



Regional Office for Latin America and the Caribbean

Annual Report 2010

Strengthening international science
for the benefit of society



About the Regional Office

To ensure that the regional priorities are reflected in the ICSU strategic plan and develop sound regional scientific programs.

About ICSU

Vision

The long-term ICSU vision is for a world where science is used for the benefit of all, excellence in science is valued and scientific knowledge is effectively linked to policy-making. In such a world, universal and equitable access to high quality scientific data and information is a reality and all countries have the scientific capacity to use these and to contribute to generating the new knowledge that is necessary to establish their own development pathways in a sustainable manner.

Mission

ICSU's mission is to strengthen international science for the benefit of society.

To do this, ICSU mobilizes the knowledge and resources of the international science community to:

- Identify and address major issues of importance to science and society.
- Facilitate interaction amongst scientists across all disciplines and from all countries.
- Promote the participation of all scientists — regardless of race, citizenship, language, political stance, or gender — in the international scientific endeavour.
- Provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society, and the private sector.

Message from the Director of the Regional Office



In 2010, the decision was taken to move the ICSU Regional Office for Latin America and the Caribbean from Brazil to Mexico City, to be hosted by the Mexican Academy of Sciences from early 2011. Although many of ICSU ROLAC's activities were marked by the relocation, Alice Abreu, the former Director, managed to assure the full functionality of the office until the end of 2010. I would like to cordially thank Alice for her constant support and commitment to ICSU ROLAC, which went far beyond her professional obligations. I would also like to congratulate her and her staff on the regional office's many achievements, the most important of which are presented in this report.

One of the priorities in 2010 was to follow up on the work by the four Scientific Planning Groups and to coordinate the publication in book form of the science plans for ICSU ROLAC's scientific priority areas biodiversity, natural hazards, sustainable energy and mathematics education in Spanish and English. This is an important legacy to the region as a whole. Yet, during 2010 many other activities are worth mentioning, such as the publication of a policy brief on biodiversity and human well-being in Latin America and the Caribbean in English, Spanish, and Portuguese and the organization of a workshop on biodiversity databases.

Two other achievements of the Regional Office are extremely relevant for ICSU's position in Latin America and the Caribbean. The first is the establishment of strong relations with the Organization of American States (OAS), the multilateral intergovernmental organization of the Americas. ICSU was granted Civil Society Organization status and as such will be able to participate in all relevant meetings of the OAS, including the Summits of the Americas. The Regional Office was also instrumental in signing a General Cooperation Agreement between ICSU and OAS, which will allow the development of specific projects. The second major achievement is the development of a project with the Inter American Development Bank on sustainable energy. I am sure that eventually this will flourish into a major activity in this area in our region.

2011 presents the challenge of following up on all previous achievements and of expanding our activities with the aim of increasing the visibility and the impact of ICSU in the Region. I am looking forward to work together with our Regional Committee and with my colleagues in the region and within the ICSU family to make this mission a success.

Manuel Limonta
Director of the Regional Office

Message from the Chair of the Regional Committee

2010 brought about significant changes to the ICSU Regional Committee for Latin America and the Caribbean. Certainly, the most important change is related to our Regional Office, which, after being hosted for four years by the Brazilian Academy of Sciences in Rio de Janeiro, will continue its work in Mexico City in 2011 with a new secretariat. Yet, 2010 also ended the planning phase of ICSU ROLAC's four scientific priority areas biodiversity, natural hazards, sustainable energy and mathematics education, with the publication in book form, in English and Spanish, of all four documents, which will allow a wider distribution among the respective scientific communities.

The 2010 ICSU review of the Regional Office clearly stressed the many achievements that ICSU ROLAC can proudly look back on. These achievements include the various scientific activities in Latin America and the Caribbean, which are all described in detail in this document. They also include the numerous outreach activities, which aimed at reinforcing existing, and establishing new bonds with partner institutions within the ICSU family and within our region. Finally, one of the major achievements of ICSU ROLAC's work so far is the establishment of numerous links among scientists in the region and between these scientists and ICSU and its members.

