

# AMSDE

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

Authors:

*Geurt van de Kerk and Arthur Manuel,*  
Sustainable Society Foundation - NL



***www.anped.org***  
***Northern Alliance for Sustainability***  
***Fiennesstraat 70***  
***1070 Brussels – Belgium***  
***Contact: Leida@anped.org***

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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](http://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.

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## 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](http://www.hdr.undp.org)

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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/](http://www.cgdev.org/section/initiatives/_active/cdi/)

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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](http://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 21<sup>st</sup> 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](http://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/>

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HPI scores for 2005 for 143 countries

Maximum 76.1

Average 43.4

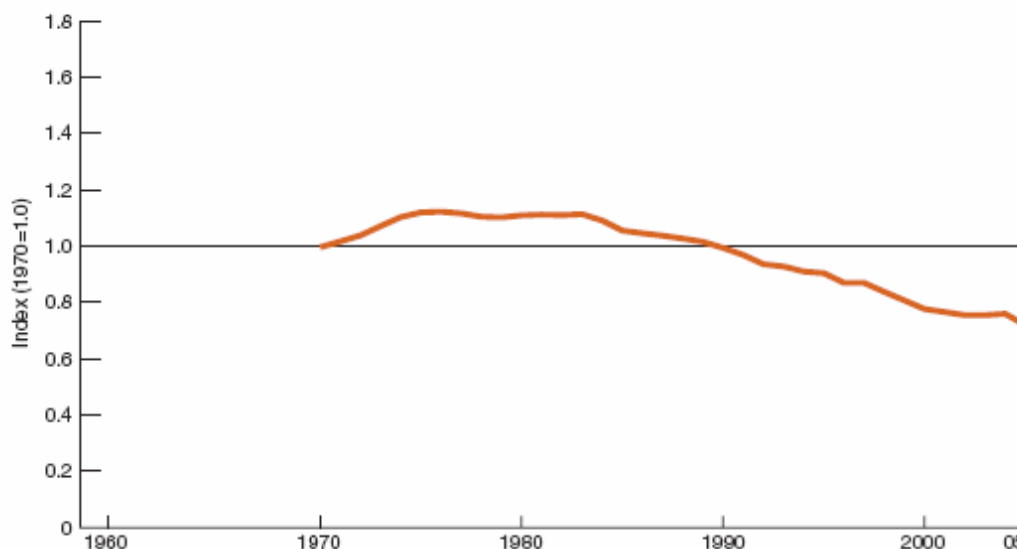
Minimum 16.6

## 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/](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:
 

<ol style="list-style-type: none"> <li><b>I. System</b></li> <li>Air Quality (4)</li> <li>Biodiversity (5)</li> <li>Land (2)</li> <li>Water Quality (4)</li> <li>Water Quantity (2)</li> </ol> <ol style="list-style-type: none"> <li><b>II. Stress</b></li> <li>Reducing Air Pollution (5)</li> <li>Reducing Ecosystem Stress (2)</li> <li>Reducing Population Pressure (2)</li> <li>Reducing Waste &amp; Consumption Pressures (3)</li> <li>Reducing Water Stress (4)</li> <li>Natural Resource Management (5)</li> </ol>	<ol style="list-style-type: none"> <li><b>III. Vulnerability</b></li> <li>Environmental Health (3)</li> <li>Basic Human Sustenance (2)</li> <li>Exposure to Natural Disasters (2)</li> </ol> <ol style="list-style-type: none"> <li><b>IV. Capability</b></li> <li>Environmental Governance (12)</li> <li>Eco-efficiency (2)</li> <li>Private Sector Responsiveness (5)</li> <li>Science &amp; Technology (5)</li> </ol> <ol style="list-style-type: none"> <li><b>V. Global</b></li> <li>Participation in International Collaborative Efforts (3)</li> <li>Greenhouse Gas Emissions (2)</li> <li>Reducing Transboundary Environmental Pressures (2)</li> </ol>
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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>

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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/](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
<b>Total Ecological Footprint</b>	7,1	8,1	9,6	10,6	11,7	11,9	13,3	13,8	15,1	16,8	17,1
<b>Total Biocapacity</b>	11,4	11,5	11,6	11,6	11,7	11,7	11,9	12,0	12,0	11,9	11,9
<b>Ecological Footprint to Biocapacity ratio</b>	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.

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

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](http://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/>

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