 0 to 100 and aggregated into a Personal Wellbeing Index and a National Wellbeing Index. These are not aggregated into one single overall figure.

9. Website: <http://www.australianunity.com.au/wellbeingindex/#glance>

Environmental Wellbeing

10. HPI - Happy Planet Index

1. Organisation: NEF – New Economics Foundation.
2. Goal: HPI offers a new compass to set society on a path of real progress, by measuring what truly matters to us – our well-being in terms of long, happy and meaningful lives – and what matters to the planet – our rate of resource consumption.
3. Scope: HPI combines environmental impact with human well-being to measure the environmental efficiency with which people live long and happy lives. HPI comprises three themes:
 - Life Satisfaction
 - Life Expectancy
 - Footprint.
4. Frequency: First report published in 2006. Most recent edition is from 2009. Data are available from 1961 to 2005.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators:3.
7. Number of countries:143.
8. Characteristics: HPI comprises Human and Environmental Wellbeing. However, it lacks Economic Wellbeing. The HPI is partly based on statistical data (Life Expectancy and Footprint) and partly on surveys (Life Satisfaction). The HPI scores range from 0 to 100.
9. Website: <http://www.happyplanetindex.org/>

HPI scores for 2005 for 143 countries

Maximum 76.1

Average 43.4

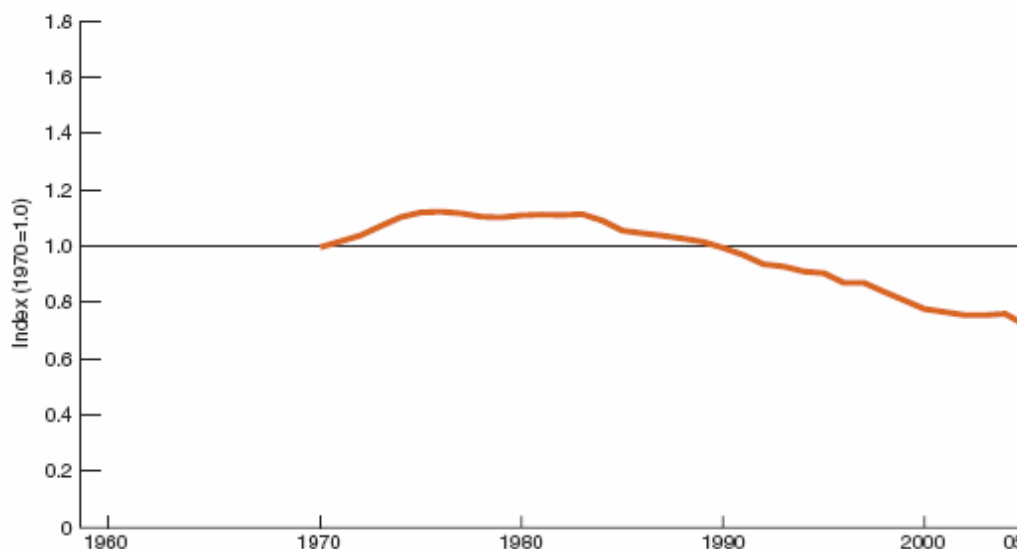
Minimum 16.6

11. LPI – Living Planet Index

1. Organisation: WWF.
2. Goal: The LPI measures trends in the Earth's biological diversity to enlarge the awareness of the public at large about the threats to biodiversity.
3. Scope: LPI comprises three elements:
 - Terrestrial
 - Marine
 - Freshwater.
 Each element shows the status of populations of species in comparison to what it was in 1970.
4. Frequency: Biennially updates. Most recent report is from 2008. Data are available from 1970 onwards.
5. Dissemination: Reports are downloadable for free from the website as well as available as hard copy, issued by WWF.
6. Number of indicators: 3.
7. Number of countries: World wide.
8. Characteristics: The Living Planet Index is confined to one specific aspect of Environmental Wellbeing: biodiversity. LPI is based on trends in nearly 5,000 populations of 1,686 species of mammal, bird, reptile, amphibian and fish from around the globe. The changes in the population of each species are then averaged and shown relative to 1970, which is given a value of 1.0.
9. Website:

http://www.panda.org/about_our_earth/all_publications/living_planet_report/living_planet_index/

Fig. 1: LIVING PLANET INDEX, 1970–2005



12. ESI – Environmental Sustainability Index

1. Organisation: Columbia University and Yale University, USA.
2. Goal: to present a better insight into the environmental dimension of the Millennium Development Goals.
3. Scope: The ESI consists of 5 components:

I. System Air Quality (4) Biodiversity (5) Land (2) Water Quality (4) Water Quantity (2)	III. Vulnerability Environmental Health (3) Basic Human Sustenance (2) Exposure to Natural Disasters (2)
II. Stress Reducing Air Pollution (5) Reducing Ecosystem Stress (2) Reducing Population Pressure (2) Reducing Waste & Consumption Pressures (3) Reducing Water Stress (4) Natural Resource Management (5)	IV. Capability Environmental Governance (12) Eco-efficiency (2) Private Sector Responsiveness (5) Science & Technology (5)
	V. Global Participation in International Collaborative Efforts (3) Greenhouse Gas Emissions (2) Reducing Transboundary Environmental Pressures (2)
4. Frequency: Published in 2000, 2001, 2002 and 2005. No updates are foreseen.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 5 components, 21 indicators and 76 variables.
7. Number of countries: 146 (out of 238 original countries 92 have been deleted due to lack of data).
8. Characteristics: Though meant to focus on environmental issues, the ESI comprises issues with respect to Human Wellbeing, Transition to Sustainability and Economic Wellbeing. The 21 indicators have been calculated and aggregated into values for the 5 categories, which are aggregated into one single score for the overall index, the ESI, on a scale from 0 to 100. ESI has defined quantified targets.
9. Website: <http://sedac.ciesin.columbia.edu/es/esi/index.html>

ESI values on a scale from 0 to 100, for 142 (2002) and 146 (2005) countries respectively:

	2002	2005
Maximum	73.9	75.1
Average	49.5	49.9
Minimum	23.9	29.2

13. EPI – Environmental Performance Index

1. Organisation: Columbia University and Yale University, USA.
2. Goal: EPI offers a composite index of current national environmental protection efforts, also reflecting Goal 7 of the Millennium Development Goals, to “ensure environmental sustainability.”
3. Scope: EPI focuses on measurable outcomes that can be linked to policy targets and tracked over time. The EPI builds on measures relevant to two core objectives:
 - reducing environmental stresses to human health (the Environmental Health objective)
 - protecting ecosystems and natural resources (the Ecosystem Vitality objective).
 These objectives are elaborated in 6 Policy Categories and 10 Subcategories:
 - Environmental Health
 - Environmental burden of disease
 - Water (effects on humans)
 - Air Pollution (effects on humans)
 - Air Pollution (effects on nature)
 - Water (effects on nature)
 - Biodiversity & Habitat
 - Productive Natural Resources
 - Forestry
 - Fisheries
 - Agriculture
 - Climate Change.
4. Frequency: Started in 2006, updated and revised in 2008 and a next update planned in 2010.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 6 Policy Categories, 10 Subcategories and 25 indicators.
7. Number of countries: 149.
8. Characteristics: EPI focuses on Environmental Wellbeing, with some attention to Human Wellbeing (Health) and no attention to Economic Wellbeing. All scores are aggregated into a single figure for EPI, on a scale of 0 to 100. EPI has defined quantified targets.
9. Website: <http://epi.yale.edu/Home>

EPI values on a scale from 0 to 100, for 133 (2006) and 149 (2008) countries respectively:

	2006	2008
Maximum	88.0	95.5
Average	64.5	71.9
Minimum	25.7	39.1

Note: due to the revision in 2008 data are not comparable over time.

14. EF – Ecological Footprint

1. Organisation: Global Footprint Network.
2. Goal: The Ecological Footprint measures humanity's demand on nature: how much land and water area a human population requires to produce the resources it consumes and to absorb its wastes, using prevailing technology, all expressed in global hectares. The results are compared with the available area of land and water, the biocapacity.
3. Scope: EF distinguishes 6 categories:
 - Cropland
 - Grazing land
 - Forest
 - Fishing ground
 - Built-up land
 - Carbon (the area required to sequester carbon dioxide emissions).
4. Frequency: Developed in 1990, biennially updates are released. The most recent edition is from 2008 (data of 2006).
5. Dissemination: Downloadable for free from the website. As hard copy published in the Living Planet Report by WWF.
6. Number of indicators: 6.
7. Number of countries: 127.
8. Characteristics: EF is a strong communication tool to enlarge people's awareness of the actual overexploitation of earth's capacity. It is hard to characterize EF in the framework of this survey. It follows a completely different approach compared to other indices. It is easier to conclude that EF does not cover Human and Economic Wellbeing.
9. Website: http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/

Results for the World as a whole (global hectares per person):

	1961	1965	1970	1975	1980	1985	1990	1995	2000	2005	2006
Total Ecological Footprint	7,1	8,1	9,6	10,6	11,7	11,9	13,3	13,8	15,1	16,8	17,1
Total Biocapacity	11,4	11,5	11,6	11,6	11,7	11,7	11,9	12,0	12,0	11,9	11,9
Ecological Footprint to Biocapacity ratio	0,62	0,70	0,83	0,92	1,00	1,01	1,12	1,15	1,27	1,41	1,44

