



**Inter-American Institute  
for Global Change Research**

**Professional Development Seminar on Managing  
Ecosystems Services from Tropical Forests**

***Marcella Ohira***  
***Deputy Executive Director***  
***Director for Capacity Building***

***25-29 July, 2016 – Liberia, Costa Rica***



## IAI is a treaty organization 19 Member Countries



1. Argentina
2. Bolivia
3. Brazil
4. Canada
5. Chile
6. Colombia
7. Costa Rica
8. Cuba
9. Dominican Republic
10. Ecuador
11. Guatemala
12. Jamaica
13. Mexico
14. Panama
15. Paraguay
16. Peru
17. Uruguay
18. USA
19. Venezuela



## Mission

Augment scientific capacity in the Americas to Understand global change and its impacts and Provide sound and useful information to decision-makers in a timely manner

**Core values:** scientific excellence, international cooperation, open exchange of scientific information

**Instrument:** scientists and decision makers jointly address critical global change problems of regional importance





## Science – Policy Interface and Science Diplomacy

- Unite nations to pursue a common goal
- Address shared challenges
- Bridge political and developmental divides

Scientific challenges larger than one country can address on its own require collaboration



"Environmental issues will be crucial in the future"  
Dr. Lino Baranao, Argentina's Minister of Science  
and Technology



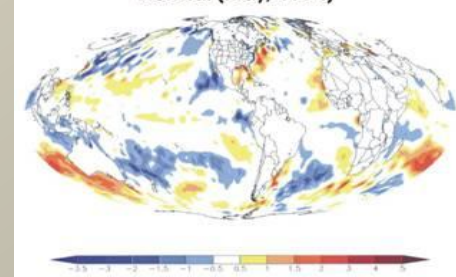


## Developing Scientific Basis for Decision-making

- Ensure scientific excellence /Develop capacities (common goals)
- Meet the needs of the Member Countries (identification of regional needs and common challenges)
- Build collaboration among researchers, stakeholders and decision makers
- Co-design of multinational research for policy usefulness: challenge and opportunity



Normal (May, 1994)





## IAI Science Agenda

Consultation process: scientists, policy makers from 19 member countries

- Understanding Climate Change and Variability in the Americas;
- Comparative Studies of Ecosystem, Biodiversity, Land Use and Cover, and Water Resources in the Americas;
- Understanding Global Change Modulations of the Composition of the Atmosphere, Oceans and Fresh Waters;
- Human Dimensions and Policy Applications.







## IAI research contributes to Science – Policy



Tropi-Dry experience in Minas Gerais, Brazil.

- Dry forest protection in Minas Gerais, Brazil
- Disagreement between classification of area as protected between State & Federal laws
- IAI scientists from Brazil and Canada testified before the State High Court and the Federal Attorney to explain scientific results from international cooperation
- State Law declared unconstitutional

"The information provided to the appeals court is an excellent example of the need for such data: complex issues related to biodiversity, ecosystem function and the sustainability of the coupled natural-human environment were analyzed and presented to the court in such a way that informed decision-making was possible." Holm Tiessen, IAI Director.





## IAI research contributes to International Politics and Negotiations

UNFCCC, IPBES, SBSTA

CoP 20 Peru, CoP 22 in Morocco

IAI scientists serve as technical advisers to country delegations

IAI scientists contribute to IPCC, IPBES

Science-Policy experiences in adaptation (local, state level)



### DECLARACIÓN DE LIMA 2014 SOBRE LA BIODIVERSIDAD Y EL CAMBIO CLIMÁTICO DE LA CIENCIA A LA POLÍTICA PARA EL DESARROLLO SOSTENIBLE

Los días 27 y 28 de noviembre de 2014, a la vera de la vigésima Conferencia de las Partes de la Convención Marco de las Naciones Unidas Sobre el Cambio Climático (CMNUCC), un grupo internacional de científicos, invitados por el Ministerio del Ambiente del Perú, el Consejo Nacional de Ciencia y Tecnología y la Secretaría del Convenio sobre Diversidad Biológica, con el apoyo del Instituto Interamericano para la Investigación del Cambio Global (IAI) y la Agencia Alemana de Cooperación Internacional (GIZ), se reunió para analizar los resultados de sus investigaciones recientes y debatir con los tomadores de decisiones acerca de las implicaciones de su trabajo para la acción en materia de biodiversidad y cambio climático en las escalas nacional, regional y global.

