

Sustainable Development Goals

Improving human and planetary wellbeing

Momentum is building towards the development of universally applicable sustainable development goals. **Owen Gaffney** reports on the progress so far and explores the path ahead.

In the last few years, every Anthropocene-related symposium I've attended concludes humanity is on a dangerous course. The excesses of a privileged few portend unprecedented destabilisation of Earth's life-support system, leaving little room for other nations to develop. These types of declarations are often swiftly followed by dark mutterings that politicians are either unwilling to act or impotent in the face of clear and present danger. The principles of scientific neutrality and objectivity are being severely tested.

Of course, political leaders are not sitting idle, but the list of issues is daunting, some barriers seem immovable and the institutions we have – the United Nations (UN), for example – seem ill-equipped at times for life in the Anthropocene. However, a new, and in some ways remarkable plan is being developed and scheduled for launch in September 2015: the Sustainable Development Goals, or SDGs, which is part of the UN's post-2015 development agenda. Unlike their predecessors, the Millennium Development Goals (MDGs), the SDGs are not aimed solely at ending poverty; indeed, the ambition is they will apply universally to all nations.

The MDGs are an attractive

model to emulate. The main goal – to halve the number of people living on less than \$1.25 a day – was achieved before the 2015 deadline despite the absence of any legally binding enforcement mechanism. Rapid economic development in countries such as China, though, was a major factor leading some to say poverty, by this definition, would have been halved regardless of the MDGs. But Bill Gates argues this is beside the point: the MDGs provided a set of clear international priorities that helped channel substantial funding from aid agencies and foundations.

The SDGs are more ambitious still. The idea for such a set of goals was first floated by Guatemala and Colombia and adopted by nations at the 2012 Rio+20 summit. The first science-policy dialogue on SDGs took place at the IGBP co-sponsored Planet Under Pressure conference in London in 2012. Since 2012, a lot of groundwork has been done mainly under the auspices of the so-called Open Working Group (OWG). This was set up by the UN to manage the process and includes representatives from 30 nations. In February the group, which has been meeting every few months, identified 19 "focus areas" ranging from poverty eradication and food

security to energy and health (see box). These will eventually get distilled down to a smaller set of goals in the course of the next few months. By the time the next UN General Assembly rolls round in September the group will have a "Zero order draft" and this will be the basis of negotiations and debate until a final decision is made at the 2015 General Assembly.

Distilling down the goals should be relatively straightforward. Several focus areas have a degree of overlap suggesting some obvious mergers: for example economic growth, industrialisation, and sustainable consumption and production. I can imagine there will be distinct goals on poverty elimination, health, education, and food, water and energy security. The devil, of course, will be in the detail. Achieving the goals will require nations to report on a series of targets and indicators. The UN's new Sustainable Development Solutions Network (SDSN) thinks around 100 indicators will be required. The network published a report recently¹ outlining the types of indicators that could be adopted to support the sort of goals under discussion. This is a major undertaking not least because targets and indicators

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UN Open Working Group's 19 focus areas



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need to be scientifically robust and mutually reinforcing – reaching one target should not be at the expense of achieving another.

Several bridges between science and the SDGs have been constructed. IGBP’s sponsor, the International Council for Science, is the official coordinator for science and technology in the process. It has a seat at the table as one of the nine major groups and regularly sends a delegation to the OWG meetings.

In a separate move, UN Secretary-General Ban Ki-moon set up the SDSN to mobilise “scientific and technical expertise from academia, civil society, and the private sector in support of sustainable development problem solving at local, national, and global scales”. Led by Jeffery Sachs at Columbia University, the network has the mechanisms and political acumen to respond to shifting priorities and tight deadlines. Furthermore, Ban Ki-moon has recently created a new Scientific Advisory Board to provide independent advice relating to sustainable development². IGBP’s former chair Carlos Nobre is a member of this new board.

Taken together, this contributes to a much-needed shake-up of

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the international science-policy interface in this sustainable development arena.

The SDGs will form the overarching international political vision relating to sustainability during the lifetime of the new Future Earth initiative. As such, if Future Earth is serious about working with stakeholders to develop solutions to global challenges, close links to the SDGs will be essential. Mark Stafford Smith, the chair of Future Earth’s scientific committee, recently co-authored a commentary in *Nature*³ outlining that long-term sustainability for a global society will require a careful watch on Earth’s life-support system. The group identified seven environmental priorities, or “must haves”, for inclusion in the SDGs: climate, biodiversity, ecosystem services, freshwater provision, nitrogen and phosphorous cycles, pollution and use of novel materials. Future Earth has also cemented close ties with SDSN. The network’s director, Guido Schmidt-Traub, sits on Future Earth’s interim Engagement Committee.

Now that the UN’s Open Working Group has produced its

list of 19 themes there are several ways science can contribute to the SDGs. Much more work is needed to develop integrated targets and indicators. Scientific expertise will be an essential ingredient to create credible, realistic indicators, as highlighted by a recent UNEP report⁴ – IGBP director Sybil Seitzinger contributed.