Economic Wellbeing

15. ISEW – Index for Sustainable Economic Welfare

1. Organisation: it is mainly a matter of private initiative to develop and to maintain the ISEW for a certain country. Nevertheless, the New Economics Foundation (NEF) is – or was, depending on financing – kind of an overarching organisation. Together with Friends of the Earth and the Centre for Environmental Strategy, NEF promotes alternative economic indicators to GDP, among which the ISEW.
2. Goal: to measure the contribution of a country's economy to the overall level of well-being enjoyed by its citizens.
3. Scope: ISEW is an economic indicator which takes into account social and environmental costs and earnings and the depreciation of natural capital.

$$\begin{aligned}
 \text{ISEW} = & \text{personal consumption} \\
 & + \text{public non-defensive expenditures} \\
 & - \text{private defensive expenditures} \\
 & + \text{capital formation} \\
 & + \text{services from domestic labour} \\
 & - \text{costs of environmental degradation} \\
 & - \text{depreciation of natural capital.}
 \end{aligned}$$

4. Frequency: First study by Daly and Cobb in 1989 for the USA. No regular updates.
5. Dissemination: Not in a structural way; through websites and various publications (e.g.: *Beyond GDP: the Index of Sustainable Economic Welfare*, Brent Bleys PhD, 2009).
6. Number of indicators: 20 - 25.
7. Number of countries: 12 until now: Austria, Belgium, Chile, France, Germany, Italy, The Netherlands, Poland, Thailand, Sweden, UK, USA.
8. Characteristics: ISEW is being recognized as a serious candidate to function next to GDP as leading economic indicator.
9. Website:
 - <http://www.foe.co.uk/tools/index.html>
 - <http://www.neweconomics.org/>
 - <http://www.ces-surrey.org.uk/>

16. GPI – Genuine Progress Indicator

1. Organisation: Redefining Progress, as well as some private researchers.
2. Goal: To measure the contribution of a country's economy to the overall level of well-being enjoyed by its citizens.
3. Scope: GPI is, quite like ISEW, an economic indicator which takes into account social and environmental costs and earnings and depreciation of natural capital. Both are variants of the 'Green GDP'.
4. Frequency: Designed by Cobb in 1995. Published for the first time in 1999 (Anielski and Rowe) for USA. No regular updates. Most recent studies are from 2008.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 25 – 30.
7. Number of countries: 8 until now: Australia, China, France, India, Japan, New Zealand, USA, Vietnam.
8. Characteristics: GPI is based on the same methodology as ISEW. In fact, it is a further elaboration of ISEW by Cobb, one of the authors of ISEW. GPI adds a number of new categories to the ISEW: the value of volunteer work, costs of crime and family breakdown, loss of leisure time, the cost of underemployment and the cost of ozone depletion. Some of these items were also included in subsequent ISEW studies.
9. Website:
www.rprogress.org/sustainability_indicators/genuine_progress_indicator.htm

17. IEWB – Index of Economic Well-Being

1. Organisation: Centre for the Study of Living Standards, Canada.
2. Goal: to measure the contribution of a country's economy to the overall level of well-being enjoyed by its citizens.
3. Scope: IEWB is, like ISEW and GPI, an economic indicator that addresses the shortcomings of GDP.

I. Consumption Flows

1. Market consumption
2. Life Expectancy
3. Unpaid Work
4. Leisure
5. Government Spending
6. Regrettable Expenditure

II. Wealth Stocks

7. Capital Stock
8. R&D
9. Natural Resources
10. Human Capital
11. Net International Investment Position
12. Social Cost of Environmental Degradation

III. Equality

13. Income Inequality
14. Poverty rate and Gap (Poverty Intensity)

IV. Economic Security

15. Risk from Unemployment
16. Financial Risk from Illness
17. Risk from Single Parent Poverty
18. Risk from Poverty in Old Age

4. Frequency: Designed by Osberg and Sharpe in 1998. Annual updates. Data available from 1989 to 2007.
5. Dissemination: Downloadable for free from the website.
6. Number of indicators: 4 categories and 18 indicators.
7. Number of countries: 14 OECD countries and Canadian provinces.
8. Characteristics: IEWB comprises a wider range of sustainability issues than ISEW and GPI. IEWB puts more weight, due to the methodology used, on environmental issues than ISEW and GPI. Other than ISEW and GPI, IEWB doesn't aggregate all indicators on a monetary basis; IEWB applies weights for calculating the indicators.
9. Website: <http://www.csls.ca/>

IEWB values on a scale from 0 to 1, for OECD (14 countries):

	1980	2007
Average	0.47	0.61
Maximum	0.57	0.79
Minimum	0.36	0.48

18. GS – Genuine Savings

1. Organisation: World Bank.
2. Goal: To measure the sustainability of a country's economy.
3. Scope: Genuine Savings or Adjusted Net Savings as it is called also, measures the true rate of savings in an economy after taking into account investments in human capital, depletion of natural resources and damage caused by pollution. It is based on the notion that savings are essential for sustainability.

$$GS = GDP$$

- public and private consumption
- net foreign borrowing
- depreciation of produced assets
- + current spending on education
- resource depletion
- pollution damage.

4. Frequency: Developed in 1999. Data are published as one of the World Development Indicators, on an annual basis. Most recent data are from 2007.
5. Dissemination: Available on the website.
6. Number of indicators: 10.
7. Number of countries: About 115 countries.
8. Characteristics: Genuine savings is a simple indicator devised by World Bank researchers to assess an economy's sustainability. Other than ISEW, GPI and IEWB which measure actual economic wellbeing, GS measures the possibility to sustain wellbeing over years. GS aims to represent "...the value of the net change of assets that are important for development: produced assets, natural resources, environmental quality, human resources, and foreign assets".
9. Website:
<http://go.worldbank.org/3AWKN2ZOY0>
<http://www.brettonwoodsproject.org/topic/environment/gensavings.pdf>

General sets of indicators

19. OECD set of indicators

1. Organisation: OECD Statistical Office.
2. Goal: To increase focus on sustainable development and assist decision-makers at all levels to adopt sound national sustainable development policies.
3. Scope: Beside other sets of indicators OECD has developed a specific set for Economic, Environmental and Social Statistics. The current set consists of 12 themes.

I. Population and Migration

- Total Population
- Elderly Population
- International Migration

II. Macroeconomic Trends

- Gross Domestic Product
- Economic Growth
- Economic Structure

III. Economic globalisation

- Trade
- Foreign Direct Investment

IV. Prices

- Prices and Interest Rates
- Purchasing Power and Exchange Rates

V. Energy

- Energy Supply
- Energy Production and Prices

VI. Labour

- Employment
- Unemployment
- Labour Compensation and Hours Worked

VII. Science & Technology

- Research & Development
- ICT
- Communications

VIII. Environment

- Water and Natural resources
- Air and Land

IX. Education

- Outcomes
- Expenditure on Education

X. Public Finance

- Government Deficits and Debt
- Public Expenditure
- Support and Aid

XI. Quality of Life

- Health
- Leisure
- Society
- Transport

XII. Productivity

- Economy-wide Indicators of Productivity Growth
- Productivity Levels
- Productivity Growth by Industry
- Impact of Labour Productivity on Unit Labour Costs

4. Frequency: Updated annually.
5. Dissemination: Data are downloadable for free from the website.
6. Number of indicators: 12 themes, 37 subthemes and 111 indicators.
7. Number of countries: 30 OECD countries + (often) some others.
8. Characteristics: This OECD set covers all aspects of Wellbeing, with a strong focus on Economic aspects. Little attention is paid to Human and Environmental Wellbeing. Indicators are not calculated on a comparable scale and are not aggregated into one single overall score.
9. Website: <http://puck.sourceoecd.org/vl=980255/cl=33/nw=1/rpsv/factbook2009/index.htm>

20. EU set of indicators

1. Organisation: Eurostat.
2. Goal: To monitor – using indicators at the appropriate level of details – progress with regard to the challenges of sustainable development.
3. Scope: The EU Sustainable Development Strategy (SDS) affirms the overall aim of achieving continuous improvement of the quality of life and well-being on earth for present and future generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion. The EU set of indicators comprises 10 themes:
 - Socioeconomic development
 - Climate change and energy
 - Sustainable transport
 - Sustainable consumption and production
 - Natural Resources
 - Public health
 - Social inclusion
 - Demographic changes
 - Global partnership
 - Good governance.
4. Frequency: Updated two yearly.
5. Dissemination: Data are downloadable for free from the website.
6. Number of indicators: 10 themes, 32 subthemes and 123 indicators.
7. Number of countries: 27 EU countries.
8. Characteristics: The EU set covers all aspects of Wellbeing, with relatively little attention for Economic Wellbeing. Indicators are not calculated on a comparable scale and are not aggregated into one single overall score.
9. Website: <http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/introduction>

