Prototype Global Sustainable Development Report

Brief 2
Assessments for sustainable development

What is an assessment? *An assessment is typically prepared for decision-makers and addresses broad and complex topics, by drawing on large and representative groups of experts. An assessment is problem-driven and usually synthesizes scientific findings on complex issues, reducing complexities. It inevitably makes judgments, but generally aims to separate descriptive and normative elements of the assessment*

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The Prototype Global Sustainable Development Report maps the landscape of assessments for sustainable development. It qualifies as *sustainable development assessments*, assessments for which the underlying sustainable development definition captures at least one item to be sustained, one item to be developed, and at least two of the economic, social and environmental dimensions. Most of the identified assessments are broader and include all three dimensions, yet fully comprehensive assessments are rare.

The report considered hundreds of assessments including 57 international scientific assessments suggested through the crowd-sourcing platform (to collect views from scientists around the world); 125 flagship publications of the UN system; and 23 outlook reports prepared by intergovernmental organizations; as well as 69 national sustainable development reports and assessments.

Sustainability science

Sustainability science emerged as a new inter-disciplinary endeavour around the year 2000. In 2012 alone, more than 40,000 authors from 2,200 cities around the world published some 150,000 articles on sustainable development – six times more than ten years before[1].

International scientific assessments

There are thousands of assessments that differ in terms of scope, scale, organization, process, participation, resources and perceived policy relevance. Most of them focused on specific systems and sectors. The database for the Assessment of assessments on oceans contains 1,023 assessments and the one for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services contains 215 assessments at multiple scales. For other areas there appear to be no comprehensive, regularly updated databases of assessments.

Three broad categories of assessments can be distinguished: intergovernmental scientific assessments; scientific-technocratic assessments; and scientific research collaborations. A handful of prominent international assessments (see Table below) have served as models for new initiatives. A few of them have been huge undertakings with hundreds or thousands of scientists participating and price tags of hundreds of millions of US dollars. The number of assessments and the resources devoted (to different sectors and themes) seems to be proportional to the associated economic stakes. This has made climate change assessments the most proliferating area over the past 20 years.

Since 2000, assessments have started to widen their scope and to consider "co-benefits" or synergies and multiple goals. Notable examples are the Millennium Ecosystem Assessment (2005), the International Assessment of Agricultural Knowledge, Science and Technology for Development (2008), and the Global Energy Assessment (2012).

The IPCC model of intergovernmental scientific assessments has been the most successful institutional model of formalizing the science-policy interface. The IPCC model has shaped the design of other assessments and has also been instituted at the national level, e.g., in Austria and Hungary. It has put key problems identified by science high on policy makers' agendas and has also enabled science to inform solutions. It is not clear if any other model has the potential to mobilize the scientific community to the same extent. At the same time, the IPCC model has received criticism from scientists and beyond. Transparency, plurality of perspectives and effective participation of scientists from developing countries have been identified as must-haves to ensure global credibility. Efforts are required to support science-capacity in developing countries and to strengthen the institutional mechanisms to support evidence-based policy making.

UN publications can tap a wider range of knowledge beyond the peer-reviewed, academic literature. They are directly linked to a UN process which facilitates consideration by decision makers. Diversity of views can provide a wider range of options to decision-makers. Hence overlaps among UN assessment publications do have their benefits, while a loose coordination among assessments and outlooks could benefit decision-makers.

[1] GSDR Prototype authors' calculations based on Google Scholar data.

Global assessments might not necessarily reflect the unique situation of small island developing countries, least developed, land-locked developing countries since vulnerability factors that are most relevant for these countries do not always show up as "crucial" in global assessments. Similarly, smaller developed and developing countries do not necessarily see their particular challenges and action priorities reflected in the global sustainable development debate and related assessments. Hence, there may be a need to build global assessments on national ones.

UN flagship publications and outlook reports

The report analysed UN flagship publications and outlook reports in terms of scope, approach, diagnosis of trends and challenges, and policy recommendations. The analysis shows that most outlook publications are being developed in isolation from each other and do not always take inter-linkages into account. For instance, the recent energy outlooks typically project large global increases in biofuel use, and while they will be within scientifically sound "potentials", they will typically not account for the changed patterns of water use and their implications, nor the interactions with innovative systems and economic growth. The report also highlights that by far the largest number of UN publications with scientific assessments are on environmental issues, noting that UNEP and the secretariats of environmental conventions have established processes for these publications.