While 2010 thus marked a year of stocktaking and transition, it also clearly showed how ICSU ROLAC's past success can be built upon in the future. We need to continue our efforts of establishing ICSU as a major science institution in our region by following up on ICSU ROLAC's existing initiatives. The most crucial upcoming task is the implementation of the science plans of our four scientific priority areas. Also, we need to expand our networking activities within the region as well as with ICSU programs and initiatives around the world. Most important, however, is to pursue ICSU's mission of strengthening international science for the benefit of society in Latin America and the Caribbean.

All of ICSU ROLAC's past achievements would not have been possible without the continuous efforts of many individuals and institutions who invested their time, knowledge and resources and I thank them all for their contributions. In particular, I would like to thank the outgoing Regional Director Alice Abreu and her staff for their achievements and their great enthusiasm and professionalism. I am looking forward to working with the new Regional Office in Mexico led by Manuel Limonta and I trust that together we will continue the success of ICSU ROLAC.

José Antonio de la Peña
Chair of the Regional Committee



Regional Committee

Regional Committee of Latin America and the Caribbean

Review of the Regional Office for Latin America and the Caribbean

Regional Committee for Latin America and the Caribbean



To assist the Regional Office in its mission, a Regional Committee for Latin America and the Caribbean was appointed in late 2006, composed of distinguished scientists from the region.

The Regional Committee met only once in 2010, due to the relocation of the Regional Office to Mexico.

The 8th Meeting of the ICSU Regional Committee for Latin America and the Caribbean (RCLAC8) took place in Rio de Janeiro, Brazil, at the Brazilian Academy of Sciences, from 14th to 15th May 2010. On Monday 17th of May the Regional Committee had a joint meeting with the Review Panel in the morning.

The Committee expressed its satisfaction with the appointment of the two new members, Patricio Felmer and Arturo Martinez and with the appointment for another mandate of José Antonio de la Peña, Mahabir Gupta and Elena Vigil. José Antonio de la Peña was re-elected as Chair for the 2010-2012 period. The Committee also noted the decision of the Executive Board reinstating the Executive Director of ICSU as *ex officio* representative on all Regional Committees.



Photos:

1. Carmen Samayoa, Elena Vigil, Jerson Lima Silva, José Antonio de la Peña

2. Patricia Ocampo-Thomason, Mahabir Gupta, Alice Abreu, Carmen Samayoa, Elena Vigil, Sérgio Pastrana, José Antonio de la Peña, Arturo Martinez, Enrique Lessa, Tara Dasgupta, Jerson Lima Silva

At the RCLAC8 meeting the Regional Committee received a wonderful homage from the Academy of Medical, Physical and Natural Sciences of Guatemala, which granted the status of foreign members of the Academy to all members of the Regional Committee. The diploma was presented to each member by the President of the Medical, Physical and Natural Sciences of Guatemala, Maria del Carmen Samayoa.



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RCLAC 2010 Members

José Antonio de la Peña – Chair (2006-2012)
Tara Dasgupta (2006-2011)
Mahabir Gupta (2006-2012)
Patricio Felmer (2010-2012)
Enrique P. Lessa (2006-2011)
Arturo Martinez (2010-2012)
Maria del Carmen Samayoa (2006-2011)
Elena Vigil Santos (2006-2012)

Ex officio

Jerson Lima Silva (ABC)
Sérgio Pastrana (ICSU Executive Board)
Deliang Chen (ICSU Secretariat)
Alice Abreu (ICSU ROLAC) 2006-2010
Manuel Limonta (ICSU ROLAC) from December 2010

Photo 3:

Patricia Ocampo-Thomason, Tara Dasgupta, Mahabir Gupta, Enrique Lessa, Sérgio Pastrana, José Antonio de la Peña and Alice Abreu receiving the diploma from Carmen Samayoa

Review of the Regional Office

Like ICSU's other Regional Offices, the Regional Office for Latin America and the Caribbean was reviewed in 2010 by the ICSU ABC Review Panel, under the coordination of the ICSU Committee on Scientific Planning and Review (CSPR). The purpose of this review was to gain insight into the role of ICSU in Latin America and the Caribbean, and to take stock of the achievements of the Regional Office so far and of the challenges that lie ahead.