21. CSD – Commission on Sustainable Development Indicators

1. Organisation: United Nations Commission on Sustainable Development.
2. Goal: To make indicators of sustainable development accessible to decision- makers at the national level. measuring progress on achieving sustainable development, including the Millennium Development Goals (MDGs), at the national and the international levels.
3. Scope: CSD has been developed to cover sustainability in its broad sense. The current set consists of 14 themes:
 - Poverty
 - Governance
 - Health
 - Education
 - Demographics
 - Natural hazards
 - Atmosphere
 - Land
 - Oceans, seas and coasts
 - Freshwater
 - Biodiversity
 - Economic Development
 - Global economic partnership
 - Consumption and production patterns
4. Frequency: First edition in 1996, revised editions 2001 and 2009.
5. Dissemination: Reports are downloadable for free from the website.
6. Number of indicators: 14 themes, 50 core indicators and a further 46 indicators.
7. Number of countries: n/a.
8. Characteristics: The CSD set covers all aspects of Wellbeing, though with little attention to Economic Wellbeing.
9. Website: http://www.un.org/esa/dsd/dsd_aofw_ind/ind_index.shtml

Country sets

22. Finland

1. Organisation: Finnish National Commission on Sustainable Development.
2. Scope: The set covers wellbeing in its broad sense. It consists of 7 themes:
 - The strengths and challenges of sustainable development in Finland
 - Balance between use and protection of natural resources
 - Sustainable communities in a sustainable regional structure
 - Citizens – well-being throughout the entire life cycle
 - The economy as a safeguard for sustainable development
 - Finland as a global actor
 - Supporting sustainable choices
3. Frequency: Updated annually.
4. Dissemination: Reports, leaflets as hard copies. All are downloadable for free from the website.
5. Number of indicators: 7 strategy headlines, 34 indicators.
6. Website: www.environment.fi/sustainabledevelopment

23. Germany

1. Organisation: Federal Statistical Office.
2. Scope: The set covers wellbeing in its broad sense. It consists of 4 themes and 21 indicator areas:

I. Intergeneration equity

- Resource Protection
- Climate protection
- Renewable energies
- Land use
- Species diversity
- National debt
- Provision for future economic stability
- Innovation
- Education and training

II. Quality of life

- Economic prosperity
- Mobility
- Farming
- Air Quality
- Health and nutrition
- Crime

III. Social cohesion

- Employment
- Perspectives for families
- Equal opportunities
- Integration

IV. International responsibility

- Development cooperation
- Opening markets

3. Frequency: Updated yearly.
4. Dissemination: Hard copy free of charge. Downloadable for free from the website.
5. Number of indicators: 21 indicator areas, 35 indicators. Quantified targets.
6. Website:
http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Navigation/Statistics/TimeSeries/Indicators/SustainableDevelopmentIndicators__nk.psml

24. The Netherlands

1. Organisation: Statistics Netherlands, the Netherlands Bureau for Economic Policy Analysis, the Netherlands Environmental Assessment Agency, and the Netherlands Institute for Social Research.
2. Scope: The set covers Wellbeing in its broad sense. It comprises 10 themes and 12 headline indicators:

I. Natural capital

Climate and energy

Greenhouse gas emissions

Energy reserves

Biodiversity

Mean species abundance

Soil, water and air

Urban exposure to particulate matter

II. Social capital

Social participation

Social participation

Trust

Generalised trust

Discrimination

III. Human capital

Labour utilisation

Hours worked

Education

Education level

Health

Female life expectancy

IV. Economic capital

Physical capital

Capital stock

Knowledge

Knowledge capital (R&D)

3. Frequency: First edition in 2009. Update planned for 2010.
4. Dissemination: Hard copy for sale. Downloadable for free from the website.
5. Number of indicators: Built upon the capital approach, the monitor comprises 10 themes, 12 headline indicators and 40 sub-indicators.
6. Website: <http://www.cbs.nl/en-GB/menu/themas/macro-economie/publicaties/publicaties/archief/2009/2009-sustainability-monitor-2009.htm>

25. Switzerland

1. Organisation: Federal Office for Spatial Development.
2. Scope: The set covers Human and Environmental Wellbeing; economic wellbeing is represented only partly. The 12 themes are:

I. Living conditions	VII. Work
II. Health	VIII. Economic system
III. Social cohesion	IX. Production and consumption
IV. International cooperation	X. Mobility and transport
V. Education and culture	XI. Energy and climate
VI. Research and technology	XII. Natural resources
3. Frequency: Updated annually.
4. Dissemination: Available as hard copy and downloadable for free.
5. Number of indicators: 12 themes, 75 indicators.
6. Website:
<http://www.bfs.admin.ch:80/bfs/portal/en/index/themen/21/22/publ.html?publicationID=3749>

26. United Kingdom

1. Organisation: Department for Environment, Food and Rural Affairs.
2. Scope: The set covers all three elements of wellbeing, though with little focus on economic wellbeing. The set comprises 15 themes:
 - Greenhouse gas emissions
 - Electricity generation
 - Carbon dioxide and other emissions
 - Resource use
 - Waste
 - Natural resources
 - Contextual indicators
 - Society
 - Employment and poverty
 - Education
 - Health
 - Mobility and access
 - Social and environmental justice
 - International
 - Wellbeing
3. Frequency: Annual updates. Data available from 1970 – 2008.
4. Dissemination: Hard copy pocket edition, downloadable for free from the website.
5. Number of indicators: 15 themes, 68 indicators.
6. Website:
<http://www.defra.gov.uk/sustainable/government/progress/data-resources/national.htm>

III. Summarizing the 26 sets of indicators

Index / set of indicators		Scope	Number indicators	Stat. data / surveys	Updates
1	HDI – Human Development Index		4	Stat.	1
2	CDI – Commitment to Development Index		7	Stat.	1
3	MDI – Millennium Development Indicators		60	Stat.	Ir
4	WoN – Wellbeing of Nations		54	St/(Su)	N
5	SSI – Sustainable Society Index		24	Stat.	2
6	FSP – Framework of Societal Progress		21	Stat.	n/a
7	CHQ – Calvert-Henderson Quality of Life Indicators		12	Stat.	?
8	CIW – Canadian Index of Wellbeing		80	St/Su	1
9	AUW – Australian Unity Wellbeing Index		14	St/Su	½
10	HPI – Happy Planet Index		3	St/Su	?
11	LPI – Living Planet Index		3	Stat.	2
12	ESI – Environmental Sustainability Index		76	Stat.	N
13	EPI – Environmental Performance Index		25	Stat.	2?
14	EF – Ecological Footprint		6	Stat.	2
15	ISEW – Index for Sustainable Economic Welfare		20-25	Stat.	Ir
16	GPI – Genuine Progress Indicator		25-30	Stat.	Ir
17	IEWB – Index of Economic Well-Being		18	Stat.	1
18	GS – Genuine Savings		10	Stat.	1
19	OECD set of indicators		111	Stat.	1
20	EU set of indicators		123	Stat.	2
21	CSD set of indicators		96	Stat.	n/a
22	Finland		34	St/(Su)	1
23	Germany		35	Stat.	1
24	The Netherlands		40	Stat.	Ir
25	Switzerland		75	Stat.	1
26	United Kingdom		68	Stat.	1

	Development
	Overall Wellbeing
	Human Wellbeing
	Environmental Wellbeing
	Economic Wellbeing

Updates
2 = Regular (frequency in years)
Ir= Irregular
N = No updates foreseen
n/a= not applicable

IV. Conclusions and recommendations

Conclusions

1. In October 2009 AMSDE concluded that
 - an adequate indicator is required to measure a country's economic progress in a better way than GDP, and
 - an adequate index or set of indicators is needed to measure a country's wellbeing.
2. In this survey the most relevant of the many worldwide existing sets of indicators have been summarized and evaluated.
3. Four indexes / indicators have been listed that are meant to measure a country's economic wellbeing: ISEW, GPI, IEWB and GS. GS has an objective that is different from the three other economic indicators. GS measures the possibility to sustain wellbeing over years, while the other three measure the contribution of a country's economy to the overall level of wellbeing.
4. To measure a country's overall wellbeing, a further 22 sets of indicators have been listed, with varying coverage of wellbeing and attention for sustainability, as shown in Section III. In view of the AMSDE conclusions of October 2009 to measure a country's wellbeing, sets of indicators should cover all aspects of wellbeing – human, environmental and economic. By doing so, also the aspects of the three capital pillars (social, environmental and economic) will be met.

Recommendations

1. To measure a country's economic progress and wellbeing, AMSDE could suggest the OECD Statistical Office to include Genuine Savings and one of the three other mentioned economic indicators in the standard list of statistical data. AMSDE could suggest the Economic and Development Review Committees to incorporate these indicators in their reviews.
2. To measure a country's wellbeing in its broad sense, each country may very well use its own list, meeting the specific conditions and requirements of the country.
3. To be able to make comparisons across OECD countries, a uniform list for all OECD countries is required.
4. To measure wellbeing in its broad sense – encompassing human, environmental and economic wellbeing – at least 11 of the listed sets of indicators can be taken into account. To make it easier to handle and more clear, AMSDE could decide on a limited number of indicators. By limiting the number to 40, five sets of indicators qualify, as shown in the table below. Should one further decrease this limit to 25, only two sets qualify.

