

Transdisciplinary approaches for a sustainable future

Almost 26 years ago, 12 nations from across the Americas recognized that the long-term chemical, biological and physical processes and cycles of the Earth system were undergoing continuous alterations that were both natural in origin and human-induced, in what is known as global change. They also expressed their concern that global change might affect the resources vital to human wellbeing and that of other species, and that our scientific knowledge on global change was incomplete. Moreover, these nations believed that policymakers were in need of accurate information characterizing the impacts of global change, and that to tackle these great challenges, we needed enhanced cooperation among institutions and countries of the Americas. These concepts became the foundation of the Inter-American Institute for Global Change Research (IAI), an intergovernmental organization with 19 current Parties that promotes scientific research and capacity building to inform decision-making on the American continents.

To better understand global change and its impacts, and more importantly, to effectively communicate scientific results to support policy and decision making to serve society, we need to integrate expertise from different scientific disciplines and other types of knowledge. Nevertheless, integrating different types of knowledge is not easy and requires cutting-edge approaches and innovative programs that bring a diversity of experts and professionals together to address common problems.

An initiative to promote integration and collaboration among disciplines, communities, sectors and nations, was the IAI's Professional Development Seminar on Transdisciplinary approaches to integrating policy and science for sustainability held in the Dominican Republic in 2016 and Canada in 2017. Almost 40 professionals, from 15 IAI Parties, participated in this seminar. The group was composed of professionals from government, the private sector, research institutes, NGOs, indigenous communities and academia. The diversity of professionals was key to engaging in the identification of common global change problems across faculties and borders — and to seek research and policy-based solutions. This engagement was fundamental to the development of collaborative research projects and to the overall achievements of the IAI event.

Four transdisciplinary projects emerged during the Professional Development Seminar. They address important socio-economic environmental themes: water governance; improving the livelihoods and resilience of cocoa producers; and native grassland sustainability for biodiversity conservation and livelihood security. These projects are

great examples of how activities such as the IAI Transdisciplinary Approaches seminar can contribute to establishing research networks composed of scientists from different disciplines working together with policy and decision makers. Two of these projects are in the process of receiving financial support from the private sector to support the development of their research.

We hope that the scientific collaborations and science-policy networks established at the IAI seminar are long-lasting and that other professionals and institutions engage in and support transdisciplinary approaches to integrating disciplines, knowledge types, communities, sectors and nations. There is no single recipe for transdisciplinary research, but goodwill, openness, respect, dialogue, and communication are important elements for a good start.

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¹IAI Parties are Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Panama, Paraguay, Peru, United States of America, Uruguay and Venezuela.