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Change the approach to sustainable development

Conventional environmental assessments are not enough — it is time for some joined-up global thinking, says Mark Stafford Smith.

As the world heads towards the next big environmental summit — the United Nations Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil, in June — officials and politicians are calling for further assessments of our global ecological plight.

In January, for example, a panel on global sustainability set up by UN secretary-general Ban Ki-moon recommended a “periodic global sustainable development outlook report that brings together information and assessments currently dispersed across institutions and analyses them in an integrated way”.

This is a response to research that shows how global society is increasingly interconnected and interdependent. The cascading effect on land availability and food security of a switch to biofuels, for example, demonstrates how actions to address carbon dioxide emissions can rebound on other goals.

But, in these difficult times, can the thinly stretched scientific community support a new assessment process? And is that really what policy-makers need from research?

Scientists are already busy on policy-makers' behalf. There is the Intergovernmental Panel on Climate Change (IPCC), the Millennium Ecosystem Assessment, assessments of international waters, mountains and fresh water, the Global Marine Assessment and the important new Intergovernmental Platform on Biodiversity and Ecosystem Services. Each has a crucial role in consolidating knowledge about individual sectors. But how to connect the dots?

In many areas, the rates of global environmental change are accelerating but decision-making processes are stuck in low gear. It is not clear that another conventional assessment will catalyse swifter action. So, although the research community should rally behind an integrated analysis, it must be done differently.

First, the focus must shift from documenting problems to supporting solutions. This requires strong and continual interaction between those working in strategic applied research and decision-makers in policy, industry and civil society, both on specific decisions (such as how to frame a particular trade agreement) and on the wider context (interactions between national well-being, environmental outcomes and economic flows).

Second, the process must promote responses at all scales, from national governments and regional groups to UN institutions. Appropriate solutions will differ from region to region, be they specific technologies for energy production or carbon sequestration, or analyses that jointly address water, energy and food.

Finally, the process must work across sectors, through simultaneous analysis of the impact of a

migration policy on environmental and social well-being, for example. To do this comprehensively, the research must also become more integrated, encompassing natural and social sciences and the humanities to understand the implications of changes.

How could this be done? Two proposals already on the table for Rio+20 could help: a UN Sustainable Development Council (UNSDC), directly answerable to the UN General Assembly, and a set of sustainable-development goals (SDGs).

A UNSDC could commission strategic analyses of global sustainability and set up and coordinate decision-specific panels — small mixed working groups that include non-scientific members, appointed to report quickly on specific issues. Such panels would work across sectors, independent from but jointly owned by global bodies such as the

Food and Agriculture Organization of the UN, the World Trade Organization, the UN Environment Programme and the World Bank.

This model must be replicated at regional and national levels, driven by local needs, with local ownership. Light-touch coordination by the UNSDC would ensure good communication and exchange of ideas, and would make sure that activities in one region did not lead to perverse global outcomes — perhaps by causing people to move, distorting prices or over-using resources.

The SDGs could ensure that these activities integrate the three pillars of sustainability — environmental, economic and social — instead of dealing with each in isolation, as the UN's current Millennium Development Goals do. They should connect sectors, aiming for example to improve well-being without environmental damage,

ensure food security without undermining local livelihoods and develop habitable urban environments without increasing resource use.

All of this builds on existing trends in the activities of bodies such as the IPCC, but we need a rapid step change in the evolving relationship between science and decision-making.

Countries such as Australia already talk about ‘national innovation systems’ — the totality of their pure and applied research efforts and the interactions of these with decision-making in industry and government. It is time to embrace a global innovation system to support better-coordinated and more nimble decision-making on global sustainability at all scales. Much work needs to be done on the details, but if science is to be genuinely useful to society, this is what we must fight for. ■

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Mark Stafford Smith is science director of the Commonwealth Scientific and Industrial Research Organisation Climate Adaptation Flagship in Canberra, and co-chair of the Planet Under Pressure conference, which will be held in London next week.
e-mail: mark.staffordsmith@csiro.au