Sets of indicators		Criteria		
		Number of indicators	Total Wellbeing	Limited number of indicators
1	HDI – Human Development Index	4		
2	CDI – Commitment to Development Index	7		
3	MDI – Millennium Development Indicators	60		
4	WoN – Wellbeing of Nations	54	✓	
5	SSI – Sustainable Society Index	24	✓	✓
6	FSP – Framework of Societal Progress	21	✓	✓
7	CHQ – Calvert-Henderson Quality of Life Indicators	12		
8	CIW – Canadian Index of Wellbeing	80		
9	AUW – Australian Unity Wellbeing Index	14		
10	HPI – Happy Planet Index	3		
11	LPI – Living Planet Index	3		
12	ESI – Environmental Sustainability Index	76		
13	EPI – Environmental Performance Index	25		
14	EF – Ecological Footprint	6		
15	ISEW – Index for Sustainable Economic Welfare	20 - 25		
16	GPI – Genuine Progress Indicator	25 - 30		
17	IEWB – Index of Economic Well-Being	18		
18	GS – Genuine Savings	n/a		
19	OECD set of indicators	111	✓	
20	EU set of indicators	123	✓	
21	CSD set of indicators	96	✓	
22	Finland	34	✓	✓
23	Germany	35	✓	✓
24	The Netherlands	40	✓	✓
25	Switzerland	75	✓	
26	United Kingdom	68	✓	

5. None of the sets is perfect, meeting the needs and wishes of every country. Nevertheless AMSDE could make a choice out of these sets. And even after having chosen, AMSDE could further adapt the set to suit specific wishes for OECD countries.
6. Following recommendation 5, AMSDE could recommend a minimum set of indicators to measure a country's overall wellbeing and the progress on the way towards a sustainable society. This could be done in close cooperation with the OECD Statistical Office.
7. Working with the set for overall wellbeing will enhance experiences and will identify possible shortcomings. AMSDE could annually identify required improvements.
8. Anyhow, don't hesitate to make a (preliminary) choice and then continually improve the chosen set. That will be way better than keep on discussing which approach would be the best.

AMSDE

seminar 5 February 2010

Short survey of relevant indexes and sets of indicators concerning development towards sustainability

Annex – Lists of indicators

1.	HDI – Human Development Index	2
2.	CDI – Commitment to Development Index	3
3.	MDI – Millennium Development Indicators	4
4.	WoN – Wellbeing of Nations	8
5.	SSI – Sustainable Society Index	10
6.	FSP – Framework of Societal Progress	11
7.	CHQ – Calvert-Henderson Quality of Life Indicators	12
8.	CIW – Canadian Index of Wellbeing	13
9.	AUW – Australian Unity Wellbeing Index	14
10.	HPI – Happy Planet Index	15
11.	LPI – Living Planet Index	16
12.	ESI – Environmental Sustainability Index	17
13.	EPI – Environmental Performance Index	18
14.	EF – Ecological Footprint	19
15.	ISEW – Index for Sustainable Economic Welfare	20
16.	GPI – Genuine Progress Indicator	21
17.	IEWB – Index of Economic Well-Being	22
18.	GS – Genuine Savings	23
19.	OECD set of indicators	24
20.	EU set of indicators	26
21.	CSD set of indicators	29
22.	Finland	32
23.	Germany	33
24.	The Netherlands	35
25.	Switzerland	36
26.	United Kingdom	37

15 January 2010



Full text of main report is available on www.anped.org

1. HDI – Human Development Index

HDI is built up by 3 indicators

- Life expectancy at birth
- GDP per capita
- Knowledge
 - Gross enrolment rate
 - Adult literacy rate

Data available from 1975 onwards.

Website: www.hdr.undp.org.

2. CDI – Commitment to Development Index

CDI is built up by 7 indicators.

Each indicator is built up by a number of underlying sub-indicators.

Data available from 2003 onwards.

Website: http://www.cgdev.org/section/initiatives/_active/cdi/.

- Aid
- Trade
- Investment
- Migration
- Environment
- Security
- Technology

3. Millennium Development Goals

MDGs comprise 8 goals with 21 quantified targets, measured by 60 indicators.

Data are available in the online database MDG Monitor for 1990 – 2009.

Website: <http://www.undp.org/mdg/>

<http://mdgs.un.org/unsd/mdg/Default.aspx>

Goal 1: Eradicate extreme poverty and hunger

Target 1a: Reduce by half the proportion of people living on less than a dollar a day
1.1 Proportion of population below \$1 (PPP) per day 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
Target 1b: Achieve full and productive employment and decent work for all, including women and young people
1.4 Growth rate of GDP per person employed 1.5 Employment-to-population ratio 1.6 Proportion of employed people living below \$1 (PPP) per day 1.7 Proportion of own-account and contributing family workers in total employment
Target 1c: Reduce by half the proportion of people who suffer from hunger
1.8 Prevalence of underweight children under-five years of age 1.9 Proportion of population below minimum level of dietary energy consumption

Goal 2: Achieve universal primary education

Target 2a: Ensure that all boys and girls complete a full course of primary schooling
2.1 Net enrolment ratio in primary education 2.2 Proportion of pupils starting grade 1 who reach last grade of primary 2.3 Literacy rate of 15-24 year-olds, women and men

Goal 3: Promote gender equality and empower women

Target 3a: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015
3.1 Ratios of girls to boys in primary, secondary and tertiary education 3.2 Share of women in wage employment in the non-agricultural sector 3.3 Proportion of seats held by women in national parliament

Goal 4: Reduce child mortality

Target 4a: Reduce by two thirds the mortality rate among children under five
<ul style="list-style-type: none"> 4.1 Under-five mortality rate 4.2 Infant mortality rate 4.3 Proportion of 1 year-old children immunised against measles

Goal 5: Improve maternal health

Target 5a: Reduce by three quarters the maternal mortality ratio
<ul style="list-style-type: none"> 5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel
Target 5b: Achieve, by 2015, universal access to reproductive health
<ul style="list-style-type: none"> 5.3 Contraceptive prevalence rate 5.4 Adolescent birth rate 5.5 Antenatal care coverage (at least one visit and at least four visits) 5.6 Unmet need for family planning

Goal 6: Combat HIV/AIDS, malaria and other diseases

Target 6a: Halt and begin to reverse the spread of HIV/AIDS
<ul style="list-style-type: none"> 6.1 HIV prevalence among population aged 15-24 years 6.2 Condom use at last high-risk sex 6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS 6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
Target 6b: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it
<ul style="list-style-type: none"> 6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs
Target 6c: Halt and begin to reverse the incidence of malaria and other major diseases
<ul style="list-style-type: none"> 6.6 Incidence and death rates associated with malaria 6.7 Proportion of children under 5 sleeping under insecticide-treated bednets 6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs 6.9 Incidence, prevalence and death rates associated with tuberculosis 6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course

Goal 7: Ensure environmental sustainability

<p>Target 7a: Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources</p> <p>Target 7b: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>
<p>7.1 Proportion of land area covered by forest 7.2 CO₂ emissions, total, per capita and per \$1 GDP (PPP) 7.3 Consumption of ozone-depleting substances 7.4 Proportion of fish stocks within safe biological limits 7.5 Proportion of total water resources used 7.6 Proportion of terrestrial and marine areas protected 7.7 Proportion of species threatened with extinction</p>
<p>Target 7c: Reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation</p>
<p>7.8 Proportion of population using an improved drinking water source 7.9 Proportion of population using an improved sanitation facility</p>
<p>Target 7d: Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020</p>
<p>7.10 Proportion of urban population living in slums</p>

Goal 8: Develop a global partnership for development

<p>Target 8a: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system</p> <p>Includes a commitment to good governance, development and poverty reduction – both nationally and internationally</p>
<p>Target 8b: Address the special needs of the least developed countries</p> <p>Includes: tariff and quota free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction</p>
<p>Target 8c: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)</p>

Target 8d: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term

Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.

Official development assistance (ODA)

- 8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income
- 8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)
- 8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied
- 8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes
- 8.5 ODA received in small island developing States as a proportion of their gross national incomes

Market access

- 8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
- 8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries
- 8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product
- 8.9 Proportion of ODA provided to help build trade capacity

Debt sustainability

- 8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)
- 8.11 Debt relief committed under HIPC and MDRI Initiatives
- 8.12 Debt service as a percentage of exports of goods and services

Target 8e: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

- 8.13 Proportion of population with access to affordable essential drugs on a sustainable basis

Target 8f: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications

- I. 8.14 Telephone lines per 100 population
- II. 8.15 Cellular subscribers per 100 population
- III. 8.16 Internet users per 100 population

4. WoN – Wellbeing of Nations

WoN comprises 10 themes, 17 categories and 54 indicators.

Published only once, in 2001.

