



Quiet green revolution starts to make some noise

The formation of the UN Scientific Advisory Board is an important step towards integrating global sustainability efforts, says Owen Gaffney.

This week sees the first meeting of a board of scientific experts set up to advise UN secretary-general Ban Ki-moon. In a modest way, it is a historic move — never before has the head of the United Nations had what amounts to a team of chief scientific advisers. Furthermore, the meeting in Berlin marks one of the first outward signs of a quiet international revolution that is building new bridges between science and policy.

Each member of the board will serve for two years, and is supposed to act independently, rather than lobbying for his or her nation. Among the 26 scientists are Abdul Hamid Zakri, science adviser to the prime minister of Malaysia and chair of the Intergovernmental Platform on Biodiversity and Ecosystem Services; Brazilian Earth-system scientist Carlos Nobre; and Bulgarian global environmental governance expert Maria Ivanova.

The inclusion of political scientists is a bold move reflecting a growing awareness that the governance arrangements of the twentieth century are struggling to cope with the challenges of the twenty-first. That failing was highlighted repeatedly at the annual meeting of the World Economic Forum in Davos, Switzerland, last week.

The board has its origins in the UN report *Resilient People, Resilient Planet*, published for the Rio+20 conference on sustainable development in 2012, which recommended that “the Secretary-General should consider naming a chief scientific adviser or establishing a scientific advisory board with diverse knowledge”. But it can also be seen as a response to another 2012 UN report, the damning *21 Issues for the 21st Century*, which highlighted what it called broken bridges between science and policy. It identified a lack of “meeting points” between scientists and politicians that is causing knowledge to remain locked in silos. As a result, the link between science and society becomes strained and public confidence — in climate science for example — is weakened.

Partly because of the size of the UN and partly because of how it has evolved, myriad commissions, programmes and organizations work on what can be grouped under the heading of sustainable development. This makes it difficult to coordinate policies. Worse, some are in direct conflict. The World Bank, for example, has invested in energy projects that fly in the face of efforts to reduce carbon emissions.

Reform will take time, and the problems run deeper than the links between science and policy. Greater change is under way: Ban announced the scientific advisory board last September at the first meeting of the UN High-Level Political Forum on Sustainable Development, the flagship that he hopes will bring about much-needed coordination.

Political fragmentation has a knock-on effect on international science programmes: when

researchers work with the UN, we are forced to deal with issues in the same silos it does. But when it comes to global sustainability, the environment can no longer be separated from economic growth, nor can action on food security be separated from action on biodiversity.

A significant strength of the new advisory board is that it will form a bridge between the UN and international research. The timing is good. The landscape of international Earth-system and sustainable-development research is itself undergoing major reform, spearheaded by the ten-year research programme Future Earth, which is bringing together all the major players. As Future Earth develops its science plan, the advisory board has within its remit to identify “knowledge gaps” that could be addressed by “international research programs, e.g., the emerging ‘Future Earth’”. The scene is set for these two initiatives to lock together like a jigsaw puzzle.

Future Earth integrates networks including the International Geosphere-Biosphere Programme (IGBP), the DIVERSITAS biodiversity programme and the International Human Dimensions Programme. The latter two will close this year and, after 28 years, the IGBP is scheduled to close its doors in 2015.

It is early days for Future Earth, but the ambition is clear: its architects argue that there needs to be an urgent shift in international science, from a focus on understanding the Earth system and how humans interact with it to meeting the needs of 10 billion people as Earth’s life-support system is transformed. This is not so much bridge repair as construction of an entirely new bridge.

As such, planning is detailed, negotiations protracted, the lag between idea and implementation

drawn out. Traditionally, international science programmes have had few links with engineering, technology and business, but this is where the solutions to modern problems will be found. Whole new networks need to emerge.

This, too, is happening. Immediately following Rio+20, Ban set up the Sustainable Development Solutions Network, led by US economist Jeffrey Sachs. This is a global network of research centres, universities and businesses tasked with innovative problem-solving. With a direct line to the secretary-general’s office and Future Earth, it has already built much momentum.

Taken together, these initiatives and the appointment of the UN scientific advisory board will inject energy into a tired system. This is worth celebrating — not least because it creates a mechanism for ongoing reform, rather than having to wait 20 years for the next Earth summit. ■

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