#### Resultados:

Las conclusiones científicas tienen que ver en primer lugar con *la naturaleza de las amenazas* – los impactos del cambio climático en la biodiversidad, cómo influye ésta en la vulnerabilidad al cambio climático o la resiliencia de los ecosistemas, las técnicas para evaluar el riesgo de extinción de especies y comunidades, cómo puede la actividad humana exacerbar los impactos del cambio climático y las tecnologías disponibles para medir y reportar dichos cambios. En segundo lugar, las conclusiones abordan *las soluciones* dirigidas a incrementar las reservas de carbono, conservar la biodiversidad y contribuir al bienestar humano mediante la restauración de los ecosistemas, los acercamientos a la conservación desde el nivel de comunidad, los incentivos para promover prácticas sostenibles de uso del suelo y marcos de políticas coherentes.

Específicamente, el trabajo presentado en la conferencia demuestra que:



#### PRESS RELEASE

#### Científicos y encargados de políticas hacen un llamamiento a incrementar los esfuerzos por integrar la biodiversidad en la política del cambio climático

Lima, 5 de diciembre de 2014 – Un grupo de científicos y encargados de políticas formuló una declaración al Ministro del Ambiente de Perú, Manuel Pulgar Vidal, presidente de la COP-20 de la CMNUCC, requiriendo investigaciones integradas en materia de diversidad biológica y cambio climático y un mayor reconocimiento de los aspectos clave de la biodiversidad en el contexto de cambio climático.

La declaración contiene un conjunto de recomendaciones hechas por los científicos que evaluaron el estado, tendencias y vulnerabilidad de la diversidad biológica al cambio climático. Según los investigadores que se reunieron en un simposio sobre Biodiversidad y cambio climático, realizado durante dos días en Lima, es necesario un mayor reconocimiento, en las negociaciones sobre el clima, del papel de la biodiversidad en la captura de carbono y en la resiliencia para las necesidades en materia de adaptación.

... Adaptación ... Las necesidades urgentes





# Giving scientists a voice in international politics

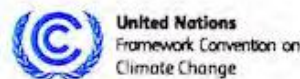
The Ministry of Environment is very pleased to invite you to the Executive Meeting

## “FROM SCIENCE TO POLICY: CONTRIBUTIONS FROM SCIENCE TO COPE WITH CLIMATE CHANGE”

This event will present the results of the dialogue among scientists and policy makers held at the scientific symposium “Biodiversity and Climate Change: Contributions from change to policy for sustainable development” held in Lima on the 27<sup>th</sup> and 28<sup>th</sup> of November 2014. The event will focus on challenges and gaps in the research agenda that must be overcome to foster synergies for both the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change. Also, there will be a presentation of the IAI-Environet program by the Inter-American Institute for Global Change Research (IAI).

### Events Details:

-  Peru Pavilion  
COP 20 Headquarters
-  05 Friday, December 05<sup>th</sup>
-  From 8:00 to 10:00 am
-  Breakfast





## The role of IAI capacity building in the "new" Science

Training of future **leaders** in science, policy, diplomacy and management

Leadership of global change research and of science-policy communication

IAI is in the forefront of developing **PROCESSES** for team building and implementing Interdisciplinary and Transdisciplinary research – **Co-Design**

Dialogue, trust, communication

Identification of common interests and problems

Integration of expertise and knowledge

Joint work in framing and development of policy relevant research



**New Approaches to Capacity Building:**



## Why integrated research & transdisciplinary capacity building?

Global changes are complex and multiple interactions;

- Multiple responses, approaches, methodologies;
- Dialogue of knowledges among scientists;
- Dialogue of needs with stakeholders & use of scientific information;
- Society (sectorial) needs and development context.