Website: <http://www.iucn.org>

I. Human Wellbeing

- **Health and Population**

- Health Index*

- Healthy Life Expectancy at birth

- Population Index*

- Total fertility rate

- **Wealth**

- Household Wealth Index*

- Food sufficiency

- Prevalence of stunted children or Prevalence of underweight children

- Population with access to safe water & basic sanitation

- GDP per capita

- National Wealth Index*

- GDP per capita

- Inflation rate or Unemployment rate

- External Debt

- Public Debt & deficit

- **Knowledge and Culture**

- Knowledge*

- Net primary & secondary school enrolment

- Tertiary school enrolment per 10,000 people

- Telephones

- Internet users per 10,000 persons

- **Community**

- Freedom and Governance Index*

- Political Rights rating

- Civil liberties rating

- Press Freedom rating

- Corruption Perceptions Index

- Peace and Order Index*

- Deaths from armed conflicts per year

- Military expenditure as % of GDP

- Homicide rate

- Rape, robbery and assault rates

- **Equity**

- Household Equity Index*

- Ratio of richest 20%'s income to poorest 20%'s

- Gender Equity Index*

- Ratio of male income to female income

- Difference between male and female school enrolment rates

- % of women in parliament

II. Ecosystem Wellbeing

- **Land**

Land Diversity Index

Converted land as % of total land

Natural land as % of total land

% change in native forest area

Protected area as % of total land, weighted for size

Protected area as % of total land, weighted for diversity

Land Quality Index

Degraded land as % of cultivated + modified land

- **Water**

Inland Water Quality

Oxygen balance

Nutrients

Acidification

Suspended solids

Microbial pollution

Arsenic & heavy metals

Inland Water Diversity

River conversion

Water Withdrawal

Water withdrawal

- **Air**

Global Atmosphere Index

Greenhouse gases

Ozone depleting substances

Local Air Quality Index

Concentrations of SO₂, NO₂, Ozone, CO, Particulates, Pb

- **Species and Genes**

Wild Diversity Index

Threatened plant species

Threatened animal species

Domesticated Diversity Index

Number of not-at-risk breeds per million head of a domesticated animal species

Ratio of threatened breeds to not-at-risk breeds of a domesticated animal species

- **Resource Use**

Energy Index

Energy consumption per hectare of total land area

Energy consumption per person

Resource Sectors Index

Food produced per harvested hectare

Fertilizer used per 1000 harvested hectares

Food production as % of supply

Depleted fish species + overexploited species as % of assessed species

Fishing fleet capacity per km² of shelf and/or inland waters

Catch per ton of fleet capacity

Fish & seafood production as % of supply

Timber fellings + imports as % of net annual increment

Timber production + imports as % of volume

5. SSI – Sustainable Society Index (redesigned)

The SSI consists of 3 clusters, 8 categories and 24 indicators.

Data available in SSI-2006 and SSI-2008.

Website: www.sustainablesocietyindex.com

Human Wellbeing

Basic Needs

Sufficient Food
Sufficient to Drink
Safe Sanitation

Personal Development

Healthy Life
Education Opportunities
Gender Equality

Well-balanced Society

Good Governance
Income Distribution
Population Growth

Environmental Wellbeing

Healthy Environment

Air Quality (Humans)
Air Quality (Nature)
Surface Water Quality

Climate & Energy

Renewable Energy
Emission of GHGs
Energy Consumption

Natural Resources

Renew. Water Res.
Forest Area
Biodiversity

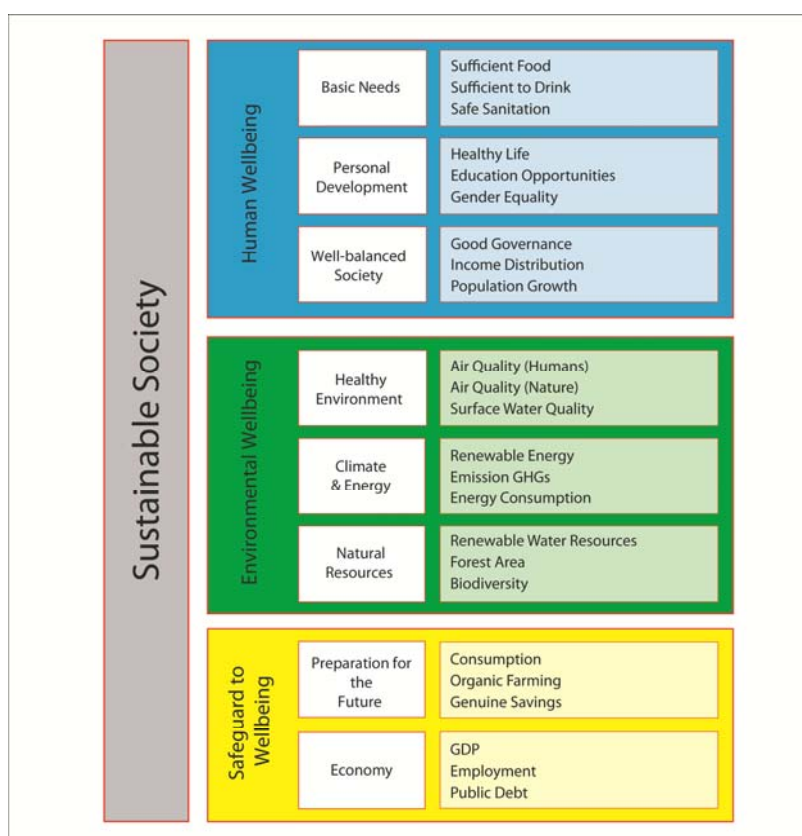
Safeguard to Wellbeing

Preparation for the Future

Consumption
Organic Farming
Genuine Savings

Economy

GDP
Employment
Public Debt



6. FSP – The Framework of Societal Progress - OECD

The FSP consists of 6 themes and 21 separate dimensions of progress.

Website: <http://www.oecd.org/dataoecd/40/46/43631612.pdf>

I. Ecosystems Condition

- Land
- Freshwater
- Oceans and Seas
- Biodiversity
- Atmosphere

II. Human Well-Being

- Physical and mental health
- Knowledge and understanding
- Work and Leisure
- Material Well-Being
- Freedom and Self-Determination
- Interpersonal relationships

III. Economy

- National Income
- National Wealth

IV. Governance

- Human Rights
- Civic Engagement
- Security and Crime
- Access to Services

V. Culture

- Cultural heritage
- Arts and Leisure

VI. Resource use

- Resource extraction and consumption
- Pollution

7. CHQ – Calvert-Henderson Quality of Life Indicators

CHQ comprises twelve categories, each with underlying indicators and sub-indicators.

Website: <http://www.calvert-henderson.com/>

Education

Educational Attainment
Educational Expenditures
Literacy Rates
Access
Distribution
Segregation
Discrimination
Lifelong Learning
Alternative education

Employment

Employed, full time / part time
Unemployed
Volunteers and Unpaid Workers
Discouraged Workers

Energy

Energy Consumption per capita
Energy Consumption per GDP
Carbon Intensity
Total Carbon Emissions

Environment

Resources
Industry/Infrastructure
Consumer Products / Services
Wastes

Health

Infant Mortality
Life Expectancy at Birth
People reporting Fair or Poor Health

Human Rights

Private sphere (e.g., freedom from domestic violence, access to food, nutrition, medical care, and clothing).
Public sphere (e.g., freedom of expression, religious freedom, rights of assembly, voting rights).
Incarceration data, the death penalty, prison labor, racial/gender discrimination, rights of American Indians and other indigenous people, mistreatment of prisoners and aliens.
Voting rights, participation in politics.
The growing influence of money and special interests.

Income

Measures trends in Standard of Living and Economic Wellbeing through a number of underlying indicators

Infrastructure

Economic Infrastructure
Transportation
Communications
Utilities
Social Infrastructure
Health
Safety
Education
Human Capital Infrastructure
Environmental Infrastructure

National Security

Diplomatic Strategy and Activities
Military Strategy and Programs

Public Safety

Safety Determinants in
Private Sphere
Public Sphere
Outcomes (deaths, injury, morbidity)
Externally caused
Diseases

Re-Creation

Institutional Investment
Individual Characteristics
Types of recreation

Shelter

Quality
(Over)crowding
Affordability
Location
Homeownership rate

8. CIW – Canadian Index of Wellbeing

The CIW consists of 8 categories, of which 3 have been elaborated until now.

Website: www.cic.ca

- | | |
|---|--|
| <p>I. Arts, Culture & Recreation</p> <p>II. Community Vitality</p> <ul style="list-style-type: none"> - Volunteering - Number of Close Relatives - Providing Assistance to Others - Poverty Crime - Violent Crime - Walking Alone After Dark - Trust - Experience of Discrimination - Caring for Others - Belonging to Community - Participation in Group Activities <p>III. Democratic Engagement</p> <p>IV. Education</p> <p>V. Environment</p> <p>VI. Healthy Populations</p> <ul style="list-style-type: none"> - Health-adjusted Life Expectancy - Diabetes - Depression - Life Expectancy at Birth - Infant Mortality - Smoking - Patient Satisfaction with Health Services - Population with a Regular Family Doctor - Influenza Immunization Among Age 65+ - Self-rated Health | <p>VII. Living Standards</p> <ul style="list-style-type: none"> - Income Distribution - Incidence of Low Income - Wealth Distribution - CSLS Economic Security Index - Long-term Unemployment - Employment Rate - CIBC Employment Quality Index - Housing Suitability and Affordability - After-tax Median Income <p>VIII. Time Use</p> |
|---|--|

9. AUW – Australian Unity Wellbeing Index

The AUW consists of two elements and 14 indicators.