The review process took place between February and June 2010. In a first step, the reports by the Regional Director and by the Chair of the Regional Committee, supplemented by information gathered during an online consultation, were reviewed and then discussed at a meeting in Paris in March. Subsequently, the Panel visited the Regional Office in Rio de Janeiro and met the Director and staff, as well as the members of the Regional Committee for Latin America and the Caribbean (RCLAC), which had completed their 8th meeting immediately prior to the visit. During the visit to the Regional Office, the members of the Panel also held meetings with the President and other representatives of the Brazilian Academy of Sciences (ABC), the *Financiadora de Estudos e Projetos* (FINEP), and other regional organizations. With regard to the upcoming relocation of the Regional Office to Mexico, the Panel also received input from the Mexican Academy of Sciences (AMC) and from the National Council for Science and Technology of Mexico (CONACyT).

The Panel found that the Regional Office had made concerted efforts to promote the participation of LAC countries in ICSU and to involve ICSU Unions in ROLAC activities, and it recommended continuing these efforts. The Panel also stressed that very good progress had been achieved, in the short period of time since the establishment of the Regional Office, in assisting ICSU and its members to link to the scientific community in Latin America and the Caribbean. It was acknowledged that a significant number of prestigious

scientists from the region were involved in the development of the four science plans. The science plans on sustainable energy, natural hazards, biodiversity, and mathematics education, based on the four scientific priority areas of ICSU-ROLAC, were well-received by the respective scientific communities. The review also stressed the active role that the Regional Office had played in developing collaborative partnerships with key organizations.

The upcoming relocation of the Regional Office to Mexico in January 2011 was considered a major challenge. Yet,



Photo:
Alexandre Quintanilla, Marta Rovira, Michael Clegg

the Panel was convinced that the Mexican Academy of Sciences (AMC) and the National Council for Science and Technology of Mexico (CONACyT) were fully committed to making the move a success. The Panel considered that the implementation of the four science plans will be a very large task, so it recommended that the Regional Office and ICSU recognize from the start that raising additional funds and building up supportive networks will have to be a prime task of the new Regional Office. The Panel advised that next to the implementation of the science

plans of the four priority areas, the new Regional Office should concentrate on expanding the existing scientific and policy contacts in the region. Special attention should be paid to achieving a homogenous distribution of these contacts within the region. In this context, potential champions for the four priority areas could be identified. Furthermore, the Panel stressed that the four scientific priority areas for Latin America and the Caribbean should be integrated into the existing global projects of ICSU concerned with these thematic areas.

[...] "In summary, the panel concludes that the initial three years of the Regional Office in Brasil has been successful and commends the Director of the office and her staff for their excellent work. At the same time new opportunities are presented by the move to Mexico where enhanced funding and staff support will be available. The new Regional Office and staff will face many challenges as they reconstitute the office and as they seek to implement the four programmes identified as priorities by the Regional Committee. It will be important for ICSU to continue to monitor the office and to be prepared to intercede at the first indication of problems, so that effective solutions can be implemented." " (Review of the ICSU Office for Latin America and the Caribbean. Report to the CSPR from an ICSU-ABC Review Panel. October 2010, p.6)



Review Panel

Michael Clegg, USA (Chair)

Alexandre Quintanilha, Portugal

Marta Rovira, Argentina

Photo:

José Antonio de la Peña, Alexandre Quintanilha, Alice Abreu, Marta Rovira, Michael Clegg, Patricia Ocampo-Thomason, Tara Dasgupta.

Priority Areas

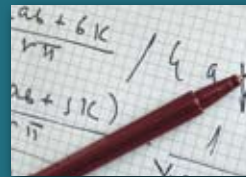
Science for a better life: Developing regional scientific programs in priority areas for Latin America and the Caribbean

The four documents relating to the ICSU ROLAC priority areas were translated into Spanish and prepared for publication in both English and Spanish, thanks to the generous support of CONACYT Mexico. Reviewing the current status of research and formulating a set of detailed objectives and targeted areas of research to be developed, these contributions will hopefully influence the scientific research in the years to come in our region.

Policy Brief “Biodiversity and human well-being in Latin America and the Caribbean: A multi-sectoral contribution to the science-policy interface”

Regional workshop “Facilitating the dialogue among national, regional and international databases on biodiversity”

Proposal for the “Establishment of an Inter-American Research Network in Sustainable Energy: Design of a Regional Program”



Science for a better life: Developing regional scientific programs in priority areas for Latin America and the Caribbean

Biodiversity knowledge, scope of research and priority areas: an assessment for Latin America and the Caribbean

Biodiversity science is of major importance for Latin America and the Caribbean, where six countries are classified as megadiverse. The 2nd ICSU Regional Consultation for Latin America and the Caribbean identified the need for the development of a database of terrestrial and marine biodiversity in the region, as well as for a definition of policies and collection and data distribution protocols. The loss of biodiversity constitutes a critical problem for human existence, and biodiversity science is amply recognized as a priority area of scientific research worldwide..