Many Environmental Problems: Combination of ecological, human, global factors

Integrate science-policy-development-sustainability-vulnerability-adaptation...





## Sustainable Development & Global Change workshop: good practices for linking science research systems to national development plans (Panama City, Panama – October 2015)

How to link scientific research systems to national development plans?

What research programs should it design/fund? How to ensure scientific excellence?

How to develop human capacities to tackle emerging needs and challenges, like global change?



Dr. Jorge Motta, Secretary of Science and Technology of Panama at the SENACYT - IAI workshop



Beyond the Brain Drain: How IAI collaborative research networks are encouraging diaspora scientists to bridge nations



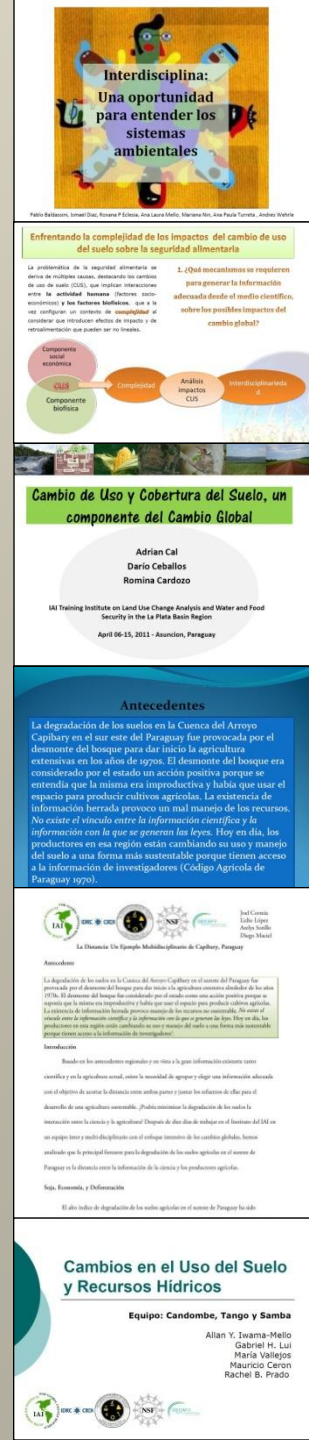
## Output – Policy Brief Process: learn by doing

### Training Institute on Land Use Change Analysis, Water & Food Security in the La Plata Basin Region (Paraguay, 2011)

**Policy Briefs** prepared by the participants: **science synthesis** and **policy communication**.

How to challenge the minds of young scientists and professionals to think outside disciplinary boxes?

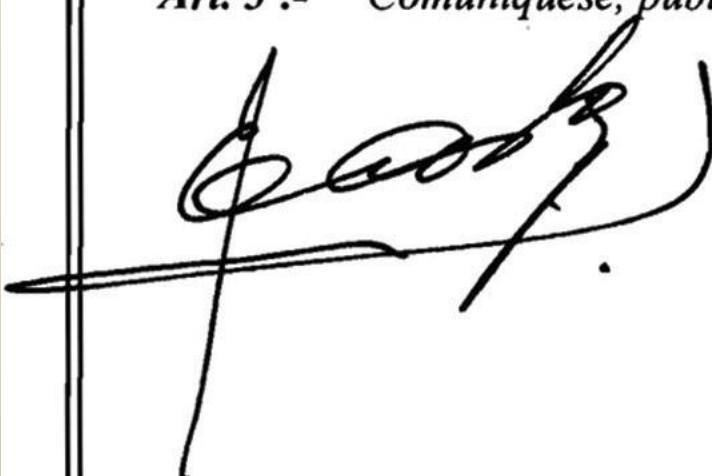
- synthesize information;
- weight the contribution from various disciplines;
- identify best visual tools (maps, graphics) for supporting arguments and the information provided;
- communicate scientific findings to society in a simple and comprehensive language.



