# Chapter 6

# The Inter-American Institute for Global Change Research

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This case study discusses a regional organisation that deals with the impact of global change in a specific part of the world. The Inter-American Institute for Global Change Research (IAI) is a regional intergovernmental organisation that is successfully funding and supporting networks of collaborative research while building capacity in the lessdeveloped countries of Latin America. With rather limited financial resources, IAI successfully catalyses collaboration in science, technology and innovation in various fields related to global change. An important challenge is the lack of strong buy-in from some members. This affects funding as well as the organisation's science-policy interaction.

#### 6.1. Introduction

The Inter-American Institute for Global Change Research (IAI, the Institute) was established by an international agreement, concluded among 16 countries in the Americas, on 13 May 1992 in Montevideo, Uruguay. It is an intergovernmental organisation established for the purpose of co-ordinating and promoting scientific research and providing accurate and timely information related to global change to policy makers in the Americas. It currently has 19 members, representing the region's industrialised countries and most of its developing countries.<sup>1</sup>

The organisation was created in the run-up to the United Nations Conference on Environment and Development (UNCED) in order to demonstrate the members' practical commitment to the environment and sustainable development. Its establishment was timely, as world leaders at the UNCED called for the formation of an international entity to take a regional approach to addressing global environmental change. They acknowledged that multinational collaborative research needed to be undertaken and new scientific knowledge produced in order to increase scientific understanding of global change and the environment, a task that no one nation could undertake independently. In addition to the IAI, two other regional institutes for global change research – the European Network for Research on Global Change and the Asia-Pacific Network for Global Change Research – were formed to facilitate regional integration of global change research programmes. The objectives of the IAI are:

- To fund regional scientific programmes and projects for which the research cannot be pursued by an individual country or institution.
- To promote regional and international co-operation and co-ordination on global change programmes.

The Institute's primary mission is to develop the capacity to understand the impact of present and future global change on regional and continental environments in the Americas and to promote collaborative research and informed action at all levels. An important aspect of its work is to develop scientific networks that work collaboratively on global change issues of regional importance. As such, the IAI acts much like a funding institution in assessing applications and awarding grants to research networks composed of multiple institutions in the Americas.

Each country participating in the IAI is supposed to benefit from the enhancement of regional relationships, from the establishment of new institutional arrangements, from the open exchange of scientific data and information generated by the IAI's research programmes, and from its training and education programmes.

The United States National Science Foundation hosted the IAI Secretariat for almost two years. In March 1996, the IAI became fully operational, with a directorate located at the Brazilian National Space Research Institute (*Instituto Nacional de Pesquisas Espaciais*) in São José dos Campos, Brazil.

#### 6.2. Main characteristics of the overall governance model

The institutional set-up of the IAI has four permanent organs (Figure 6.1). The Conference of the Parties (the Conference) is the principal policy-making organ of the IAI.<sup>2</sup> It includes representatives from the 19 member states. It meets annually and has the following main functions:

- To consider and adopt measures to establish, review and update the policies and procedures of the Institute, as well as to evaluate its work and the accomplishment of its objectives.
- To review periodically and approve, on the basis of recommendations of the Scientific Advisory Committee, the scientific agenda of the Institute and to consider and approve its long-range plans and annual programme and budget.
- To consider and approve the financial policies, the annual budget and the financial records of the Institute submitted by the director.
- To elect the members of the Executive Council and of the Scientific Advisory Committee, and the director.
- To establish *ad hoc* committees as necessary.
- To approve amendments to the IAI Agreement and to perform other functions as necessary to achieve the objectives of the Institute.

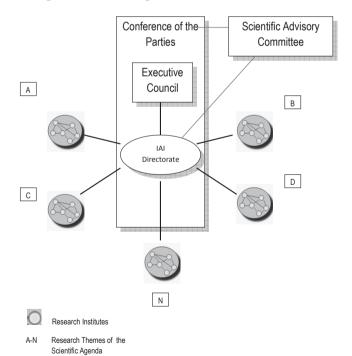


Figure 6.1. Overall governance structure of the IAI

Source: Adapted from figure on the IAI website:

www.iai.int/index.php?option=com content&view=article&id=14&Itemid=61.