The science plan analyzes how LAC's biodiversity developed, and gives an overview of the different aspects of biodiversity, such as biogeographical divisions, ecosystems, and species. The assessment then goes on to examine the conservation of biodiversity and related research efforts in the region, before presenting existing institutional arrangements and resources for biodiversity research. The document identifies the main threats to biodiversity in LAC countries, which are

deforestation, fire, over-exploitation, invasive species, climate change, and pollution.

The priority areas identified are: 1.) Develop georeferenced data bases and completion of biological inventories; 2.) Synthesize molecular phylogenetic information; 3.) Evaluate biodiversity and ecosystem services; 4.) Consolidate a network of ecological observatories; 5.) Develop a regional-scale assessment of the impacts of invasive species in the context of early warning systems; 6.) Transfere biodiversity and biocultural knowledge into sustainable economic activities; 7.) Find solutions for the implementation of biodiversity conservation measures in managed landscapes and seascaapes; 8.) Develop studies on the ecosystem service value of urban biodiversity.

Download the pdf of the document at <http://www.icsu.org/latin-america-caribbean/publications/reports-and-reviews/biodiversity-knowledge/>



Scientific Planning Group Biodiversity

Mary T. Kalin Arroyo (Chile) – Co-chair

Rodolfo Dirzo (Mexico/US) – Co-chair

Carlos Alfredo Joly (Brazil)

Juan Carlos Castilla (Chile)

Francisco Cejas Rodrigues (Cuba)

(RCLAC liason – Mahabir Gupta)

Understanding and Managing Risk associated with Natural Hazards: a Comprehensive Scientific Approach for Latin America and the Caribbean

During the 2nd ICSU Regional Consultation for Latin America and the Caribbean in March 2009, it was decided that the priority area on Natural Hazards and Disasters should stress the multidisciplinary perspective and integrate social and natural sciences. The focus of the research should be the social and human dimension of ecosystem services and the conservation of biodiversity, as well as the process of climate change adaptation and mitigation. The trend of the rising number of disasters over the last five decades is likely to continue under future climate change scenarios. The science plan conceptualizes disasters as social conditions. Based on the notion of the “social construction” of risk, it acknowledges that society, in its interaction with the physical world, constructs disaster risk by transforming physical events into hazards through social processes. Disaster risk reduction should include practices that allow the reduction of existing risk (corrective management), and control over the creation of new risk in the future (prospective management).

This complexity requires that research should ideally be based on interdisciplinary and trans-disciplinary approaches. Equally important is the use of participatory methods, which

consider stakeholder roles to promote the transition between research and action. Furthermore, a better understanding between the scientific and government policy communities, as well as between the scientific and civil society should be promoted. Capacity building throughout the disciplines should be based on a holistic perspective.

The research objectives are:

- 1) Identify significant natural hazard processes and patterns;
- 2) Understand the factors and processes that contribute to the social construction of risks and to the ways in which risk is socially, territorially, and temporally distributed;
- 3) Identify ways to evaluate, measure, or gauge risks objectively, and the way risks are socially analyzed;
- 4) Understand decision making processes and the real enactment or rejection of risk reduction and control, disaster preparedness, response and recovery actions.

Download the pdf of the document at

<http://www.icsu.org/latin-america-caribbean/publications/reports-and-reviews/natural-hazards/>



Scientific Planning Group Natural Hazards

Omar Dario Cardona (Colombia) - Chair

Allan Lavell (Costa Rica/UK)

Michel Hermelin (Colombia)

Juan Carlos Bertoni (Argentina)

Tony Gibbs (Barbados)

(RCLAC liaison – Carmen Samayoa)

Sustainable Energy in Latin America and the Caribbean: Potential for the Future

The 2nd ICSU Regional Consultation for Latin America and the Caribbean in March 2009 emphasized the need to assess the energy resource profile in each country and to identify the best combination among traditional and renewable energy resources, with special attention on biomass, solar, and eolic energy. The ICSU ROLAC science plan on sustainable energy responds to this need by addressing research, development, and innovation issues regarding renewable energy resources in Latin America and the Caribbean. The document starts with an overview of the global and regional energy situation, stressing the risks of maintaining the present structure of the world energy matrix with high dependence on fossil fuels. The subsequent analysis of the different renewable energy sources shows that biomass, solar, and wind energy are promising for centralized or distributed energy production in LAC countries. These, together with small scale hydropower plants are also important for small and isolated communities, located in off-grid regions.