# **EL PRESIDENTE DE LA REPÚBLICA DEL PARAGUAY**

## **DECRETA:**

- Art. 1º.-** *Decláranse de Interés Nacional la “Capacitación sobre Cambio de Uso de la Tierra, Seguridad Hídrica y Alimentaria en la Región de la Cuenca del Río de la Plata” y la “Reunión Política del Instituto Interamericano de Investigación para el Cambio Global”, que se llevarán a cabo del 6 al 15 de abril y del 14 al 17 de junio del año 2011, respectivamente, organizados por la Facultad de Ciencias Exactas y Naturales de la Universidad Nacional de Asunción (FaCEN-UNA), conjuntamente con el Instituto Interamericano de Investigación para el Cambio Global-IAI.*
- Art. 2º.-** *El presente Decreto será refrendado por el Ministro de Agricultura y Ganadería.*
- Art. 3º.-** *Comuníquese, publíquese e insértese en el Registro Oficial.*



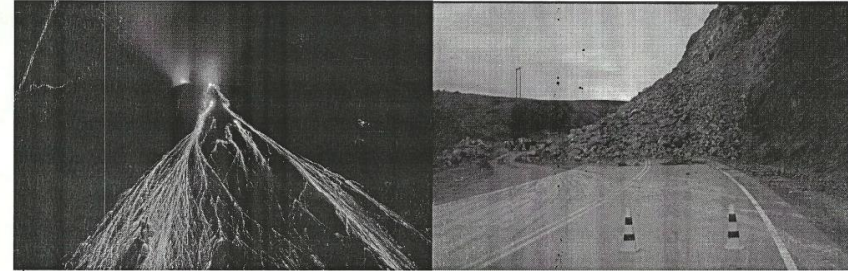
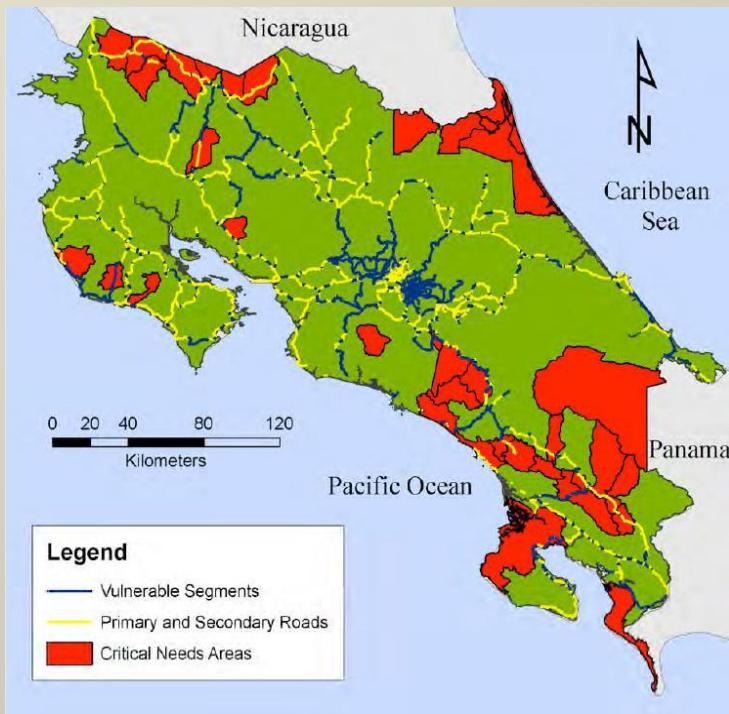
Dirección de Decretos y Leyes  
Secretaría General  
Gabinete Civil

[www.presidencia.gov.py](http://www.presidencia.gov.py)



## Output – Policy Brief

Knowledge Innovation at the Science- Policy Interface (Costa Rica, 2010). Decision support tool: map prepared by the participants



**Disaster Preparedness**  
Expanding the Costa Rica national disaster coordination infrastructure to tap community networks

# A Policy Brief

### Key Findings

- Rural areas are most vulnerable to disaster events
- The national disaster coordination network inadequately cover rural areas
- Many communities may be isolated after a disasters because all primary and secondary roads are threatened by at least one hazard

### Recommendations

- Expanding the number of national disaster managers and placing the new managers in at-risk areas
- Focusing training and capacity building at the community level which takes advantage of strong social and community networks that already exist
- Create local community participation in the disaster management by working with existing social groups and leaders



