

## **PRESS RELEASE**

### **Celebrating 30 years of global change research**

**The global science community celebrates 30 years of research collaboration which has contributed to fundamental breakthroughs in our understanding of the Earth System**

Auckland, New Zealand (Sept 1) – Three decades of research collaboration amongst thousands of volunteer scientists across the globe to deepen our understanding of the Earth System was celebrated today on the first day of the General Assembly of the International Council for Science (ICSU).

Delegates to the major three-day scientific conference heard how the combined efforts of the four global change programmes in the past decades have shaped our understanding of the Earth System and underpinned the major policy assessments such as the Intergovernmental Panel on Climate Change (IPCC).

“The value of the global change programmes is putting together the big picture. The sum is greater than the parts,” said Sybil Seitzinger, Executive Director of the International Geosphere-Biosphere Programme (IGBP).

The World Climate Research Programme (WCRP) was set up in 1980, followed by IGBP. In 1989 a UN General Assembly resolution called on countries around the world to “increase their activities in support of WCRP and IGBP.” DIVERSITAS – biodiversity science was established soon after, then the International Human Dimensions Programme (IHDP) in 1996, followed by the Earth System Science Partnership in 2001.

IGBP was established as the major international programme to increase understanding of the biogeochemistry of the Earth system. At a meeting in Mexico in 2000, IGBP Vice Chair Nobel Laureate Paul Crutzen said that Earth system changes were so great that we could no longer be said to be in the Holocene. He coined the term Anthropocene at that meeting. “It was a major shift in our understanding in the dynamics of the Earth system and human activities,” Seitzinger said.

“Twenty years ago we knew very little about the magnitude of change humans were having on the nitrogen cycle. The scientific community was fragmented and we didn’t have an Earth System perspective. Coordination through IGBP has led to major advances and we can now quantify the magnitude of human impact on the nitrogen cycle.”

Director of the World Climate Research Programme Dave Carlson thanked the thousands of volunteer scientists who contributed to the realization of the WCRP vision. He added that “what is important is to look at the big picture across these projects, where a small number of people in a small number of secretariats organized these things.”

Anne-Helene Prieur-Richard, Acting Executive Director of DIVERSITAS – which has focused on understanding the biodiversity component of the Earth system – described the changes in the focus of biodiversity research over the past three decades.

Starting from the 1980s, when research looked at questions like “What is biodiversity? Where is it in the world?”, in the 1990s the focus shifted to how biodiversity contributes to ecosystem processes and functions.

Prieur-Richard also paid tribute to the legacy of IHDP, highlighting work on the consequences of urbanization, new metrics to measure human and natural capital and understanding how different institutional systems shapes human behaviour and decision-making processes.

Seitzinger stressed that all the global change programmes provided a way for policymakers to access the research community and vice versa. “They are a platform for engagement and this is one of the big success stories of IGBP,” she said. For example, more than 100 IGBP scientists have been involved as authors and reviewers in the IPCC Fifth Annual Assessment released in the past year. Another significant policy product is the annual Global Carbon Budget which is a timely update on global emissions and carbon sinks.

The legacy of global change research will be carried on by the new Future Earth programme, into which IGBP, IHDP and DIVERSITAS will be merged in 2015.

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#### **About ICSU**

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