

INTER-AMERICAN INSTITUTE FOR GLOBAL CHANGE RESEARCH
DIRECTORATE

May, 1999 **Director's Report for the 9th EC and 6th CoP meetings**
Ottawa – Canada

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C/o INPE

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Report of the Director to the 9th EC and 6th CoP Meetings

In this report, an analysis of IAI's on-going activities and related Directorate's actions is made for the period of July 98 - May 99, with particular emphasis on actions accomplished during the period of December 98 - May 99, following the 8th EC meeting held in Montevideo (November 23-24, 1998).

More information and analysis on some items only listed or briefly reported here are provided in other documents to be distributed to the EC/CoP representatives of the upcoming meetings and/or to be part of the presentations of other IAI Directorate staff or EC representatives. This is particularly the case of the following issues: Scientific Progress Emerging from IAI Funded Activities, IAI Core Budget for 1999/2000, IAI Policy and Conflict of Interest and Standards of Ethic Conduct, Directorate Reorganization, and the Working Groups' and Task Forces' activities.

I. INSTITUTIONAL ASPECTS

A. Status of IAI Memberships

No new nation has deposited the ratification instrument at the Organization of American States (OAS) during the period covered in this report (table 1). However, information received at the IAI Directorate from the Bolivian Association for Environmental Teledetection on 03/30/99 indicates that the IAI Agreement is now at the Ministry of Foreign Affairs and Congress levels to be ratified. Bolivia is the only country that has signed the IAI agreement (May 1992) and has not ratified it thereafter.

As mentioned in previous reports, communications at institutional level with some countries are weak and/or discontinuous, thus reducing their possibilities to accomplish full involvement into IAI activities. This is particularly the case of Guatemala, the last country to join IAI. Efforts have been presently made at the Directorate through the Foreign Affairs Ministry and the Guatemalan Embassy in Brasilia to have communications with appropriate institutions, which can ensure a future, increased participation of this country in IAI activities.

Table 1: Countries that have ratified and/or adhered to IAI Agreement up to April 1999.

SIGNATORY COUNTRIES	DATE (m/d/y)	RA/AC/AD (m/d/y)	DEPOSIT (m/d/y)	INSTRUMENT
ARGENTINA	05/13/92	11/03/93	02/24/94	RA
BOLIVIA	05/13/92	/ /	/ /	
BRAZIL	05/13/92	05/07/93	06/23/93	RA
CANADA	05/13/92	/ /	06/15/93	AC
CHILE	05/13/92	09/28/94	10/14/94	RA
COLOMBIA	05/13/92	08/13/97	09/24/97	RA
COSTA RICA	05/13/92	05/13/94	08/26/94	RA
CUBA	05/13/92	/ /	01/05/95	RA
ECUADOR	05/13/92	10/16/97	11/24/97	RA
GUATEMALA	/ /	10/13/97	01/05/98	AD
JAMAICA	/ /	07/31/97	09/10/97	AC
MEXICO	05/13/92	06/30/92	04/27/93	RA
PANAMA	05/13/92	12/23/93	01//11/94	RA
PARGUAY	05/13/92	08/27/96	10/08/96	RA
PERU	05/13/92	12/27/94	02/17/95	RA
D O M I N I C A N REPUBLIC	05/13/92	07/29/97	09/04/97	RA
UNITED STATES	05/13/92	/ /	01/12/93	AC

URUGUAY	05/13/92	08/10/93	08/10/93	RA
VENEZUELA	/ /	03/06/96	06/14/96	AD

(RA = Ratification / AC = Acceptance / AD = Adhesion)
Source: OAS – April 1999

B. New Country Representative

Through an official communication to the Directorate (March 09, 1999), IAI was notified that Patricia Ramirez, who had been representing Costa Rica in the EC/CoP since the creation of our Institute, will no longer be representing her country at IAI. Dr. Eladio Zarate, the new Director of the National Meteorological Institute, is now the new representative of Costa Rica.

C. Missions in IAI Countries

The EC Chair and the IAI Director have visited IAI member countries with the main purpose of developing and/or increasing institutional arrangements between IAI, the country representatives' entity, and other national scientific and/or technological agencies.

Argentina: The EC Chair and the Director met with the President of *the Agency for the Promotion of Science and Technology* in February 99 to adjust implementation steps on the US\$ 800,000 support given by Argentina to the IAI CRN program as well as to define future joint activities in the region for specific themes of IAI Science Agenda.

Paraguay: A planned visit of the EC Chair to Paraguay in order to seek for increased involvement of scientists and institutions of that country in IAI activities was scheduled for the end of March. However, and because of the political troublesome which happened during that period in Asunción, the visit was rescheduled for the second semester of the year.

Mexico: The Director visited CONACYT (Mexico) on April 16 and met with Dr. Sylvia Ortega (Director of International Cooperation) to discuss mechanisms through which CONACYT (Mexico) could partially support projects involving the participation of Mexican scientists. Dr. Carlos Gay is now following up actions on this matter.

Peru: Meetings between the Director and authorities of CONCYTEC (*Consejo Nacional de Ciencia y Tecnologia*) and CONAMA (*Consejo Nacional del Medio Ambiente*) were held on April 20, while the Director was in Lima participating in the 11th SAC meeting. A brief presentation of what IAI is doing in the region and particularly in Peru was made. A MOU with CONCYTEC will probably be signed in the coming months.

Through arrangements made by Ronald Woodman (Peruvian SAC member) the Director had informal meetings with 2 senators (Carlos H. Leon and Luis Campos Baca) with whom the issue of voluntary country contribution mechanism and the importance of it to sustain IAI Administrative actions was highlighted.