The Executive Council is the executive organ of the IAI. It is composed of nine members, each of whom is elected by the Conference for a two-year term and serves in his or her individual capacity. Its primary functions are to develop policy recommendations for approval by the Conference and ensure implementation of those policies by the IAI Directorate. The Financial and Administrative *ad hoc* Committee assists the Executive Council in matters relating to planning, preparation and implementation of IAI financial, administrative and project management issues.

The Scientific Advisory Committee is the principal scientific advisory body and has ten members, elected by the Conference for three-year terms. Six members are nominated by the Parties; three nominations are received from the Scientific Advisory Committee; and one member is nominated by the Institute's associates. The Committee makes recommendations to the Conference regarding the science agenda, long-term plans, the Institute's annual programme, and science programmes to be funded. In addition, it assesses the scientific outcome of the research funded by the Institute. Interviewees indicated that this last function is not yet well implemented. The Scientific Advisory Committee has no standing rules on voting procedures, procedures for debate, rules for agenda preparation and amendment, etc. It is supposed to set its own rules on these matters.

The Directorate is the Institute's primary administrative organ and is presently composed of: a director and assistant directors for the science programmes, for finance and administration, and for capacity building; an information technology manager; a collaborative research network project manager; and support staff. It is responsible for day-to-day operations and the implementation of policies and scientific programmes as determined by the Conference and the Executive Council. It operates under the leadership of the Executive Director and currently has a staff of 13.

The institutional link to member governments is ensured through their representatives in the Conference and their nomination of official country representatives. Beyond this, the IAI seeks to ensure that scientific research is brought to the attention of policy makers at the local and national level through its networks, its staff and to a lesser extent through the government's official representatives who are responsible for relations with the IAI. Country focal points are also crucial for the organisation's effective translation of science into policy action.

The IAI's relationship with member states varies. At governmental level it is strong with some members, somewhat weaker with others, and almost non-existent with a very few. This has resulted in an unbalanced and far from optimal participation in Conference meetings and hence in constraints on effective inter-governmental governance of the IAI. In the past, this has even put the Conference at risk of not reaching the quorum needed to act legally and potentially being unable to approve a budget or country contributions.

Beyond the Americas, one of the mandates of the IAI is to link its researchers to the world scientific community. The IAI co-operates in various ways with other institutions. For example, it has an active observer role with the United Nations Framework Convention on Climate Change. The Institute has had observer status since 2006 and has since provided inputs, mainly to the Subsidiary Body for Scientific and Technological Advice. According to the Director, the IAI also has more or less regular co-operation with other global change programmes. Short-term programmatic, institutional and financial collaborations at regional as well as international level evolve primarily through joint training and capacity-building activities.

#### Agenda and priority setting

The Institute's long-term mission and agenda are defined in the Agreement establishing the IAI. The Agreement lists seven rather highly aggregated topics, from the "study of tropical ecosystems and biogeochemical cycles" to "high latitude processes" (IAI Agreement, Article III). The detailed policy and science agenda is approved by the Conference. Furthermore, the Conference considers and approves – on the recommendation of the Executive Council and the Scientific Advisory Committee – the IAI's long-range plans and annual programme. Therefore, the IAI applies a "top-down approach" to agenda and priority setting, which is partially balanced by the efforts of the Directorate to integrate micro-level views. Generally, decisions of the Conference are made by a majority vote of the accredited Parties. Priorities are reviewed by the Conference with the support of the Scientific Advisory Committee and input from the Directorate. For instance, the previous Scientific Advisory Committee chair pushed forward a social science agenda, a topic that was not previously a priority area. As a result the IAI now has a human dimensions programme.

Since its establishment the IAI has undergone a few changes to, but no significant reforms of, its governance structure. The changes concerned the leadership of the IAI and occurred primarily with the appointment in 2005 of a new director, who introduced new management practices. These included new financial reporting requirements and a review of standard agreements with partner institutions. The changes basically concerned the IAI flagship programme, the Collaborative Research Network (CRN) Programme, created with the idea of developing networks of scientists and scientific institutions working together in an integrated fashion on global change issues of regional importance. The CRN projects promote co-operation by interdisciplinary teams within the region, with at least four countries involved in each project. These networks are encouraged to expand through institutional incentives.

