

Draft proposal for an IAI Directorate with distributed functions

The IAI is an international treaty organization with a regional mandate. During its existence it has managed to significantly increase project leadership in Latin American countries, promoting principal investigators from the South in its science and capacity building programs. The opportunity that is provided by the offers from three Mercosur countries to help the IAI in its unique tasks of developing the Continent's capacity to understand and deal with global change must be taken up. Such broad international support is a chance to overcome current limitations in the operations of the IAI and to develop its full mandate of science and capacity building for decision making. Anchoring the IAI in a regional Alliance of countries will also contribute to balancing the IAI's support structure from an overwhelming role of the US Government to a more comparable participation of the South.

The Agreement Establishing the IAI contains the following mandates:

- 1) Promote regional cooperation and... pursue on a regional scale that research which cannot be pursued by any individual State,
- 2) Improve the scientific and technical capabilities and research infrastructure and foster standardization, collection, analysis and exchange of scientific data relevant to global change, and
- 3) Improve public awareness and provide scientific information to governments.

In the process of developing a science synthesis for policy and decision-making, it has become clear that the human resources at the IAI Directorate cannot provide the capacity needed for guaranteeing a policy return on the science investment and that new structures are needed for the IAI directorate that can tap into expertise and capacities provided by member countries and its institutions.

The IAI has successfully funded and administered science projects. The IAI's "value-added" science governance beyond such international administrative tasks are science syntheses and translations for policy-making activities which have to become core activities of the Directorate. These tasks require broad interdisciplinary integration that goes well beyond current patterns of science governance. This cannot be done without strong partnerships integrated with the IAI core activities and therefore with its Directorate, and without close collaboration with, and support from the IAI Member Countries.

A fundamental weaknesses exist in global change science, which hampers the process of developing political consensus on actions needed: global models are unable to provide information at time and spatial scales that lend themselves to practical interventions in such critical areas as public health vigilance, disaster preparedness, or land use decisions. The impacts of global environmental changes felt at regional and country level have root causes that are commonly regional to local. For instance, land cover change causes changes in regional weather, climate and hydrology, and is linked to impacts on ecosystem services, public health and biodiversity. Such changes may be enhanced by "global climate change" which now is measurable as a 1.7 degree increase in global

average temperature, and which is the result of the global summation of CO₂ emissions. Mitigation actions for global climate change concern carbon budgets. Mitigation actions for regional impacts of global environmental are manifold. There are critical interactions between global climate change and environmental changes, felt for instance in the occurrence of disasters. That interface between global climate and regional environments is critical to the IAI's mission and cuts across all its science programs. Yet the Directorate has no structure yet to develop the synthesis, assessments and science needed to develop knowledge.

Brazil's role:

Critical issues are 1) the limited ability to scale scientific information to spatial and time scales appropriate for policy and decision making and 2) The inability of climate models to provide information at time and spatial scales that lend themselves to practical interventions in such critical areas as public health vigilance, disaster preparedness, or land use decisions. Both tasks require broad interdisciplinary integration that goes well beyond current patterns of science governance and should be implemented by the directorates *IAI Science Development Office*. Without developing a strong partnership that is integrated with the IAI core activities and therefore with its Directorate this cannot be done. That is the task that an IAI - INPE partnership should address. Such a centre would be a major contribution to global change science. IAI's administrative flexibility, scientific adaptability and international presence combined with INPE's science and applications experience and exemplary record of science access provide a key opportunity. To make this successful would mean expanding the directorate and linking some of its science governance directly to INPE. A modified host country agreement may be a suitable vehicle for this.

Examples of this science development are in IAI initiatives from Climate Change - Public Health applications for the Mercosur countries to assessments of Climate - Biodiversity interactions in the Andean Pact countries - both initiatives involving IAI-INPE collaboration and providing very close and real links to strategic decision making. Brazil, and in particular MCTI/INPE, has interacted with IAI science at the project level and in capacity building. INPE's experience with the policy of free and open data availability and its instructional capacity have been applied to IAI public health applications for the Mercosur countries, and to assessments of climate - biodiversity interactions in the Andean Pact countries. Both of these initiatives have involved IAI-INPE collaboration and have provided very close and real links to strategic decision making.

Uruguay's Role

The Government of Uruguay has made a very convincing proposal that would provide the needed core stability for the IAI Directorate. The financial operations and management of the IAI would best be operated from Uruguay, at an *IAI Operations and Finance Office*. The facilities outlined in the proposal will enhance directorate function, facilitate stability of staffing, provide excellent communications and support the many financial transaction that the IAI undertakes as it funds science and capacity building programs throughout the continent. The management of the new directorate structure will

be conducted from this office. In addition, local facilities will support workshops and capacity building events. The proposal is supported by several ministries and organizations that would help integrate the IAI Directorate broadly in its new environment.

Argentina's Role

The Agreement Establishing the IAI contains the mandate to improve public awareness and provide scientific information to governments. The External Review of 2007 recommended a robust strategy of communication and dialogue. Since 2007, IAI has begun to move the knowledge generated into the realm of decision making and policy. Knowledge generated across IAI science projects has been brought to the UNFCCC agenda and presented in the Americas summit process. IAI is at the forefront of the process of developing mechanisms for integrating science towards informed decision making. Argentina has begun to provide government and governance support for science communication towards decision makers. This has developed synergistically with the existing IAI Communications Office in Buenos Aires. The improvement of public awareness and provision of scientific information to governments could best be provided by Argentina, expanding the current publications office into the *IAI Science-Policy Liaison Office* and linking it to political structures of IAI member countries. The Directorate's Science-Policy Liaison office will therefore develop and manage mechanisms of interaction between the IAI and decision makers, link IAI science to public policy and strengthen the relevance of IAI science projects to the decision making process. It will develop strategies for public outreach and events, and provide IAI's knowledge output to international and regional institutions to promote the dialogue on global change and its regional impacts.