Costa Rica: The Director met with the new IAI representative (Eladio Zárate) in San José on April 22. IAI activities in Costa Rica and achievements already accomplished by Costa Rican scientists and institutions under IAI projects were analyzed. Possibilities of higher institutional

involvement of Costa Rican universities in addition to their present scientific participation within IAI were discussed and strongly encouraged.

II. PROGRAMMATIC DEVELOPMENT

A. Initial Science Program (ISP) Status

With almost all the 11 projects under the ISP I being completed or to be finished this year and with the majority of the 12 projects under the ISP II on their mid-term development, the Scientific Officer is preparing a report to be presented at the meeting on the Scientific Progress emerging from these funded IAI activities. It will include: a) a summary of the available information in terms of publications, communications, progress reports, etc; b) a synthesis trying to visualize how the results emerging from research are instrumental in advancing IAI Science Agenda and goals.

Table 2 summarizes the status of ISP's projects in terms of start and end dates and submission of reports to IAI.

Table 2: *Status of ISP's projects as related to start and end date and reports (progress or final) to IAI*

ISP I

PROJECT TITLE	PI	STARTING DATE	END DATE	REPORT TO IAI
Request for Partial Support for a Workshop on a Comparative Analysis of Nitrogen Cycling in the Americas.	Howarth, Robert W.	01/Jun/1996	31/May/1998	Yes
The last four centuries of the California Current Calibration and Interpretation from the laminated sediments, tree-rings and historical records of southern Alta California and Baja California.	Herguera, Juan C.	15/Oct/1996	14/Oct/1998	Yes
Rainfall Studies in the Amazon Basin and Central South America.	Diaz, Henry F.	01/Sep/1996	31/Aug/1999	Yes
Hydrological Budgets for Amazonia.	Krishnamurti, T. N.	01/Jul/1996	30/Jun/1998	Yes
Vegetation History from Fossil Rodent Middens in Mid-Latitude American Deserts.	Betancourt, Julio L.	01/Jun/1996	31/May/1998	Yes

A South American Modeling Center for Global Change related Oceanic, Coastal and Estuarine Processes.	Campos, Edmo	01/Jun/1996	31/May/1998	Yes
Initial Climate Research within the trade Convergence Climate Complex.	Enfield, David B.	01/Sep/1996	31/Aug/1998	Yes
Ice-core Study on the Environment and the Climate of the Antarctic Peninsula and the Southern part of South America.	Aristarain, Alberto	01/Jul/1996	30/Jun/1999	Yes
Comparative Studies in North and South America along an Aridity Gradient: A Methodological Approach to Upscaling the Functional Role of Biodiversity within Plant Communities.	Castellanos, A. E.	01/Jun/1996	31/May/1999	Yes
Biogeochemical Determinants of Land Cover Changes and Land Use in Savana-Cultivation-Grazing Systems.	Tiessen, Holm	01/Oct/1996	30/Sep/1998	Yes
Exchange through the Yucatan Strait and its importance for Climate Change Studies.	Badan-Dagon, A.	01/Feb/1997	31/Jan/1999	---

ISP II

PROJECT TITLE	PI	STARTING DATE	END DATE	REPORT TO IAI
The Impact of Climate Change on Nearshore Marine Biodiversity in the Gulf of California	Foster, Michael S.	June/1997	June/1999	Yes
Support for Short Course: Instrumentation and Measurement Methodologies in Atmospheric Chemistry Research	Bierly, Eugene W.	08/Apr/1997	08/Apr/1998	Yes
Desertification and Ecosystem Processes: Overgrazing, Grass Transpiration, and Soil-Water Balance	Reynolds, James F.	04/Feb/1997	04/Feb/2000	Yes
Global Change Effects on Biodiversity and Functioning: Manipulation of a Keystone Process	Sala, Osvaldo E.	18/Mar/1997	18/Mar/1999	Yes
Climate Variability and Agriculture in Argentina and Uruguay: Assessment of ENSO Effects and Perspectives for Use of Climate Forecasts	Bidegain, Mario	12/Mar/1997	12/Mar/1999	Yes

Links Between Coastal Productivity, Benthic Communities, and Biogeographic Boundaries in Chile and California	Navarrete, Sergio A.	18/Mar/1997	18/Sep/1998	Yes
The effect of UV-B Radiation on Salt-Marsh Vegetation along a Latitudinal Gradient	Koch, Evamaria	18/Mar/1997	18/Mar/1999	Yes
Coastal Upwelling along the Western Americas: Past, Present and Future	VanGeen, A.	27/Mar/1997	27/Mar/1999	---
Precipitation in Southeastern Southamerica: Influence of SEA Surface Temperatures, Predictability and Variability	Pisciottano, Gabriel	04/Nov/1997	04/Jul/1999	Yes
Diagnosing, Monitoring and Predicting Cold Waves ("Friagens") in the Coffee Growing Areas of Southeastern Brazil	Marengo, José	27/Jun/1997	27/Jun/2000	Yes
Biophysical in the Pelagic Ecosystem of the Southern California Current	Baumgartner, T.	17/Nov/1997	17/Nov/2000	Yes
A South American Network for the Measurement of Ultraviolet Radiation	Vernet, Maria	22/Jul/1997	22/Jul/1999	---