The CRN Programme has gone through two major research phases: CRN I (1996-2006) and CRN II (2006-11). Changes introduced in the transition from CRN I to CRN II included moving from support for individual projects to cross-programme networking with more international appeal and to regionally more relevant and generally more coherent programmes. Improvements important to the IAI's work included synthesising the output of all projects, integrating human dimensions and economic analysis with the natural sciences, and emphasising a stronger science-policy interface. This integrated programming approach is important for the Institution's policy relevance in the area of global change and hence for its governance.

CRN priority setting (and funding) covers a cycle of five years, which ensures a longer-term perspective. At the same time, flexibility is an important element of the science agenda. The Agreement establishing the IAI states that the agenda should be dynamic and evolve to incorporate new scientific priorities, address changes in the needs of the region's countries, and address changes in the ability of the scientific community to carry out research that contributes to the solution of specific problems. This flexibility is important for ensuring the policy relevance of the organisation's science programmes.

Priorities are reviewed by the Conference with the support of the Scientific Advisory Committee and input from the Directorate. The Scientific Advisory Committee plays a crucial role in setting the research agenda and ensures the integration of the scientific view in the decision-making process of the IAI. According to the Director, the Scientific Advisory Committee is expected to play an important role in defining the next call for proposals for CRN III, provided that funds for the organisation of Scientific Advisory

Committee meetings are available. However, in 2010 the Committee had difficulty executing its functions effectively owing to a lack of financial resources. The lessons learned from CRN II will also influence how the programme will evolve. The Director monitors the implementation of the defined priorities with respect to their policy implications.

The provisional agenda of each regular Conference meeting is prepared by the Director in consultation with the Chair of the Executive Council, taking into account the decisions of the previous meeting, the recommendations of the Executive Council, and the proposals of the Parties. The Director also takes into account feedback from the principal investigators of the different CRN networks.

The operations of the Institute have improved in recent years, owing in part to a dedicated and stable Directorate. The IAI also benefits from its access to a range of leaders in the scientific and political arenas who participate in the Conference, the Executive Council and the Scientific Advisory Committee, and who could serve as ambassadors for the Institute. These participants need to be fully engaged in IAI operations to shape the organisation's priorities and scientific agenda. To realise its full potential, the IAI must clearly define the roles and responsibilities of each IAI participant (AAAS, 2007, p. 4).

## Funding and spending arrangements

Pursuant to the IAI Agreement provisions, the 19 members make annual pledges to provide "voluntary contributions" to support the IAI Directorate's core operational expenses, major research and capacity building programmes, and specific projects. According to the Agreement the pledges are in increments of USD 5 000 but since 2007 the increments have been of USD 1 000. Specific project funding also comes from other bodies (*e.g.* the World Meteorological Organization's Global Environment Facility, the MacArthur Foundation). The core funding covers operational expenses, including salaries and basic support for the Directorate, Scientific Advisory Committee and Executive Council. The IAI Agreement calls upon the Parties to "recognize that regular contributions to the operational budget are essential to the success of the Institute". The adoption of the annual budget is taken by consensus of the Parties.

The programme funds are dedicated exclusively to research or capacity building. The IAI Agreement (Article XIII, 2) specifies that its major research programmes and specific projects can also be supported by donations from associates of the Institute, by states outside the region, by regional or international intergovernmental organisations, and by industry and other non-governmental and private organisations.

The IAI's science programme is largely funded by grants from the US National Science Foundation (NSF), which has provided the major part of the funding by far, followed by Canada and Argentina. According to the IAI, other member states often provide in-kind contributions for scientific research. In practice, NSF funds represent up to 60% of the core budget and cover all programme funding with the exception of the grants of the MacArthur Foundation and Canada's International Development Research Centre. Effectively, the United States funds 79% of the IAI's activities.

The main programmes are:

- 1. The Collaborative Research Network Programme, which receives the major part of the funding.<sup>5</sup> The IAI is able to complement the programme when needs are identified. For example, about USD 800 000 from CRN II was not committed to projects but is being used to promote a scientific synthesis of the programme's projects and to develop stakeholder interaction processes.<sup>6</sup>
- 2. Small grants and seed programmes ("Initial Science" programmes) were maintained in the past "to support the initiation of research, capacity building, and planning activities that would facilitate the development of larger science programmes and research networks". This instrument is now being used for the human dimensions projects.
- 3. The Small Grants Programme: Human Dimensions (SGP-HD) was created in 2007 to promote human dimensions research and builds on the interdisciplinary networks created in CRN II. It is intended to merge this line of activity with the CRN in future calls to provide better integration of the human and natural sciences.