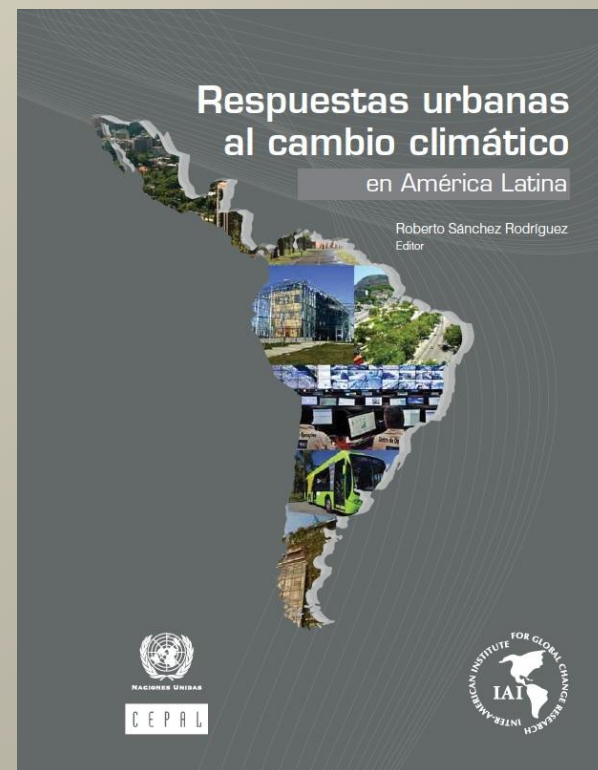


## Output: Science – Policy Guide

### Urban Responses to Climate Change: Policies, Strategies and Instruments for Latin America (Chile 2010, Argentina 2012, Mexico 2013)

**Book:** Guide for Decision-Makers

**MoU:** IAI - CEPAL co-funding, synergies and programmatic collaboration (Science & Economics)





## Seed Grant Program (2011-2015)

Small grants: broad impact

11 networks

67 professionals

53 institutions

15 countries

\$220,625 IAI funding

\$180,003 leveraged resources

Varios science and policy outputs

# Climate variability and impacts on public health in Latin American cities



**PI. Graciana Barboza, MSP Uruguay**

Network:

4 Countries

10 Natural Sciences

2 Social Sciences

3 Research Institutions

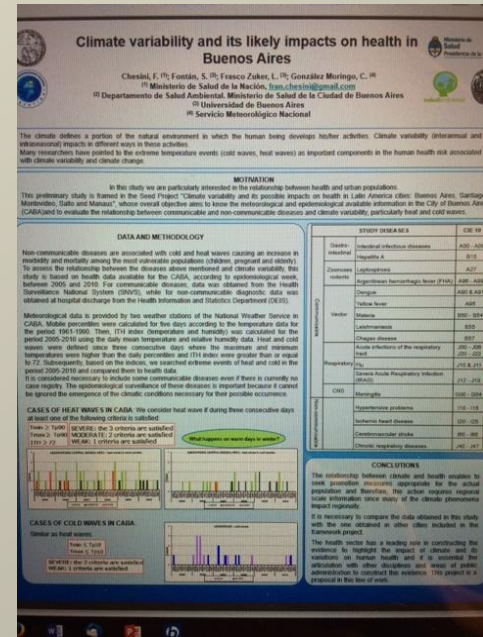
9 Policy Institutions

Science and Policy products

Young scientists assist MERCOSUR ministries on Climate and Health, including transboundary issues.