ISP III

PROJECT TITLE	PI	STARTING DATE	END DATE	REPORT TO IAI
Training and Education in the context of the LBA Experiment.	Nobre, Carlos A.	01/Aug/1998	31/Jul/2001	---
Effects of Species and Functional Diversity on Ecosystem Function: A comparison between Artic Tundra and a Temperate Grasslands / Shrubland System.	Diaz, Sandra M.	15/Jun/1998	15/Jun/2001	Yes
The Impact of Accelerated Sea Level Rise on Nutrient Cycling and Productivity in Karst and Deltaic Ecosystems in the Gulf of Mexico and Caribbean Area: Ecological and Socio-Economic Implications.	Day Jr., John W.	01/Jun/1998	31/May/2001	Yes
Benefits of incorporating ENSO forecasts into reservoir operation and hydroelectric power distribution procedures.	Waylen, Peter	20/May/1998	19/May/2000	Yes

UNAM-UCR-NCAR Tutorial on Regional Weather and Climate Modeling for Latin America.	Warner, Thomas	01/Mar/1999	31/Aug/2000	Yes
Applications of Multiple Lead-Time Climate Predictions in the Region of Central America and the Caribbean.	Diaz, Henry F.	01/May/1998	30/Apr/2000	Yes
Variations in Spatial and Temporal Precipitation Patterns in the Trade Convergence Region.	Donoso, Maria C.	01/Aug/1998	31/Jul/2000	---
Estimation of ENSO Effects on sugar cane yields in several Latin-American countries.	Utset, Angel	01/Sep/1998	01/Dec/1999	Yes
Global Change Effects on Biogeochemical and Hydrological Determinants of Structure and Function in Cerrado Ecosystems.	Franco, Augusto	01/May/1998	30/Apr/2001	Yes
Relationships between the Antarctic Vortex Dynamics, Chemistry, Ozone Depletion and Southern Midlatitude Stratosphere and Upper Troposphere.	Canziani, Pablo O.	01/May/1998	30/Apr/2001	Yes
A regional assessment of landuse impact on ecosystem function and structure in temperate areas of North and South America.	Paruelo, José M.	01/Jun/1998	31/May/2001	Yes
Spawning Habitat of Small, Pelagic Fish in Relation to ENSO and Global Change.	Checkley, David	01/Jul/1998	31/Aug/2001	Yes
An International Study on the Health Effects of ENSO in the Americas.	Confalonieri, U.	01/Nov/1998	01/Nov/2000	Yes
Earth System and Global Change Education Workshops: Building IAI Capacity with a Science and Education Network.	Johnson, Donald	15/May/1998	15/May/2001	Yes
Comparative Assessment of Agricultural Uses of ENSO-Based Climate Forecasts in Argentina, Mexico and Costa Rica.	Jones, James W.	01/Jun/1998	31/May/2000	Yes
Natural and Anthropogenic Controls on the Hydrology and Biogeochemistry of a Meso-Scale Andean Amazon River Catchment: Integrating Andean Systems into Basinwide Investigation.	Llerena, Carlos A.	01/Jun/1998	01/Jun/2000	Yes

B. Collaborative Research Network (CRN) Program

1. **Table 3** summarizes the up to date administrative actions conducted to implement the CRN program:

Actions	Dates	Observations
<u>Pre-proposal phase:</u> <ul style="list-style-type: none"> • Call for pre-proposals; • 70 proposals received; • SAC review and encouragement of 35 pre-proposals. 	Nov. 25, 1997 Mar. 23, 1998 Apr. 14-15, 1998	9 th SAC meeting
<u>Full proposal phase:</u> <ul style="list-style-type: none"> • Call for full proposals; • 37 proposals received; • Directorate review of documentation; • Mail review • Panel review meeting; • SAC review & recommendations; • EC Approval 	June 15, 1998 Sep. 01, 1998 Sep. 01-15 Sep. 15-Oct. 15 Oct. 21-22, 1998 Oct. 26-27, 1998 Nov. 23-24, 1998	10 th SAC meeting 8 th EC meeting
<u>Directorate Negotiations</u> <ul style="list-style-type: none"> • Awarded and declined letters; • Comments from SAC and reviews to PIs; • Phone dialogue with awarded PIs; • Budget adjustments and/or clarifications requested by SAC - received; • Working plans; • SAC member nomination to work with Directorate overseeing project development; • Grant Policy Guidelines and contract: <ul style="list-style-type: none"> - sent to FAWG; - will be sent to PIs 	December January 1999 February March 1 April April 20 April June	All projects Still not all 11 th SAC meeting (see SAC Report) for comments for agreement

<u>Availability of Funds</u>			
• Evaluation at NSF of IAI proposal		March-May	
• Adjustment of project components to be funded by Argentinean Agency		February-June	
• NOAA responding to possible support of specific activities on Climate Variability and Application CRN projects		June	

2. The Directorate has completed negotiations with the Project PIs to adjust the budget on the basis of the recommendations suggested by the SAC and in some cases by the review panel itself. The PIs have agreed on adjustments that would not compromise the key scientific objectives of the projects (on average the project budgets have been reduced by 18%). These changes generally related to travel, salary support and publication costs, that in most cases were absorbed through in-kind contributions of the participating institutions. Therefore, the revised budgets preserve the overall goals and strategies of the projects.

Table 4 summarizes the selected projects along with the final adjusted budgets. That will allow the Directorate to accomplish EC's guide to incorporate a project manager to assist the SO in the follow-up of the program.