Website: <http://www.australianunity.com.au/wellbeingindex/#glance>

I. Personal Wellbeing

- Standard of living
- Health
- Achievements in life
- Personal relationships
- How safe you feel
- Community connectedness
- Future security
- Spirituality / religion

II. National Wellbeing

- Economic situation
- State of the environment
- Social conditions
- How Australia is governed
- Business
- National security

10.HPI - Happy Planet Index

Data are available from 1961 to 2005.

Website: <http://www.happyplanetindex.org>

HPI comprises three themes:

- Life Satisfaction
- Life Expectancy
- Footprint.

HPI is calculated by the formula:

$$\text{Living better, using less} = \frac{\text{Long, healthy lives} \times \text{Satisfied lives}}{\text{Resources consumed}}$$

11.LPI – Living Planet Index

Data are available from 1970 onwards.

Website:

http://www.panda.org/about_our_earth/all_publications/living_planet_report/living_planet_index/

LPI comprises three elements:

- Terrestrial
- Marine
- Freshwater.

Each element shows the status of populations of species in comparison to what it was in 1970.

12. ESI – Environmental Sustainability Index

ESI comprises 5 components, 21 indicators and 76 variables.

Website: <http://sedac.ciesin.columbia.edu/es/esi/index.html>

I. System

- Air Quality (4)
- Biodiversity (5)
- Land (2)
- Water Quality (4)
- Water Quantity (2)

II. Stress

- Reducing Air Pollution (5)
- Reducing Ecosystem Stress (2)
- Reducing Population Pressure (2)
- Reducing Waste & Consumption Pressures (3)
- Reducing Water Stress (4)
- Natural Resource Management (5)

III. Vulnerability

- Environmental Health (3)
- Basic Human Sustenance (2)
- Exposure to Natural Disasters (2)

IV. Capability

- Environmental Governance (12)
- Eco-efficiency (2)
- Private Sector Responsiveness (5)
- Science & Technology (5)

V. Global

- Participation in International Collaborative Efforts (3)
- Greenhouse Gas Emissions (2)
- Reducing Transboundary Environmental Pressures (2)

Note: between brackets the number of variables.

13.EPI – Environmental Performance Index

EPI consists of 6 Policy Categories and 10 Subcategories and 25 indicators, as shown in the Framework below.

Website: <http://epi.yale.edu/Home>

ENVIRONMENTAL HEALTH	Environmental Health	Environmental burden of disease	Environmental burden of disease (DALYs)
		Water (effects on humans)	Adequate sanitation
			Drinking water
		Air Pollution (effects on humans)	Urban particulates
			Indoor air pollution
ECOSYSTEM VITALITY	Air Pollution (effects on nature)	Air Pollution (effects on nature)	Regional ozone
			Sulfur dioxide emissions
	Water (effects on nature)	Water (effects on nature)	Water quality
			Water stress
	Biodiversity & Habitat	Biodiversity & Habitat	Conservation risk index
			Effective conservation
			Critical habitat protection*
			Marine Protected Areas*
	Productive Natural Resources	Forestry*	Growing stock change
		Fisheries*	Marine Trophic Index
			Trawling intensity
		Agriculture*	Irrigation Stress*
			Agricultural Subsidies
			Intensive cropland
			Burnt Land Area
			Pesticide Regulation
	Climate Change	Climate Change	Emissions per capita
			Emissions per electricity generation
			Industrial carbon intensity

14.EF –Ecological Footprint

The Ecological Footprint is built up from 6 underlying footprints, all expressed in global hectares:

- Cropland
- Grazing land
- Forest
- Fishing ground
- Built-up land
- Carbon (the area required to sequester carbon dioxide emissions).

The required area in global hectares, calculated by the six footprints, is the Ecological Footprint.

The EF can be compared with the biocapacity of a country. A country's biocapacity is a function of the number and type of biologically productive hectares within its borders. Deducting a country's footprint by its biocapacity results in a reserve or overshoot for each country.

Website: http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations

15. ISEW – Index for Sustainable Economic Welfare

The format of the ISEW of Belgium, USA and UK comprises 21 items:

1. Private Consumption Expenditures
2. Welfare Losses from Income Inequality
3. Value of Household Labour
4. Adjustment for Consumer Durables
5. Services from Streets and Highways
6. Public Expenditures on Health and Education
7. Defensive Private Expenditures on Health and Education
8. Costs of Commuting
9. Costs of Personal Pollution Control
10. Costs of Car Accidents
11. Costs of Water Pollution
12. Costs of Air Pollution
13. Costs of Noise Pollution
14. Costs of Loss of Habitat
15. Costs of Loss of Wetlands
16. Costs of Loss of Farmlands
17. Natural Capital Depletion
18. Costs of Climate Change
19. Costs of Ozone Layer Depletion
20. Net Capital Growth
21. Change in Net International Investment Position

The simplified formula for calculating the ISEW is:

ISEW = personal consumption
+ public non-defensive expenditures
- private defensive expenditures
+ capital formation
+ services from domestic labour
- costs of environmental degradation
- depreciation of natural capital.

Website:

<http://www.foe.co.uk/tools/index.html>

<http://www.neweconomics.org/>

<http://www.ces-surrey.org.uk>

16. GPI – Genuine Progress Indicator

The format of the GPI of Australia comprises 18 items:

1. Private Consumer Expenditures
2. Welfare Losses from Income Inequality
3. Value of Household Labour
4. Adjustment for Consumer Goods
5. Costs of Air Pollution
6. Costs of Loss of Farmlands
7. Depletion of Non-Renewable Resources
8. Long-Term Environmental Damage
9. Change in Net International Investment Position
10. Publicly Provided Service Capital
11. Value of Volunteer Work
12. Costs of Underemployment
13. Costs of Crime
14. Costs of Family Breakdown
15. Costs of Irrigation Water Use
16. Costs of Timber Depletion
17. Costs of Urban Waste Water
18. Environmental Health Index

Website: www.rprogress.org/sustainability_indicators/genuine_progress_indicator.htm

17.IEWB – Index of Economic Well-Being

The IEWB comprises 4 categories and 18 indicators.

Data are available from 1989 to 2007.

Website: <http://www.csls.ca/>

I. Consumption Flows

1. Market consumption
2. Life Expectancy
3. Unpaid Work
4. Leisure
5. Government Spending
6. Regrettable Expenditure

II. Wealth Stocks

7. Capital Stock
8. R&D
9. Natural Resources
10. Human Capital
11. Net International Investment Position
12. Social Cost of Environmental Degradation

III. Equality

13. Income Inequality
14. Poverty rate and Gap (Poverty Intensity)

IV. Economic Security

15. Risk from Unemployment
16. Financial Risk from Illness
17. Risk from Single Parent Poverty
18. Risk from Poverty in Old Age

18.GS – Genuine Savings

Genuine Savings – or Adjusted net savings – are derived from standard national accounting measures of gross national savings by making four types of adjustments. First, estimates of capital consumption of produced assets are deducted to obtain net national savings. Then current expenditures on education are added to net domestic savings as an appropriate value of investments in human capital (in standard national accounting these expenditures are treated as consumption). Next, estimates of the depletion of a variety of natural resources are deducted to reflect the decline in asset values associated with their extraction and harvest. Finally, pollution damages are deducted.

This is reflected in the next formula:

GS = GDP

- public and private consumption
- net foreign borrowing
- depreciation of produced assets
- + current spending on education
- resource depletion
- pollution damage.

Website: <http://go.worldbank.org/3AWKN2ZOY0>

19.OECD set of indicators

The current OECD set consists of 12 themes, 37 subthemes and 111 indicators.

I. Population and Migration

- Total Population
 - Evolution of the population
 - Regional Population
- Elderly Population
 - Ageing societies
 - Elderly Population by region
- International migration
 - Trends in migration
 - Immigrant population
 - Migration and unemployment
 - Educational attainment of recent immigrants

II. Macroeconomic Trends

- Gross Domestic Product
 - Size of GDP
 - National income per capita
 - Regional GDP
- Economic Growth
 - Evolution of GDP
 - Household saving
 - Investment rates
 - Inflation
 - Steel production
- Economic Structure
 - Value added by activity
 - Evolution of value added by activity
 - Small and medium-sized enterprises

III. Economic globalisation

- Trade
 - Share of trade in GDP
 - Trade in goods
 - Trade in services
 - Trading partners
 - Balance of payments
- Foreign Direct Investment
 - FDI flows and stocks
 - Activities of multinationals

IV. Prices

- Prices and Interest Rates
 - Consumer Price Indices (CPI)
 - Producer Price Indices
 - Long-term interest rates
- Purchasing Power and Exchange Rates
 - Rates of conversion
 - Effective exchange rates

V. Energy

- Energy Supply
 - Energy Supply
- Energy Production and Prices

VI. Labour

- Employment
- Unemployment
- Labour Compensation and Hours Worked

VII. Science & Technology

- Research & Development
- ICT
- Communications

VIII. Environment

- Water and Natural resources
- Air and Land

IX. Education

- Outcomes
- Expenditure on Education

X. Public Finance

- Government Deficits and Debt
- Public Expenditure
- Support and Aid

XI. Quality of Life

- Health
- Leisure
- Society
- Transport

XII. Productivity

- Economy-wide Indicators of Productivity Growth
- Productivity Levels
- Productivity Growth by Industry
- Impact of Labour Productivity on Unit Labour Costs

Website: <http://puck.sourceoecd.org/vl=980255/cl=33/nw=1/rpsv/factbook2009/index.htm>

20. EU set of indicators

The EU set of indicators consists of 10 themes, 32 subthemes and 123 indicators.