National assessments

The report considered an inventory of national sustainable development reports not older than 10 to 15 years including, *inter alia*, national sustainable development reports prepared for Rio+20 in 2012, national progress reports on the Millennium Development Goals (MDGs), and national reports, strategies, indicator profiles, statements, and voluntary initiatives, prepared for sessions of the UN Commission on Sustainable Development (CSD) by 193 Member States.

Referring to the number of sustainable development related reports submitted to the UN by countries, the report shows that country coverage of MDG progress reports (148 countries) has been three times better than for the Commission on Sustainable Development (CSD) progress reports and twice better than for Rio+20 reports, which is indicative of the comparatively lower importance attached to sustainable development by UN entities and its Member States. It shows big differences in terms of national priorities under the sustainable development agenda: amongst the 405 national assessment reports on specific thematic topics that had been submitted to the CSD for implementation cycles 2004 through 2011 most reports focused on chemicals and waste; desertification, land degradation, and drought; and sustainable consumption and production. Climate change had the fewest national reports by countries.

Issues scientists would like decision-makers to consider

Based on the results of the crowd-sourcing platform, issues scientists would like decision-makers to consider include: regional conflicts due to global competition for natural resources, the climate-land-energy-water-development nexus, political instability and social unrest from wealth inequalities, child labour, non-existent or decreasing environmental justice, and youth unemployment.

Issues for consideration

Assessing assessments on sustainable development is one of the elements decision-makers might want to see in a future Global Sustainable Development Report. It might not only help to identify scientific consensus but could also assist in identifying differences in views and areas for joint action.

More information

For further information, see the Prototype Report's website: http://sustainabledevelopment.un.org/globalsdreport

Typology of international sustainable development assessments

Type	Examples	Description	Link to political process	Participants nominated/ selected by	Drafted by	Text approved by	Fre-quency	Normative or descriptive	Type of knowledge assessed
Intergovernmental scientific assessments	IPCC, IPBES	Regular intergovernmental scientific assessments	Formal	Governments	Scientists	Government, peers	Regular	Primarily descriptive	Academic, peer-reviewed
	IAASTD	Ad hoc stakeholder, intergovern-mental scientific assessment	Formal	Multi-stake-holder Bureau	Scientists	Govern-ments	Ad hoc	Primarily descriptive	Academic and traditional/local knowledge of stakeholders
	GEO	Regular UN science publication with formal link	Formal	Governments, stakeholders	Scientists guided by UN	Peers	Regular	Descriptive and normative	Academic, peer-reviewed, UN
	Asian Highway expert group	Intergovernmental UN expert group	Formal	Governments	UN staff guided by experts	UN	Regular	Descriptive	Governments, UN, academic, private sector
Scientific, technocratic assessments	UN Committee for Development Policy	Standing UN expert groups with formal reporting to governments	Formal	UN Secretary General	UN staff guided by Committee members	Commit-tee	Regular	Normative	Academic, peer-reviewed, UN
	High-level Panel on Global Sustainability	Ad hoc initiatives of the Secretary General	Formal, weak	UN Secretary General	UN staff guided by Panel	Panel	Ad hoc	Normative	UN, governments, academic, NGOs, stakeholders
	GBO, WESS	UN flagship publications, drawing on expert groups, linked to UN process	Formal, weak	UN	UN staff jointly with experts	UN	Ad hoc, regular	Descriptive and normative	Academic, NGOs, UN, government, stakeholders
	UN SD21 study	Stocktaking made in preparation for high-level international conferences	Formal, weak	UN	Lead authors, with UN staff	UN	Ad hoc	Descriptive	Academic, practitioners' views
Scientific research collaborations	Global Energy Assessment	Collaborative collation of scientific knowledge	Informal	Peers	Scientists	Authors, Peers	Ad hoc	Descriptive and normative	Academic, peer-reviewed
	Millennium Ecosystem Assessment	Identification of scientific basis and knowledge gaps for action	Non-govern-mental	science panel, endorsed by board	Scientists	Peers	Ad hoc	Descriptive and normative	Academic, peer-reviewed, stakeholders
	Census of Marine Life; Future Earth	Collaborative scientific research programme	Non-govern-mental	Peers	Scientists	Authors, Peers	Ad hoc	Descriptive	Academic, own research

Note: Increasing role of governments from bottom to top. Source: Global Sustainable Development Report, 2014