Flexibility in funding and spending is viewed as essential for successful project implementation and management. At the same time, stable financial contributions and funds are important for the organisation's functioning.

The Directorate, jointly with the Executive Council's Financial and Administrative Committee, 8 develops the budget plan and draft budget for the following year and makes it available to members of the Executive Council who are invited to comment via e-mail within 15 days on the plan and budget.

The financial policy and budget documents are prepared and submitted to the Conference by the Director, through the Executive Council, which makes recommendations. The Conference considers the recommendations and approves the Institute's financial policies, the annual budget and the financial records. The Director is also responsible for submitting annually adjusted allocations to the Directorate, for implementing the financial policies and the budget and for maintaining detailed records of all revenue and expenditure of the Institute.

Through the Financial and Administrative Committee, the Executive Council appoints an external auditor and reviews the annual external audit of the financial records submitted annually by the director to the Conference. The Executive Council annually discusses the auditor's report on the financial statement provided by the IAI Directorate, which is then presented to the Conference. Beneficiaries of the science programme are required to submit annual financial and scientific reports. Their frequency and format (and the cases in which they need to be certified by an auditor) are defined in the grant agreement. Based on the project reports, and possibly also with the support of presentations made by the principal investigator, the IAI conducts annual reviews of progress. The reviews are a useful tool for deciding whether to continue financial support for the project. In the event of a negative outcome of a review, the IAI Directorate may decide to suspend the project pending corrective action, or to terminate the grant agreement. Ideally the IAI should involve independent experts (peer review) in this process.

#### Knowledge sharing and intellectual property

The IAI Agreement (Article II) establishes the full and open exchange of scientific information and data with a view to informed decision making: "The Institute shall pursue the principles of scientific excellence, international cooperation, and the full and open exchange of scientific information, relevant to global change." The Institute is therefore seeking to improve information management and to develop a culture of data sharing among IAI members (*IAI Biennial Report 2007-2009*, p. 27). Furthermore, the IAI has adopted an approved Data Policy Statement to ensure free and open access to data generated by IAI-funded projects.

The IAI requires a continuing commitment from the CRN grantee regarding the establishment, maintenance, validation, description, accessibility and distribution of high-quality, long-term data sets that may result from research supported by a grant (Point 2.6 of the *CRN Policy Guidelines*, July 1999). Principal investigators can request initial periods of exclusive data use only under special circumstances. In such cases, the IAI negotiates the duration of the exclusive use period. Furthermore, where applicable, grantees need to submit a fully documented data set to the IAI for distribution on the IAI Data and Information System (IAI-DIS); alternatively, the grantee supplies electronic pointers for the IAI-DIS.

In principle, researchers must publish their research results in international journals and books. This helps to ensure the scientific excellence and standing of IAI's research. If researchers publish in a copyright-protected organ, the IAI-DIS system only includes a reference to the book or the article but does not provide direct access to the content. The IAI-DIS could also be developed as an important tool for inter-institutional communication throughout the Americas.

In 2007, a review conducted by the American Association for the Advancement of Science (AAAS) found that the data and information system was not realising its goal – to serve science and society and inform action – and recommended that strategies should be developed for sharing research outcomes and data with regional and international scientists more effectively (AAAS, 2007, p. 4). It recommended that IAI develop and implement a plan to upgrade the IAI data and information system (USGCRP, 2009). However, such a plan was still not in place by the end of 2010.

The Directorate has developed an Internet database that references information produced by the IAI's scientific projects. Technically, these references are metadata, that is, information about data such as publications, final and partial reports from the scientific programmes, posters, presentations, workshops, and other programmes and projects. The IAI plans to continue to update the system to improve its features, make it more user-friendly, and, in particular, more interoperable with similar systems in other institutions and organisations. The compatibility of data systems of different organisations and institutions has proved to be crucial for the effective and efficient use of the open access system.