Table 4: *Projects selected for funding under the CRN program, PIs, Requested and Reduced Budgets, Science Theme, and Participating Countries.*

PI	Title	Requested budget (K)	Reduced Budget (K)	Science Theme	Participating Countries
Luckman	The assessment of present, past and future climate variability in the Americas from tree-like environments	1000	820	I,II	Canada, Argentina, Chile, USA, Mexico
Magana	Climate variability and its impacts in the Mexican, Central American and Caribbean region	358	294	I	Mexico, USA, Costa Rica, Colombia, Brazil
Campos	SACC: An international consortium for the study of global and climate changes in the western south Atlantic	999	819	I,II,III	Brazil, Argentina, Uruguay, USA
Cornejo	Multi objective study of climate variability for impact mitigation in the Trade Convergence Climate Complex Region	988	810	I,IV	Ecuador, Panama, USA, Canada, Colombia, Mexico

Nunez	Development of a Collaborative Research Network for the study of regional climate variability and changes, their prediction and impact in the MERCOSUR area	999	819	I,IV	Argentina, Brazil, Paraguay, Uruguay, USA
Baumgartner	Comparative studies and assessments of the impacts of global change on the pelagic and near shore ecosystems of the North and South Pacific Eastern Boundary Currents	1000	820	I,II,III	Mexico, Chile, Peru, Ecuador, Colombia, Panama, Costa Rica, Guatemala, USA, Canada
Silva	Comparative studies of global change effects on the vegetation of two tropical ecosystems: the high mountain and the seasonal savanna	651	552	II	Venezuela, Argentina, Brazil, Colombia
Sala	The effects of biodiversity on ecosystem functioning: a comparison across the Americas	1000	820	II	Argentina, USA, Chile, Mexico, Uruguay
Vernet	Enhanced Ultraviolet-B Radiation in Natural Ecosystems as an added Perturbation due to Ozone Depletion	1000	820	II,III	USA, Argentina, Brazil, Canada, Chile,
Tiessen	Biogeochemical cycles under land use change in the semiarid Americas	998	818	II,III,IV	Canada, Argentina, Brazil, Mexico, Venezuela
McClain	Andean Amazon Rivers Analysis and Monitoring (AARAM) Project	960	787	II,III	USA, Peru, Ecuador, Colombia, Brazil, Bolivia
Wood	Cattle, land use and deforestation in the Amazon: a comparative study	791	649	II,IV	USA, Brazil, Peru, Canada, Ecuador
Franco	ENSO disaster risk management in Latin America: a proposal for the consolidation of a regional network for comparative research, information and training from a social perspective	987	809	I,IV	Peru, Argentina, Brazil, Colombia, Costa Rica, Ecuador, Mexico, USA
Confalonieri	Diagnostics and prediction of climate variability and human health impacts in the tropical Americas	975	800	I,IV	Brazil, Colombia, Venezuela, Mexico
	Total Requested Budget	12705	10437		

I. Understanding Climate Variability in the Americas

II. Comparative Studies of Ecosystems, Biodiversity, Land Use and Water Resources in the Americas

III. Changes in the Composition of the Atmosphere, Oceans and Fresh Waters

IV. Integrated Assessment, Human Dimensions and Applications

A separate document is being provided to the EC/CoP representatives which includes for each project: executive summary, revised budget and its distribution in project activities and/or among countries, and in some cases, annual working plans.

3. Directorate/SAC/Project Interactions

Every year each PI will submit a plan containing an outline of tasks to be completed, the list of personnel who will be included in the project including a description of their roles, and a detailed annual budget. The annual plan will be used as a management tool to track the progress of each project and to aid in the identification of potential problems. For each project, the scientific and programmatic progress will be closely monitored through the joint work of the SO and one or two SAC members assigned to oversee the project (see Report of the 11th SAC meeting).

4. Actions to facilitate network development

In addition to the activities planned within each project in terms of coordinated/complementary scientific activities and communication among all investigators, other mechanisms to foster the IAI network development are:

- Meetings (every other year) of PIs of thematically related projects;
- Communications through the IAI homepage;
- Use of the DIS to facilitate the free interchange and accessibility of data;
- The IAI Directorate will strongly encourage (is already doing it) the project teams to interact and, if possible, to affiliate with appropriate global change scientific organizations (IGBP, WCRP, IHDP, START).

5. Some comments on Contract Agreement and PI and Grantee Obligations

The contract agreement will be made between the IAI and the Grantee (home institution of the PI). The Grantee receives the grant and assumes legal and financial responsibility and accountability for the awarded funds. The contractual agreement set forth the financial and scientific conditions of the award and the management and monitoring requirements. Each year's funding is dependent upon satisfactory accounting of both scientific and financial activities by the PI and the Grantee.

The IAI will require two types of annual reports throughout the term of the grant: a progress report and a financial report. These will be due 45 days before funding is scheduled to be received for another year. Next year's funding will be released only if annual reporting requirements have been adequately met. The progress report will detail the status of the research project. The financial report will be prepared on a cash basis, showing how the money received during the year has been spent and giving details of unobligated balance at the end of the grant year.

A final Project Report will be due 90 days following expiration of the grant. It will provide a complete accounting of the scientific results and of the associated expenditures.

C. Program to Expand the Scientific Capacity in the Americas (PESCA)

A Separate document is being provided to the EC/CoP Representatives on this new activity that IAI has started during 1999.

III. CAPACITY BUILDING

A. IAI-GEF-WMO Project

As established at the third and final Tripartite Review Meeting held in Miami, October 23, 1999, the Project formally ended on March 31, 1999. The executive summary for the entire project activities and results are given as a separate document to all EC/CoP representatives.

Despite the formal termination of the project on March 31, the Project Director realized that certain administrative actions were not done or finished at that time: acquisition of materials for pilot nodes in Costa Rica and Uruguay, satellite images and bibliography to countries participating in the project. The brochure to describe and “market” the project was not finished either.

Based on a consultation with the IAI Director and the availability of funds in the project, WMO has hired the Project Director (Eduardo Banús) for a 3-month period to conduct these activities. An additional task included in the TOR would be to work with the World Meteorological Program Department of WMO to identify potential projects within IAI priorities and region needs, which could be submitted to external funding agencies.