A significant challenge for the UN will be in data collection and analysis. The MDGs were hampered by long time lags for reporting, often several years behind schedule. SDG reporting will be on a much larger scale. There is even talk about reporting at subnational levels, for example cities and businesses reporting against SDG targets. This promises to be a unique but complex and interconnected dataset.

Emerging digital technologies could be harnessed to create a revolutionary data platform. There is a window of opportunity for researchers to work with UN agencies to develop a ground-breaking system for collection, analysis and visualisation.

Social science is also getting in on the act. Researchers on the Earth System Governance project are fully involved and attending Open Working Group

Sustainable Development Goals timeline

| | 2012 | | | | | 2013 | | | | | |
|--------------------------|-----------------------|---|---|---|--|-----------------------------------|--|--|--------------------------------|--------------------------------|--|
| | Mar | June | July | Aug | Sept | Jan | Mar | Apr | May | June | Aug |
| Political process | | Rio+20 conference | High Level Panel (HLP) of Eminent Persons established | | UN General Assembly ratifies Rio+20 outcomes | UN Open Working Group established | 1st Open Working Group meeting | 2nd Open Working Group meeting | 3rd Open Working Group meeting | 4th Open Working Group meeting | |
| Scientific input | Planet Under Pressure | ICSU Science and Technology Forum (Rio) | | UN Sustainable Development Solutions Network (SDSN) | | | Sustainable Development Goals for People and Planet (Griggs <i>et al</i>) <i>Nature</i> . | UN-ICSU-ISSC* expert group meeting on science and SDGs | | | UNEP: Embedding the environment in the sustainable development goals |

*International Social Science Council

meetings. The project has set up a specific initiative relating to governance and the SDGs and plans to publish three policy briefs in the coming months.

Governance – the systems of people and institutions, formal and informal rules, and rule-making at all levels of human society – is seen by policymakers, commentators and scholars as a major issue that needs to be addressed to achieve the goal of a truly sustainable global society. Indeed, some argue that the Anthropocene demands a re-examination of nation-state governance and its ability to deal with the global commons. Global governance failures have appeared prominently in the World Economic Forum’s annual risks report during the last few years.

The Earth System Governance project, though, argues that creating a specific goal on governance is unnecessary⁵, and may well be counterproductive. Project Executive Director Ruben Zondervan from Lund University in Sweden says the literature does not support the need for a specific goal; instead, governance should be tackled within each goal with specific targets and indicators. It appears the

co-chairs of the Open Working Group may be listening because governance does not appear as a specific theme in the group’s list.

Zondervan is positive about the role of science within the SDGs to date. “Science is more recognised in this process than I have seen in other processes. There have been some excellent scientific presentations at the Open Working Group meetings and we feel the group’s co-chairs are paying attention.” Indeed, the OWG has made considerable efforts to bring in a range of expertise to help its deliberations. The problems often lie within the scientific community’s ability to respond to deadlines imposed by the policy process.

“The SDSN is very visible and provides some really useful material. ICSU is significantly weaker. It needs to be more responsive and build stronger messages, it needs more consultations with academia and more transparency.” He argues ICSU must focus on science’s unique selling point: the evidence base.

There is much at stake. The SDGs have the potential to be influential. As highlighted in Zondervan’s first policy brief on the subject⁵, the SDGs could go a

long way to setting new societal norms. The goals may help create a fresh global narrative around a common future to mobilise collective action and help develop a shared understanding of interconnected risks and solutions.

In short, the ultimate goal of the SDGs is to promote a new worldview and provide the beginnings of a plan to end poverty without imposing significant costs on Earth’s life-support systems. ■

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| | | | | 2014 | | | | | | | | 2015 |
|---|---|--------------------------------|---|--|---|---|---------------------------------|---------------------------------|--|---------------------------------|--|--|
| Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Sept | Sept |
| High Level Political Forum (UN Secretary-General announces Scientific Advisory Board) | | 5th Open Working Group meeting | 6th Open Working Group meeting | 7th Open Working Group meeting | 8th Open Working Group meeting | 9th Open Working Group meeting | 10th Open Working Group meeting | 11th Open Working Group meeting | 12th Open Working Group meeting | 13th Open Working Group meeting | UN General Assembly receives Zero Order Draft of SDGs from OWG | Intergovernmental process to adopt goals |
| | SDSN report: an action agenda for Sustainable Development | | UNESCO –ICSU side event on STI and SDGs | 1st meeting of Ban Ki-moon’s Scientific Advisory Board ICSU side event on understanding integrated urban challenges | ICSU-ISSC* Position paper on SDGs at the end of the stocktaking | SDSN: Indicators for Sustainable Development Goals draft report | | | ICSU side event at 12th Open Working Group | | | |