The IAI also uses a variety of communication and outreach mechanisms to increase its visibility, make information about its activities and programmes available to the scientific and policy-making communities and the general public, and make known the results of its scientific research and capacity-building efforts. These mechanisms include the newsletter, the IAI website, the IAI Listserv, the IAI biennial report, policy briefs and communiqués, scientific publications, and other material.

#### From research to implementation

The AAAS report found that policy makers across the Americas have had difficulty using the results of the Institute's science to inform their policy action (AAAS, 2007, p. 5). In 1999, the IAI launched its interdisciplinary training institutes to promote the human dimensions aspect of environmental change and address the need for a sciencepolicy interface to ensure that relevant scientific findings are accessible to and usable by policy makers. The training focuses on themes of priority to the governments of the Americas and on science-policy linkages and facilitates attendees' development as leaders in science in their respective countries. The success of these programmes in fostering communication between natural and social scientists and promoting multinational and multidisciplinary collaboration led the IAI to plan further institutes.

The aim of the IAI's future training institutes is expected to focus on policy relevance and effective ways to apply scientific data to policy development and on capacity building. To this end the Institute seeks to establish new and strengthen existing institutional and financial partnerships with other national and international organisations. Co-planning and joint implementation can strengthen the linkages among the participating agencies and institutions and maximise the use of financial and human resources.

Some research funded by the IAI already influences planning and policy. IAI projects that deal with balancing CO<sub>2</sub> in South America are one example of multinational collaboration. Two collaborative research networks, funded by the NSF through the IAI, illustrate how important the understanding of local as well as regional processes is to the mitigation of climate change. One team, led by the Servicio de Hidrografia Naval of Argentina, collaborates with scientists in Argentina, Brazil, Chile, the United States and Uruguay and is identifying the physical and biological mechanisms that control the exchanges of CO<sub>2</sub> between the ocean and the atmosphere. This research provides important input to discussions of climate change at regional level (IAI, 2010).

#### Capacity building

The Institute's greatest contribution has come from successfully building scientific capacity throughout the Americas. This effort has been closely coupled with its efforts to support interdisciplinary, collaborative research. The capacity-building efforts of the organisation have proved successful in terms not only of workshops and training institutes, but also of institutional capacities to handle international science, networks and complex projects with complex funding mechanisms that require special agreements among institutions in different countries.

The IAI supports training and education by granting fellowships and research opportunities to students and professionals from many countries of the Americas. In the past ten years, it has supported thousands of professionals who are important for their country's development through technical workshops and seminars. Students have received support for their studies at the undergraduate, graduate and postgraduate levels. Recipients of academic grants not only receive resources to conduct their studies, but also benefit from exposure to scientific environments and from opportunities to link their degree studies with current research (through field trips, laboratory experiments, related studies in other countries, and exchange of scientific data and knowledge with other investigators in the IAI network). The IAI also supports other training and education efforts and initiatives, such as scientific and technical workshops, training institutes, and seminars.

To the IAI, capacity building means providing knowledge and know-how, developing opportunities for collaboration and means of communication, and strengthening local and regional capacities to deal with global change and its impacts. By bringing together participants from different scientific, professional and cultural backgrounds, IAI training activities expand the boundaries of "traditional" education to integrate a range of social actors, policy and decision makers, thereby promoting dialogue and enriching individual perspectives. The aim is to provide professionals with the capacity to understand the overall impact of past, present and future global changes on regional and continental environments, to promote collaboration in multilateral networks and to foster informed action.

To build capacity the IAI's tasks include: to encourage networking between natural and social scientists; to engage small countries and under-represented communities in its activities; to promote outreach to end users, decision makers and planners; and to make complex networks of research and outreach successful and self-sustaining. To address these challenges, the IAI has developed new means of integrating different institutional, programmatic, financial, educational and scientific objectives (IAI, 2007). The IAI has only 13 staff, two of whom are responsible for managing capacity building.

#### 6.3. Summary of strengths, weaknesses, opportunities and threats

The Institute's greatest regional contribution has been its success in building scientific capacity throughout the Americas, in terms both of human resources and institutions, via its research networks, training institutes, workshops, small grants and seed project support. The IAI has trained more than 1 000 scientists and researchers from 46 countries, including all 19 IAI members and 27 non-member countries in the Americas. The mixing of participants from various disciplines and with different backgrounds has proved effective. The AAAS review considered capacity building the IAI's greatest regional contribution, a view confirmed in the interviews, and considered it important to expand the programme in order to involve more people. IAI-supported science has also enhanced the region's contribution to global change research.