The external evaluation of the project is expected to be conducted during May-June 1999.

B. IAI-DIS present situation

- The DIS manager, Luiz Marcelo Achite, started his activities at the IAI Directorate in February 1999.
- CIESIN is concluding the development of the system. The installation at the central node and the training phase are expected to be conducted during June 1999 (with the participation of the pilot node managers from Costa Rica and Uruguay).
- Meantime, at the Directorate, work that has been conducted during 1999 includes:
 - preparation of computer environment with installation of additional softwares related to IAI-DIS;
 - installation and testing of the Port Master and modems (to allow the remote communication with the system);
 - insertion of some initial IAI-DIS data from INPE departments;
 - identification and correction of data inconsistencies.

C. Training and Education

- Fellowships for Graduate and Post-Doctoral Studies at Brazilian Universities

Due to some unexpected delays associated with a restructuring on CNPq's procedures, the implementation of this Program is delayed. Evaluation of the 7 candidates that have responded to the announcement of opportunity made through IAI Newsletter has been postponed for mid

1999 after bureaucratic barriers are sorted out. Márcio Barbosa (INPE), Mary Kayano (INPE), and Luiz Bevilacqua (SAC) are making efforts to adjust procedures, which finally lead to the implementation of this very important training opportunity that has been offered by the Government of Brazil to IAI.

- IAI Summer Training Program

Please see attached progress report for the First IAI/UM Summer Institute.

IV. RELATIONSHIPS AND ACTIVITIES WITH OTHER ORGANIZATIONS AND PROGRAMS.

During the period covered in this report, actions aimed to increase relations and collaborative activities with other organizations and programs have continued. Some of the most important ones were:

A. Mechanisms of Association with International Programs (IGBP, WCRP, IHDP, START)

Letters have been sent by the IAI Director to the IGBP, WCRP, and IHDP Executive Directors inviting them to become associates to IAI. IAI has received enthusiastic responses from the 3 programs and, at the same time, the common suggestion that the best way to proceed is to formalize a statement of agreement to be submitted for approval of the respective governing bodies of IAI (CoP) and the Programs (SC).

Some of the most important issues to be included in the agreements are:

- to link IAI scientists, groups, and networks into the international IGBP, WCRP and IHDP networks;
- IGBP, IHDP, WCRP to provide a framework within which IAI can interact with colleagues from APN, ENRICH and START projects to build common international projects;
- to share advise on research directions and priority topics, so to ensure the maximum potential for collaboration;
- resources: collaborative actions within existing budgets of both IAI and the International Program.

A draft MOU between IAI and WCRP is attached.

B. IAI-VAMOS (Variability of American Monsoon Subproject) Interaction

Representatives from IAI (EC Chair, Director, Scientific Officer) met with members of VAMOS in March 1999 to discuss ways in which the two organizations may collaborate in the future. Main conclusions were:

- VAMOS and IAI together will define a sub-group of objectives that can most effectively be accomplished by acting through IAI;
- each of these sub-objectives will be examined to determine which are already being adequately addressed by existing IAI projects and those which are not;
- IAI and VAMOS together will seek new funds to support sub-objectives that are being adequately addressed at this point.

IAI and VAMOS have also agreed that if funds are obtained, IAI could manage a competitive grant program tailored to the specific needs of VAMOS.

C. IAI-IT (IHDP)

As reported earlier, in an effort to promote human dimensions of global environmental change research in Latin America, the IAI (through a grant awarded by the NSF and additional support from the Brazilian Academy of Science), in cooperation with the IT subprogram of IHDP, organized a regional workshop on Industrial Transformation and Global Change, São José dos Campos, November 1998. A report has been published by IAI and distributed to the region.

As a result of this workshop, there was a significant participation of Latin American scientists in the Open Science Meeting on “Industrial Transformation” held in the Netherlands in February 1999. Two subprojects out of the 6 subprojects composing the Science Plan of the Industrial Transformation Program will have Latin American scientists as co-leaders. Another very important output of this regional workshop is that a significant number of social scientists and institutions of Latin America were identified and for the first time had the opportunity to meet and discuss potential future collaborative activities. Many of them will be part of the subprojects of the IT program.

Also, and as a new action aimed to foster participation of Latin American social scientists in the human dimensions activities of global change, IAI will be supporting the attendance of scientists from the region at the open meeting of the Human Dimension of Global Environmental Change Research Community.

D. IAI-NOAA/OGP

Climate Forecasts and Applications at Regional Level

Joint IAI-NOAA/OGP activities started in 1996. They were designed to regionally advance on the integration of the emerging El Niño Forecast capabilities into decision and policy-making processes in climate-sensitive sections such agriculture fisheries, water resources, human health and natural disaster responses. As shown in table 5, IAI has co-participated in supporting various meetings, conferences and workshops that have been held since 1996 to advance on the application of Climate forecasts at regional levels. The association IAI-NOAA/OGP-IRI-WMO and USAID made possible to conduct such a significant number of meetings over the entire region.

Table 5: Lists of Meetings, Conferences and Workshops held since 1996 to advance on the application of Climate Forecasts at regional levels.