US\$ 20K – 18 months

MERCOSUR's request





## Capacity Building Events 2016-2017 Linking Science to Policy

**Professional Development Seminar on Managing Ecosystem Services from Tropical Forests**  
25-30 July 2016 in Liberia/Costa Rica and 2017 in Santiago/Chile



**School of Advanced Science on nitrogen cycling, environmental sustainability and climate change**  
31 July – 10 August 2016, São Pedro, SP – Brazil



**Professional Development Seminar: Transdisciplinary approaches  
to integrating policy and science for sustainability**

28 November – 2 December 2016, Puerto Plata/Dominican Republic and 29 May – 2 June 2017, Calgary/Canada



**Public Health and Global Change: Module for PhD Program / Medical School - 2017 in Argentina**



## Professional Development Seminar on Managing Ecosystems Services from Tropical Forests

*Understanding ecosystem functioning is fundamental to preserve the goods and services necessary for human populations. Tropical forests are the basis for the livelihoods of millions of people worldwide. There is a great need for training managers, policy makers, and scientists on how to quantify and manage ecosystem services, learning from the experience of local communities and decision makers on designing and carrying out conservation programs across the Americas.*



**Applications open!**

1st session: Liberia, Costa Rica – 25-30 July, 2016

2nd session: Santiago, Chile – 2017

Information: [IAI.costarica2016@dir.iai.int](mailto:IAI.costarica2016@dir.iai.int)



## São Paulo School of Advanced Science on Nitrogen cycling, environmental sustainability and climate change



*The biogeochemical cycle of nitrogen involves and affects multiple issues, such as food security, conservation of biodiversity, water and air quality and climate regulation.*

*This School is directed at graduate students from Brazil and abroad and provides an integrated and multidisciplinary approach to the crosscutting themes of nitrogen cycling as well as to the complex interactions among nitrogen, agriculture, sustainability and global changes.*

**Full Announcement**



## Professional Development Seminar: Transdisciplinary Approaches to Integrating Policy and Science for Sustainability

*Puerto Plata, Dominican Republic, 28 November – 2 December 2016 and  
Calgary, Canada, 29 May -2 June 2017*

The complexity of global change problems and their impact on societies involve socioeconomic, biophysical, and technological dimensions. Addressing these issues properly requires effective communication and collaboration between scientists from various fields and those making and affected by sustainability policy.

The seminar will train professionals from the science and policy communities in transdisciplinary approaches to develop projects in global change-related areas, such as agriculture, land use, public health, sustainable development, biodiversity, energy, water, air, and climate. Seminar sessions will focus on real-world cases that involve transdisciplinary collaborations and will offer participants an opportunity to draw on their own experiences to develop proposals and collaborate across diverse interests, sectors, and institutional arrangements.

We strongly encourage applications from social and natural scientists, humanities scholars, and staff from NGO and community organizations, the private sector, and government agencies.



**APPLICATIONS OPEN!**

**Deadline: August 15th, 2016**

**Full Announcement:** [www.iai.int/?p=12698](http://www.iai.int/?p=12698)

**Information:** [IAI.dominicana2016@dir.iai.int](mailto:IAI.dominicana2016@dir.iai.int)



## Conclusions – IAI experience in capacity building

New approach to capacity building: **knowledge integration** at the **science-policy interface**:

**beyond** individual disciplines, traditional training methods and national borders.

interdisciplinary training programs built on the contribution from **different scientific fields** and **their excellence** and the understanding of their **interactions**.

**practical knowledge** and **experience** from environmental **practitioners, stakeholders and user groups** from many countries share common problems or goals.

build **trust, dialogue, skills** and design **mechanisms/programs** for **integration, collaboration** and **communication** among sciences and with policy.

coupling **training activities** with **science programs** provides additional scientific capacity building and further encourages **collaborative networks**.

**science to inform decision making** and assist in **national / international negotiations**.



Why we are here this week





## Professional Development Seminar on Managing Ecosystem Services from Tropical Forests

25-30 July 2016 in Liberia/Costa Rica and 2017 in Santiago/Chile

### Goals:

Future leaders in GC Sciences, Policy and Management

Multi-fold, many goals

Why 2 sessions (Costa Rica and Chile)?

Who?

### Expected results:

Capacity building

Networks – Disciplines, Institutions, Sectors, Countries

Science, Policy, and Science-Policy collaboration

### New approaches:

Inter-Transdisciplinary; Knowledge Integration; Mutual learning; Creativity/Innovation

### Products:

Publication (Arturo)

Invitation to initiatives: video, policy brief, professional internships, design programs/projects, alumni network, others??





Thank you  
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