A clear strength of the IAI is its well-developed multidisciplinary networks that enable scientists to collaborate at a regional level, to exchange knowledge and experiences and to learn from each other. However, its relations with some members need to be strengthened, enhanced and developed. This may also lead to a more equal distribution of CRN activities among member countries. Participants from all member states should be involved to provide for an equitable regional distribution. Furthermore, the IAI needs the involvement of its members not only in their own countries but also in neighbours that are not members. This may lead to the inclusion of more countries in the IAI and an increase in its reach in the Americas.

On the downside, the policy community remains relatively unaware of the IAI and of the importance of its results. It is therefore important to translate the IAI's progress in science and excellence in scientific capacity building into policy-relevant discourse and action. The IAI has started addressing this gap with new activities such as joint policy-science training seminars and policy briefs specifically aimed at decision makers. Its efforts to link the natural and social sciences to dialogue with decision makers are essential to this endeavour and need to be further developed. The challenge is to support decision-making and inform policy-making, a challenge not only for the IAI, but for countries and institutions around the globe. Although this is difficult, it is essential because the science that the IAI sponsors as an intergovernmental institution does not reach a crucial target of its efforts, government policy makers. By improving its communication with regional scientists and decision makers at multiple levels, and by

enhancing work on the human dimensions of global change research, the IAI will become more relevant to the development and policy needs of the Americas (Swap, 2008, p. 402).

The IAI has the potential to facilitate informed policy action. This means making science available to decision makers and synthesising scientific results in a form that can be understood and used by decision makers, by civil society and by social actors. It needs to strengthen the communication of its results to decision makers and to the public as a whole so as to be in a position to influence discussions usefully and contribute significantly to the region's policy making in the area of global change research. CRN activities and the CRN II synthesis workshop in August 2010 have shown that to use science for informed action requires processing information so that it can be used and anchored in time and space. The biggest challenge for organisations such as the IAI is to be able to present complex findings in an understandable and applicable way.

The IAI promotes full and open exchange of information and data with a view to informed decision making. Researchers should therefore be strongly motivated to insert all their data in the data system, which should also be subject to qualitative monitoring. The IAI's information system requires further development. Data integration, discovery and interconnectivity need to be improved, protocols for data sharing among projects need to be defined, metadata display and visualisation tools need to be developed, and an interdisciplinary thesaurus should be developed. The data system could be made more user-friendly and the shared data, metadata and products could be more accessible for research and education

Among the specific challenges in regard to the IAI's partnerships are: lack of attendance of country member representatives at the annual Conference meetings, which negatively affects the effectiveness of the IAI's governing body; the need to involve the Scientific Advisory Committee more in the evaluation and review of the scientific outcomes of the projects; a lack of financial and human resources; and the lack of a long-range plan for developing and strengthening partnerships. The Institute could consider extending its partnerships and collaborating more with complementary organisations for joint study of issues such as risk, vulnerability and adaptation. Partnering with other global change research institutions is essential for IAI's strategic partnerships. While the IAI has developed some relationships, there is potential for expanding them. Partnering with complementary inter-American groups and the creation of strategic thematic partnerships, with the aim of attracting additional public and private funders, may lead to additional financing.

The IAI depends on the sustained efforts of member states to meet their commitments, and the flow of adequate resources is critical to the future success of the IAI. A strength of its funding scheme is that the IAI generally deals with just one contact per country in order to receive funding. This contact is also involved in IAI activities and is, therefore, knowledgeable about the IAI. This facilitates funding and requests for support for new programmes. However, funding is a serious challenge for various reasons:

- The disparities between member states' commitments and actual voluntary contributions
- The fact that not all members have paid their agreed-upon voluntary contributions.
- Limited core resources have made it difficult for the IAI to accomplish some basic functions, such as financing the meetings of the Scientific Advisory Committee.
- The narrow base of consistent (and substantial) resources to support research and capacity building.