- **Socioeconomic development**
 - Growth of GDP per capita
 - Investment*
 - Regional disparities in GDP
 - Household saving
 - Labour productivity growth*
 - Research and development expenditure
 - Energy intensity
 - Employment*
 - Female employment
 - Regional disparities in employment
 - Unemployment
- **Climate change and energy**
 - Greenhouse gas emissions
 - Greenhouse gas emissions by sector*
 - Greenhouse gas intensity of energy consumption
 - Global surface average temperature
 - Consumption of renewables
 - Energy dependency*
 - Gross inland energy consumption
 - Electricity generation from renewables
 - Consumption of biofuels in transport
 - Combined heat and power
 - Implicit tax rate on energy
- **Sustainable transport**
 - Energy consumption of transport relative to GDP
 - Modal split of freight transport*
 - Volume of freight transport relative to GDP
 - Volume of passenger transport relative to GDP
 - Modal split of passenger transport*
 - Investment in transport infrastructure
 - Passenger transport prices
 - Greenhouse gas emissions from transport*
 - Average CO₂ emissions per km from new passenger cars
 - Emissions of ozone precursors from transport
 - People killed in road accidents*
 - Emissions of particulate matter from transport
- **Sustainable consumption and production**
 - Resource productivity
 - Municipal waste*
 - Domestic material consumption
 - Recycled and composted municipal waste
 - Atmospheric emissions
 - Electricity consumption of households*
 - Number of households
 - Household expenditures
 - Final energy consumption
 - Car ownership
 - Environmental management systems*
 - Eco-labels
 - Organic farming
 - Livestock density index

- **Natural Resources**

Abundance of common birds

Protected areas

Deadwood on forest land

Water abstraction

Water quality in rivers

Conservation of fish stocks

Fishing capacity

Change in land cover

Forest trees damaged by defoliation

- **Public health**

Healthy life years

Deaths due to chronic diseases

Suicides

Unmet needs for health care

Production of toxic chemicals

Exposure to air pollution by particulate matter

Exposure to air pollution by ozone

Annoyance by noise

Serious accidents at work

- **Social inclusion**

Risk of poverty

Intensity of poverty

Income inequalities

Jobless households

Working poor

Long-term unemployment

Gender pay gap

Early school leavers

Public expenditure on education

Adults with low educational attainment

Lifelong learning

- **Demographic changes**

Employment rate of older workers

Life expectancy at age 65 (men's)

Life expectancy at age 65 (women's)

Fertility rate

Migration

Elderly population compared to working-age population

Income level of over-65s compared to before

Risk of poverty for over-65s

Public Debt

Retirement age

Expenditure on care for the elderly

The impact of ageing on public expenditure

- **Global partnership**

- Official development assistance

- Imports from developing countries*

- Share of imports from least-developed countries

- Subsidies for EU agriculture

- Financing for developing countries*

- Share of foreign direct investment in low-income countries

- Share of official development assistance for low-income countries

- Share of untied assistance

- Assistance for social infrastructure and services

- Assistance for debt relief

- CO₂ emissions per inhabitant*

- Assistance for water supply and sanitation

- **Good governance**

- Infringement cases*

- Citizens' confidence in EU institutions

- Transposition of Community law

- Voter turnout*

- E-government availability

- E-government usage

- Environmental taxes compared to labour taxes.*

Website: <http://epp.eurostat.ec.europa.eu/portal/page/portal/sdi/introduction>

21.CSD – Commission on Sustainable Development Indicators

The most recent CSD set of indicators (2009) comprises 14 themes, 50 core indicators and a further 46 indicators.

Website: http://www.un.org/esa/dsd/dsd_aofw_ind/ind_index.shtml

Theme	Sub-theme	Core indicator	Other indicator
Poverty	Income poverty	Proportion of population living below national poverty line	Proportion of population below \$1 a day
	Income inequality	Ratio of share in national income of highest to lowest quintile	
	Sanitation	Proportion of population using an improved sanitation facility	
	Drinking water	Proportion of population using an improved water source	
	Access to energy	Share of households without electricity or other modern energy services	Percentage of population using solid fuels for cooking
	Living conditions	Proportion of urban population living in slums	
Governance	Corruption	Percentage of population having paid bribes	
	Crime	Number of intentional homicides per 100,000 population	
Health	Mortality	Under-five mortality rate	
		Life expectancy at birth	Healthy life expectancy at birth
	Health care delivery	Percent of population with access to primary health care facilities	Contraceptive prevalence rate
		Immunization against infectious childhood diseases	
	Nutritional status	Nutritional status of children	
	Health status and risks	Morbidity of major diseases such as HIV/AIDS, malaria, tuberculosis	Prevalence of tobacco use
			Suicide rate
Education	Education level	Gross intake ratio to last grade of primary education	Life long learning
		Net enrolment rate in primary education	
		Adult secondary (tertiary) schooling attainment level	
	Literacy	Adult literacy rate	
Demographics	Population	Population growth rate	Total fertility rate
		Dependency ratio	
	Tourism		Ratio of local residents to tourists in major tourist regions and destinations
Natural hazards	Vulnerability to natural hazards	Percentage of population living in hazard prone areas	
	Disaster preparedness and response		Human and economic loss due to natural disasters

Atmosphere	Climate change	Carbon dioxide emissions	Emissions of greenhouse gases
	Ozone layer depletion	Consumption of ozone depleting substances	
	Air quality	Ambient concentration of air pollutants in urban areas	
Land	Land use and status		Land use change
			Land degradation
	Desertification		Land affected by desertification
	Agriculture	Arable and permanent cropland area	Fertilizer use efficiency
			Use of agricultural pesticides
			Area under organic farming
	Forests	Proportion of land area covered by forests	Percent of forest trees damaged by defoliation
			Area of forest under sustainable forest management
Oceans, seas and coasts	Coastal zone	Percentage of total population living in coastal areas	Bathing water quality
	Fisheries	Proportion of fish stocks within safe biological limits	
	Marine environment	Proportion of marine area protected	Marine trophic index
			Area of coral reef ecosystems and percentage live cover
Freshwater	Water quantity	Proportion of total water resources used	
		Water use intensity by economic activity	
	Water quality	Presence of faecal coliforms in freshwater	Biochemical oxygen demand in water bodies
			Wastewater treatment
Biodiversity	Ecosystem	Proportion of terrestrial area protected, total and by ecological region	Management effectiveness of protected areas
			Area of selected key ecosystems
			Fragmentation of habitats
	Species	Change in threat status of species	Abundance of selected key species
			Abundance of invasive alien species
Economic development	Macroeconomic performance	Gross domestic product (GDP) per capita	Gross saving
		Investment share in GDP	Adjusted net savings as percentage of gross national income (GNI)
			Inflation rate
	Sustainable public finance	Debt to GNI ratio	
	Employment	Employment-population ratio	Vulnerable employment
		Labor productivity and unit labor costs	
		Share of women in wage employment in the non-agricultural sector	
	Information and communication technologies	Internet users per 100 population	Fixed telephone lines per 100 population
			Mobile cellular telephone subscribers per 100 population

	Research and development		Gross domestic expenditure on R&D as a percent of GDP
	Tourism	Tourism contribution to GDP	
Global economic partnership	Trade	Current account deficit as percentage of GDP	Share of imports from developing countries and from LDCs
			Average tariff barriers imposed on exports from developing countries and LDCs
	External financing	Net Official Development Assistance (ODA) given or received as a percentage of GNI	Foreign direct investment (FDI) net inflows and net outflows as percentage of GDP
			Remittances as percentage of GNI
Consumption and production patterns	Material consumption	Material intensity of the economy	Domestic material consumption
	Energy use	Annual energy consumption, total and by main user category	Share of renewable energy sources in total energy use
		Intensity of energy use, total and by economic activity	
	Waste generation and management	Generation of hazardous waste	Generation of waste
		Waste treatment and disposal	Management of radioactive waste
	Transportation	Modal split of passenger transportation	Modal split of freight transport
			Energy intensity of transport

22. Finland

The indicator set of Finland comprises 7 strategy headlines and 34 indicators.