Date	Place	Targeted Region	Supporting Institutions	Main accomplished or expected outputs
Nov. 96	USA	Meso America	IAI, NOAA-IRI	<ul style="list-style-type: none"> Design of 6-12 month research projects to evaluate the potential of climate forecast application at regional level for specific socio-economic sectors.
May 97	Belize	Meso America	IAI, NOAA-IRI, PAHO, WMO	<ul style="list-style-type: none"> Design of an end-to-end program including a catalog of health data and a research project to evaluate ENSO effects on incidence of certain diseases.
Oct. 97	Peru	South-America Pacific	IAI, NOAA-IRI, WMO, int. and reg. scientific and/or technical organizations, and user organizations.	<ul style="list-style-type: none"> Climate outlook for the next 3-4 months ahead;
Dec. 97	Uruguay	South-east South America		<ul style="list-style-type: none"> Dissemination of the information to decision and policy makers; Design of research projects to evaluate feasibility of climate forecast application at regional level;
Jan. 98	Brazil	North-east South America		<ul style="list-style-type: none"> Convening periodic regional meetings of experts to produce and to evaluate regional forecasts as applied to specific socioeconomic sectors.
May 98	Panama	Central America	NOAA-IRI, USAID, WMO (IAI)	<ul style="list-style-type: none"> Climate outlooks for the next 3-4 months ahead;
May 98	Jamaica	Caribbean		<ul style="list-style-type: none"> Dissemination of the emerging forecasts to decision and policy makers.
April 99	Barbados	Caribbean	NOAA, CMI	<ul style="list-style-type: none"> Climate outlook for upcoming raining season; ENSO cycle and hurricane activity; Interactions between producers and users of climate forecasts.

One of the most challenging outputs resulting from these initial climate outlook fora has been the self-determination of regional level organizations and sectors to periodically meet and produce regional forecasts for the 3-6 months ahead. This is particularly the case of the Southeast South America region (MERCOSUR). After the initial meeting conducted in Montevideo in December 1997 and supported by IAI-NOAA/OBP and WMO, regional scientific/technical and users organizations are meeting periodically to produce regional forecasts and to reevaluate the adequacy of previous ones.

Pan-American Climate Information System (PACIS)

Both the experience derived from the regional outlook fora and the need to have ahead information and advice to face natural disasters provided the rational to develop the idea of

establishing a formal mechanism in the Americas to analyze and systematically disseminate and apply seasonal to interannual forecasts. This is the origin of the Pan-American Climate Information System (PACIS) initiative. IAI (through some EC members, Patricia Ramirez, and Carlos Ereño) and the Director have been participating in the 3 meetings conducted during 1998/99 to design the system (Costa Rica - April 1-2 and August 25-26, 1998; Buenos Aires – March 19-21, 1999).

We believe that both through its present set of on-going research projects related to this subject and through of its network structure and associated mechanisms of communication (DIS, among others) IAI may have a very important role to play in this initiative.

A special presentation of present status of PACIS and near-future actions will be made by Lisa Farrow (NOAA/OGP) at the CoP meeting.

E. Participation of IAI Directorate Staff in Institutional and/or Scientific Events

Brad Wilcox II IGBP Congress – Japan - May 06-10, 1999
Marcella Ohira Open Science Meeting for the Industrial Transformation project of the IHDP – Amsterdam, the Netherlands – Feb. 25-26, 1999

Armando Rabuffetti - APN IV Intergovernmental Meeting – Kobe, Japan – March 18-20, 1999;
 - IOCARIBE Users and the Global Ocean Observing System (GOOS) Capacity Building Workshop – San José, Costa Rica – April 22-23, 1999

V. FINANCIAL ISSUES

A. Scientific/Programmatic

In this section, an overall vision of how these IAI activities have been and/or are actually supported is presented.

Table 6 lists the funds available, already used, or committed to support the principal IAI programmatic and scientific activities from 1996 to 2003. Some numbers are approximated. Workshops and planning meetings conducted prior to 1996 as well as institutional communication activities (Newsletter, Annual Report) and SAC meetings are not included.

Table 6

Activity	Amount US\$	Source of funds	Time Period
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RESEARCH

Start-up Grants	1,700,000	NSF	1996-1998
ISP	3,850,000	NSF/NASA/NOAA	1996-2001
CRN	10,800,000	NSF/Arg. Ag. Sc. &Tech.	1999-2003
PESCA	300,000	NSF	1999-2000
	16,650,000		

PLANNING/ASSESSMENT MEETINGS AND WORKSHOPS

NCAR Climate Ch. Mod.	320,000	NSF	1996
Gl. Ch. Res. Central Am.		NSF	1996
Gl. Ch. Res. Caribbean		NSF	1997
IAI PIs meeting		NSF	1997
Ozone Workshop		NSF/NASA/SECYT(Arg.)	1998
Clim. Ch. and Agric.		IAI/Yale Univ./PROCISUR	1998
IAI Sc. Forum		NSF	1998
Ind. Transf./IHDP		NSF/Braz. Ac. Sciences	1998
ENSO Application Activities in the Americas	280,000	IAI/NOAA/IRI/WMO/USAID	1996-1998
	600,000		

...

CAPACITY BUILDING

• Training/Education:			
Graduate/Post Doc.	500,000	Brazil-MCT/INPE/CNPq	1999/2000/2001
Post Doc.	100,000	Mexico UNAM/CICESE	Open
Summer Institute	850,000	NSF	1999-2001
• DIS	250,000	INPE/IAI/NSF	1997 on
• IAI/GEF/WMO	3,000,000	UNDP/NSF/Brazil (*)	1995-1998
	4,700,00		

(*) Brazil through in-kind contribution.

Some comments:

- 1) From this information, it is possible to conclude that a real significant array of activities are being conducted both in terms of research and capacity building in the region. However, and despite this positive action, IAI needs to urgently enlarge its funding basis at the programmatic/scientific level to more adequately support the offer of excellent

scientific research projects submitted to IAI in response to IAI announcement of opportunities (please see the document on “Research Proposal Submitted to IAI Likely to be Funded”).