The Institute was originally conceived as an institution that would channel funding for science from all of its members. So far this has not happened as planned. With the exception of the United States, all members receive more funding than they provide. Probably the most significant weakness of the IAI is that members have not taken advantage of the Institute as a lean and convenient way to make funds accessible for science in their countries. In particular the IAI Conference needs to address disparities between commitments and actual contributions of member states. As member states are made aware of the IAI's successes in research and capacity building, and as they are also properly recognised for their in-kind support, they may be more inclined to meet their current commitments and perhaps provide additional support (AAAS, 2007, p. 3). It is also important for the IAI to attract more members and to increase its independence through external financing.

#### 6.4. Conclusions

The science of global environmental change has come of age, and there is increased public awareness of its importance. The IAI's capacity-building work has established successful networks of social and natural scientists and institutional and local decision makers which have led to greater willingness to collaborate and share results, techniques and information by social and life scientists and administrators. All this contributes to the IAI's mission, in which the critical point continues to be translating scientific knowledge into informed action. Although the awareness of the IAI among the international policy community is still relatively low, the IAI has developed innovative approaches and activities such as joint policy-science training seminars and policy briefs aimed specifically at decision-makers to successfully close this gap. The efforts to couple natural and social science are critical to this endeavour.

As an intergovernmental organisation the IAI aims to allow scientists and decision makers of countries throughout the Americas to address jointly the critical cross-border issues associated with global change. It is successfully funding and supporting networks of high-quality research under its science programme and building capacity in the region. Indeed, it has relatively high impact in terms of science collaboration yet with limited financial resources for administrative support. However, as the problems associated with the funding and budget illustrate, countries still need to be convinced that the work that the IAI is doing is worthwhile and that it is valuable to all participating countries.

An aspect of the value added that the IAI brings through its science funding programmes is its experience in managing international networks, contracts, administrative problems, etc. It has a comparative advantage in this respect compared to funding agencies that operate in a single country. It has opened up new avenues for scientists by providing them with opportunities to engage in regional exchanges with colleagues from different countries in the Americas. Before the establishment of the IAI, there was no real collaboration on global environmental change between research institutions and universities of different Latin-American countries, as interviewees repeatedly observed. The networks motivate scientists who otherwise work in isolation to interact with one another, South–South and North–South. Their scientific exchanges contribute significantly to regional capacity to deal with global change phenomena. Other international global change organisations and programmes are starting to show increasing interest in linking to and networking with the IAI.

#### Notes

- 1. Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Panama, Paraguay, Peru, the United States, Uruguay, and Venezuela.
- 2 Article V.1. of the Agreement establishing the IAI, www.iai.int/files/communications/publications/institutional/agree en.pdf, accessed 20 October 2011
- The IAI Agreement, paragraph XI.1, states that "the Conference of the Parties may 3. invite States outside the region, regional or international intergovernmental organizations, and industries and other nongovernmental and private organizations interested in supporting the Scientific Agenda and programmatic activities of the Institute, to become Associates of the Institute".
- www.iai.int/files/communications/publications/institutional/agree en.pdf, 4. accessed 20 October 2011.
- 5. CRN I funded 14 projects for a total of USD 11.5 million. CRN II funds 13 projects for a total of USD 9.6 million. Source: IAI Biannual reports 2004-2006 and 2007-2009, available at www.iai.int/files/communications/publications/institutional/Biennial Report 2004 2006 EN.pdf www.iai.int/files/communications/publications/institutional/Biennial Report 2007 2009 EN.pdf.
- The IAI was granted additional funds from Canada's IDRC and from the John D. and 6. Catherine T. MacArthur Foundation.
- 7. Six projects are being funded under this programme for a total of about USD 800 000 (and two more projects on human dimensions are being supported with additional funds from CRN II). As of October 2010, five of these projects had been extended with NSF funds for another year for a total of about USD 500 000. SGP-HD funding was provided by NSF.
- Its members are elected for a renewable two-year term by the Executive Council. 8.
- 9 See the conclusions of the IAI training event in Panama in February 2008, "Training Institute on Information Management: free and open access to, and use of data and information" reported in the Biennial Report 2007-2009, www.iai.int/files/communications/publications/institutional/Biennial Report 2007 2009 EN.pdf.

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