Website: www.environment.fi/sustainabledevelopment

Strategy headline	Indicator
The strengths and challenges of sustainable development in Finland	<ul style="list-style-type: none"> - Environmental Performance Index - Human Development Index
Balance between use and protection of natural resources	<ul style="list-style-type: none"> - Greenhouse gas emissions - Total energy consumption - Use of renewable energy sources - Endangered species - Energy and natural resource consumption in relation to economic growth - Environmental loading in relation to economic growth - Development of total material requirement - Proportion of household expenditures on services - Eutrophication discharges into Baltic Sea
Sustainable communities in a sustainable regional structure	<ul style="list-style-type: none"> - Relative change in population in different regions - Distance of certain services from homes - Economic dependency ratio by province - Service satisfaction of citizens - Development of public and passenger car transport
Citizens – well-being throughout the entire life cycle	<ul style="list-style-type: none"> - Life expectancy at birth - Expected retirement age - Occupational diseases and accidents - Population development by age group - People with low employment potential - Immediate placement of 9th grade students in further studies - Per capita alcohol consumption and deaths attributable to alcohol - Employment rate for immigrants and number of non-Finnish speaking schoolchildren - Participation of 14-year olds in social organisational work - Voting activity
The economy as a safeguard for sustainable development	<ul style="list-style-type: none"> - GDP per inhabitant - Economic dependency ratio - Public debt in relation to GDP divided into state and municipal shares of debt - Number of unemployed and unemployment rate - Finland's competitiveness in relation to other OECD countries assessed in terms of relative cost of work unit
Finland as a global actor	<ul style="list-style-type: none"> - Official Development Aid - Direct investments from Finland in other countries
Supporting sustainable choices	<ul style="list-style-type: none"> - Research and development expenditure and patenting

23. Germany

The set consists of 4 themes and 21 indicator areas.

Website:

<http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Content/Statistics/Environment/EnvironmentalEconomicAccounting/EnvironmentalIndicators/Tables/Content75/IndicatorsInfo,templateId=renderPrint.psm!>

I. Intergeneration equity

Resource Protection

- 1a Energy productivity
- 1b Raw material productivity

Climate protection

- 2 Greenhouse gas emissions

Renewable energies

- 3a, b Share of renewable energy sources in total energy consumption

Land use

- 4 Increase in land use for housing and transport

Species diversity

- 5 Species diversity and landscape quality

National debt

- 6 National deficit

Provision for future economic stability

- 7 Gross fixed capital formation in relation to GDP

Innovation

- 8 Private and public spending on research and development

Education and training

- 9a 18- to 24-year-olds without a school leaving certificate
- 9b 25-year old university graduates
- 9c Share of students starting a degree course

II. Quality of life

Economic prosperity

- 10 Gross domestic product per capita

Mobility

- 11a Intensity of goods transport
- 11b Intensity of passenger transport
- 11c, d Share of rail transport and inland water transport

Farming

- 12a Nitrogen surplus
- 12b Organic farming

Air Quality

- 13 Air pollution

Health and nutrition

- 14a, b Premature mortality
- 14c, d Proportion of adolescents and adults who smoke
- 14 e Proportion of obese people

Crime

- 15 Burglaries in homes

III. Social cohesion

Employment

16a, b Employment rate

Perspectives for families

17a, b All-day care provision for children

Equal opportunities

18 Wage difference between women and men

Integration

19 Foreign school leavers with a school leaving certificate

IV. International responsibility

Development cooperation

20 Share of expenditures for official development assistance in gross national income

Opening markets

21 German imports from developing countries.

24. The Netherlands

The set comprises 10 themes, 12 headline indicators and 40 sub-indicators.

Website: <http://www.cbs.nl/en-GB/menu/themas/macro-economie/publicaties/publicaties/archief/2009/2009-sustainability-monitor-2009.htm>

I. Natural capital

Climate and energy

- A1 Greenhouse gas emissions
- A2 Energy reserves
- A3 Energy intensity
- A4 Renewable energy

Biodiversity

- B1 Mean species abundance
- B2 Red list (number of species)
- B3 Preservation of species (%)
- B4 Area of nature and forest (%)

Soil, water and air

- D1 Urban exposure to particulate matter
- D2 Acidifying emissions
- D3 Nitrogen deposits
- D4 Phosphorus in soil
- D5 Phosphorus in water

II. Social capital

Social participation

- E1 Social participation
- E2 Voluntary work (%)
- E3 Contacts with family and friends

Trust

- F1 Generalised trust
- F2 Feelings of discrimination
- F3 Trust in institutions

III. Human capital

Labour utilisation

- G1 Hours worked
- G2 Labour participation
- G3 Hours worked by workers
- G4 Retirement age (age)
- G5 Over-65s

Education

- H1 Education level
- H2 Education level of young people
- H3 School leavers
- H4 Maths skills
- H5 Education expenditure
- H6 Lifelong learning

Health

- J1 Female life expectancy
- J2 Healthy female life expectancy
- J3 Health expenditure

IV. Economic capital

Physical capital

- K1 Capital stock
- K2 Capital stock per unit of GDP
- K3 Investment (% GDP)

Knowledge

- L1 Knowledge capital (R&D)
- L2 Private sector expenditure on R&D
- L3 Public sector expenditure on R&D
- L4 Patents

25. Switzerland

The set comprises 12 themes and 75 indicators.

Website:

<http://www.bfs.admin.ch:80/bfs/portal/en/index/themen/21/22/publ.html?publicationID=3749>.

I. Living conditions

- Household income
- Population living below poverty line
- Life satisfaction
- Violent crime
- Remittances by migrants
- Housing costs
- Suicide rate

II. Health

- Life expectancy in good health
- Health-relevant behaviour: physical exercise
- Overweight
- Mental wellbeing
- Health expenditure

III. Social cohesion

- Inequality of income distribution
- Voluntary work
- Women in the National Council
- Reading skills of 15-year-olds by socio-economic background
- Early school leavers by citizenship

IV. International cooperation

- Official development assistance
- Official development assistance to poor countries
- Multilateral treaties
- Duty-free imports from developing countries
- Attitude towards development assistance
- Direct investments in developing countries

V. Education and culture

- Reading skills of 15-year-olds
- Early school leavers
- Participation in further education
- Internet use by income group
- Regular use of a second national language
- Participation in cultural activities
- Own cultural activities

VI. Research and technology

- Patent applications
- Human resources in science and technology
- Expenditure on research and development

VII. Work

- Unemployment rate
- Youth unemployment
- Working Poor
- Wage gap between men and women
- Professional position by gender

VIII. Economic system

- Investment to GDP ratio
- Labour productivity
- Level of public debt
- Fiscal revenue rate
- Environment-related taxes

IX. Production and consumption

- Material intensity
- Material requirement abroad for imports
- Fair trade
- Municipal waste
- Total material requirement
- Consumption of organic products
- Waste recycling

X. Mobility and transport

- Final energy consumption of transport
- Modal split in passenger transport
- Intensity of freight transport
- Take-offs and landings
- CO₂ intensity of individual motorised transport
- Modal split in freight transport
- Persons affected by noise

XI. Energy and climate

- Final energy consumption
- Renewable energies
- Greenhouse gas emissions
- CO₂ intensity
- Energy intensity
- Energy dependency
- CO₂ emissions

XII. Natural resources

- Per-capita settlement area
- Landscape fragmentation
- Particulate matter concentration
- Phosphorus content in lakes
- Breeding bird populations
- Ecological quality of forests
- Ecological footprint
- Settlement area
- Arable land
- Nitrate content in groundwater
- Ozone concentration

26. United Kingdom

The set comprises 15 themes and 68 indicators.

Website: <http://www.defra.gov.uk/sustainable/government/progress/data-resources/national.htm>

- **Greenhouse gas emissions**
 - Greenhouse gas emissions
 - Carbon dioxide emissions by end user
 - Aviation and shipping emissions
- **Electricity generation**
 - Renewable electricity
 - Electricity generation
- **Carbon dioxide and other emissions**
 - Household energy use
 - Road transport
 - Private vehicles
 - Road freight
 - Manufacturing sector
 - Service sector
 - Public sector
- **Resource use**
 - Resource use
 - Energy supply
 - Water resource use
 - Domestic water consumption
 - Water stress
- **Waste**
 - Waste
 - Household waste per person
- **Natural resources**
 - Bird populations
 - Biodiversity conservation
 - Agriculture sector
 - Farming & environmental stewardship
 - Land use
 - Land recycling
 - Dwelling density
 - Fish stocks
 - Ecological impacts of air pollution
 - Emissions of air pollutants
 - River Quality
 - Flooding
- **Contextual indicators**
 - Economic Growth
 - Productivity
 - Investment
 - Demography
 - Households and dwellings
- **Society**
 - Active community participation
 - Crime
 - Fear of crime
- **Employment and poverty**
 - Employment
 - Workless households
 - Economically inactive
 - Childhood poverty
 - Young adults
 - Pensioner poverty
 - Pension provision
- **Education**
 - Education
 - Sustainable development education
- **Health**
 - Health inequality
 - Healthy life expectancy
 - Mortality rates
 - Smoking
 - Childhood obesity
 - Diet
- **Mobility and access**
 - Mobility
 - Getting to school
 - Accessibility
 - Road accidents
- **Social and environmental justice**
 - Social justice
 - Environmental equality
 - Air quality and health
 - Housing conditions
 - Households living in fuel poverty
 - Homelessness
 - Local environment quality
 - Satisfaction in local area
- **International**
 - UK international assistance
- **Wellbeing**
 - Wellbeing