- 2) Although some diversification in the sources of funding (other than NSF funds) started to appear in the region, mainly through the government of Argentina, Brazil and Mexico, it is still well below the desired balance of funding for IAI in terms of multiple country participation.

B. Core Budget

All details related to the status of the Core Budget (resources and expenditures, cash balance estimates, and paid and unpaid voluntary contribution from member countries) are given in the “IAI Core Budget Request – Fiscal Year 1999/2000”.

What is important to highlight here is the fact that during 1998/1999 the level of voluntary contributions (US\$ 730,000,000) is well below not only of the amount that should be received if the contributions fully fit with the total of US\$ 820,000,000 agreed in CoP IV, but also below the amount of US\$ 785,000,000 established as an intermediate overall annual contribution during the period of 1997-2000, the time needed by some countries to move to full contribution.

Should this tendency continue, IAI will start to operate with annual deficits, still overcome for a couple of years because of existing resources but leading anyway to very risky operative possibilities for the Directorate and SAC in the near future.

PROGRESS REPORT

First IAI/UM Summer Institute on Interdisciplinary Science in the Americas “Interactions between Seasonal to Inter-annual Climate Variability and Human Systems.”

Miami, Florida, July 11–31, 1999

Introduction

The central goal of the IAI-UM Summer Institute is to foster effective communication and collaboration between early-career natural and social scientists from the Americas. Each year, the Summer Institute will be organized around a regionally important global change issue with societal relevance. The Institute’s themes (changing each year) will be approached from a multi-disciplinary perspective, including both the natural and social dimensions. The chosen Institute theme will serve as the central focus for various instructional efforts (lectures, discussions, research mini-projects).

The theme selected for the first IAI-UM Summer Institute is “Interactions between Seasonal to Inter-annual Climate Variability and Human Systems.” The Institute will explore links between climate variability associated mainly with the El Niño-Southern Oscillation (ENSO) phenomenon and important socio-economic sectors (e.g., agriculture, management of water resources). In particular, the Institute will explore the implications of the emerging capability to forecast the occurrence on ENSO events with lead time of several months, and the feasibility of incorporating this information into decision-making or policy-making processes.

Preliminary Institute Announcement

A preliminary announcement describing the first IAI/UM Summer Institute was distributed by IAI on December 16, 1998. This preliminary announcement generated significant interest, as over 180 queries and requests for more information were logged at the Institute's WWW site (<http://www.rsmas.miami.edu/IAIUM>) between December 1998 and February 1999.

Official Institute Announcement and Application Process

The official Institute announcement was released on February 17, 1999. The announcement included instructions on how to apply (application forms, a list of required materials, and a checklist to verify that applications were complete). The deadline for reception of applications was set to April 8, 1999.

A total of 83 complete applications were received from candidates eligible to participate in the Summer Institute. Table 1 shows a breakdown of the applicants by country. Note that the criterion to assign applicants to a given country was flexible. For example, many applications were received from citizens of various IAI countries who were carrying out graduate studies in the United States. In these cases, applicants were assigned to his/her country of nationality if (a)

they retained an institutional affiliation with their home countries or (b) had specific plans to return to their home countries.

Table 1: *Breakdown by country of complete applications to the first IAI/UM Summer Institute.*

Country		Country	
Argentina	13	Jamaica	1
Brazil	13	Mexico	12
Canada	1	Panama	1
Chile	3	Paraguay	1
Colombia	1	Peru	2
Costa Rica	3	Uruguay	2
Cuba	6	USA	15
Dominican republic	1	Venezuela	3
Ecuador	5		

Selection process

A preliminary selection of candidates took place on April 10–12, 1999, with the participation of representatives from the two organizing institutions (IAI and the University of Miami). Files for all applicants were forwarded to the two Institute Leaders (Drs. Alice Grimm and Diana Liverman) for comments and recommendations, and the selection was finalized towards the end of April 1999. Applicants were notified about the outcome of the selection process in early May 1999.

Table 2: *Major area of expertise of the selected candidates and their country of present and/or future work.*

Area of Expertise	Number of selected candidates	Countries
Meteorology	8	Argentina, Brazil (2), Costa Rica, Cuba, Jamaica, Paraguay, Mexico
Agriculture	4	Argentina, Mexico, Uruguay, USA
Hydrology	4	Argentina, Brazil, Mexico, USA
Social Science/Economy Geography	4	Canada, Chile, USA, Venezuela

The group will be composed of graduate students, early and mid-career scientists, and 2 senior scientists (5 B.Sc., 10 MS, 5 Ph.D.).

Guest Lecturers

In addition to the 2 Institute leaders, various scientists of the region will participate as guest lecturers. The next list gives their names and affiliated institutions.

Dr. Antonio Busalacchi

NASA Goddard Space Flight Center, Laboratory for Hydrospheric Processes, USA

Topic(s): Observational systems (satellite-based and *in situ*) for monitoring and forecasting El Niño.

Date(s): 13 July 1999 (Week 1)

E-mail: tonyb@neptune.gsfc.nasa.gov

Status: CONFIRMED

Dr. Chester Ropelewski

International Research Institute for Climate Prediction, USA

Topic(s): Diagnostic studies of ENSO signature on regional climates.

Date(s): 14–16 July 1999 (Week 1)

E-mail: chet@iri.ldeo.columbia.edu

Status: CONFIRMED

Dr. David Enfield

NOAA Atlantic Oceanographic and Meteorological Laboratory, USA

Topic(s): Effects of extra-Pacific modulation on regional climate signals. Longer-scale components of climate variability (ENSO-related or not)

Date(s): 14 July 1999 (Week 1)

E-mail: enfield@aoml.noaa.gov

Status: CONFIRMED

Dr. Carlos Nobre

Centro de Previsão do Tempo e Estudos Climáticos (CPTEC), Brazil

Topic(s): Numerical models for climate prediction. Capabilities and limitations

Date(s): 15–16 July 1999 (Week 1)

E-mail: nobre@cptec.inpe.br

Status: CONFIRMED

Dr. Jim Jones

University of Florida, USA

Topic(s): Overview of crop simulation models. Use in agricultural risk assessment/risk management. Linking crop models with climate forecasts

Date(s): 19–20 July 1999 (Week 2)

E-mail: jjones@agen.ufl.edu

Status: CONFIRMED

Dr. Brad Wilcox

Inter American Institute for Global Change Research

Topic(s): Overview of major issues related to water resources; linkages to climate variability

Date(s): 20–22 July 1999 (Week 2)

E-mail: bwilcox@dir.iai.int

Status: CONFIRMED

Dr. Jim Mjelde

Texas A&M University, USA

Topic(s): Climate variability and agricultural economics. Economic value of climate forecasts

Date(s): 22–23 July 1999 (Week 2)

E-mail: jwm@taexgw.tamu.edu

Status: CONFIRMED

Dr. Timothy Finan

University of Arizona, USA

Topic(s): Overview of research methods and techniques in social sciences

Date(s): TBD

E-mail: finan.U.Arizona.edu

Status: INVITED. NOT CONFIRMED.

Dr. Roger Pulwarty

NOAA Office of Global Programs, USA

Topic(s): Impediments/barriers for the effective use of climate information. Commonalities/differences in use of climate information in various sectors/countries

Date(s): 26–27 July 1999 (Week 3)

E-mail: pulwarty@ogp.noaa.gov

Status: CONFIRMED

Dr. H. Granger Morgan

Carnegie-Mellon University

Topic(s): Effective communication of climate information. Mental models.

Date(s): 26? July 1999 (Week 3)

E-mail: gm5d+@andrew.cmu.edu

Status: INVITED. NOT CONFIRMED

Dr. Paul Filmer

National Science Foundation, Directorate for Geosciences, USA

Topic(s): Management and evaluation of scientific projects

Date(s): 28 July 1999 (Week 3)

E-mail: pfilmer@nsf.gov

Status: CONFIRMED

Dr. Caitlin Simpson

NOAA Office of Global Programs, USA

Topic(s): Scientific projects involving natural and social scientists: lessons learned
Date(s): 28 July 1999 (Week 3)
E-mail: simpson@ogp.noaa.gov
Status: CONFIRMED

Dr. Juan Pablo Sarmiento
USAID Office of Foreign Disaster Assistance, USA
Topic(s): Vulnerability to climate variability; natural disasters
Date(s): 29 July 1999 (Week 3)
E-mail: sarmient@cable.net.co
Status: CONFIRMED

Dr. Christopher Landsea
NOAA Atlantic Oceanographic and Meteorological Laboratory, USA
Topic(s): Human dimensions of tropical cyclones
Date(s): 29 July 1999 (Week 3)
E-mail: landsea@aoml.noaa.gov
Status: CONFIRMED

Guest lectures to be delivered via videoconferencing

Dr. Carlos Fernandez Jauregui
UNESCO Regional Office for Latin America and the Caribbean
Topic(s): Major issues relating climate variability and water resources in the Americas
Date(s): 26 July 1999
E-mail: uhcfj@unesco.org.uy
Status: CONFIRMED

Dr. Guillermo Berri
Universidad de Buenos Aires, Argentina
Topic(s): Lessons learned during IRI Pilot Training Project
Date(s): TBD
E-mail: berri@at1.fcen.uba.ar
Status: CONFIRMED

Dr. Antonio Divino Moura
International Research Institute for Climate Prediction
Topic(s): IRI activities, plans for interactions between natural/social scientists
Date(s): TBD (POSSIBLY ON FINAL DAY?)
Status: TO BE INVITED

Research Mini-projects

Two mini-projects will be conducted during the Institute. The foci of the two projects will be (a) ENSO and agriculture in Argentina, and (b) ENSO and management of water resources in

Ecuador. The mini-projects will serve as the vehicle for application of knowledge gained during the Institute. They also should demonstrate the need to work collaboratively when dealing with global change problems with multiple natural and social dimensions. The mini-projects will be performed by groups of participants from different disciplines, working together on various aspects of the problem. This is intended to reinforce the Institute's focus on effective multi-disciplinary collaboration. Participants will be encouraged also to exchange experiences and advice with disciplinary colleagues from other groups.

Dr. Jim Hansen

University of Florida, USA.

Coordinator of mini-project "Climate variability and agriculture in Argentina".

Date(s): 19–30 July 1999 (Weeks 2–3)

E-mail: jhansen@agen.ufl.edu

Status: CONFIRMED

Dr. Remigio Galarraga, Escuela Politécnica Nacional, Ecuador,

Dr. Edison Heredia Calderón, Instituto Nacional de Meteorología e Hidrología, Ecuador

Co-coordinators of mini-project "ENSO-related climate variability and management of water resources in Ecuador".

Date(s): 7–31 July 1999 (Weeks 1–3)

E-mail: remigala@mail.epn.edu.ec and migsumi@ecuanex.net.ec

Status: CONFIRMED. DATES

Next Possible Topics for Future 2 Years

At its last meeting, the SAC discussed and recommended the themes that should be addressed in the next 2 years based on region needs and compliance to IAI Science Agenda. The 2 general themes recommended are:

- Land use/land cover change;
- Coastal management.