The successful implementation of the science plan for sustainable energy practices and technologies needs to be supported by three main pillars:

- 1) Research on specific scientific and technological issues that can contribute to the adaptation of state of the art technologies to local and regional scenarios.
- 2) Capacity building, at institutional and individual levels, by means of joint research programs.
- 3) Design and implementation of public policies based on scientific information to create the enabling environment necessary for the full and sustainable implementation of sustainable energy practices and technologies.

The RD&I priorities analyzed include biomass productivity, solar energy assessment, wind resource estimation, as well as related processes, such as energy carriers, and standards and certification. The science plan also proposes several activities that may contribute to institutional and individual capacity building, and offers advice regarding the development of sound and sustainable public policies on renewable energy sources in Latin America and the Caribbean.

Download the pdf of the document at <http://www.icsu.org/latin-america-caribbean/publications/reports-and-reviews/sustainable-energy/>



Scientific Planning Group Sustainable Energy

Décio Luiz Gazzoni (Brazil) – Chair

Claudio Estrada (Mexico)

Gabriel Blanco (Argentina)

Isaias Macedo (Brazil)

Ivan Azurdia Bravo (Guatemala)

(RCLAC liason – Elena Vigil)

Mathematics Education in Latin America and the Caribbean: a reality to be transformed

The 2nd ICSU Regional Consultation for Latin America and the Caribbean in March 2009 identified mathematics education as a primary area of concern with an urgent need for improvement in Latin America and the Caribbean. In particular, it reiterated the importance of intensifying the relationship of professional mathematicians with teachers of mathematics, both at the initial teacher training and during the job training. The ICSU ROLAC Science Plan on Mathematics Education stresses that, although mathematics and science are primary sources of lifelong learning and important for the progress of civilization, Latin American and Caribbean children are not being taught at an adequate level. Compared to international education standards, Latin American and Caribbean countries on average score very low, especially in assessments of children's abilities to make practical use of their mathematical knowledge. Thus, there is an urgent need to improve the education of students, which needs to be based on a better education of teachers.

The document argues that the success in achieving this goal is closely linked to an efficient communication between stakeholders on a national and also on a regional level. The following detailed objectives are recommended:

- 1) Reinforce the link between research mathematicians and school teachers;
- 2) Develop suitable data for the evaluation of performance;
- 3) Define sets of minimum standards throughout the region for the primary and secondary school levels;
- 4) Use Information and Communication Technologies (ICTs) to make more resources available to teachers and students;
- 5) Find strategies to improve mathematics and language literacy at the same time;
- 6) Continue the involvement of the mathematics education faculty in supporting mathematics teachers in pedagogy and didactics.

The document concludes by arguing that mathematics education should no longer be seen as a privilege of some, but as a right of all students.

Download the pdf of the document at
<http://www.icsu.org/latin-america-caribbean/publications/reports-and-reviews/mathematics-education/>



Scientific Planning Group Mathematics Education

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Lilliam Alvarez Diaz (Cuba)
Rafael Correa (Chile)
Suely Druck (Brazil)
Raymond McEachin (Jamaica)
(RCLAC liason – Juan A. Asenjo)

Policy Brief “Biodiversity and human well-being in Latin America and the Caribbean: A multi-sectoral contribution to the science-policy interface”

The Policy Brief “Biodiversity and human well-being in Latin America and the Caribbean: A multi-sectoral contribution to the science-policy interface,” published in 2010 in the three main languages of the region, is the result of an extensive multi-sectoral consultation on the relationship between biodiversity and human well-being in Latin America and the Caribbean, which gathered the perspectives of different social actors and stakeholders.

The aim of the Policy Brief is to provide resource managers and decision makers with a synthesis of the priority problems and paths of action that were identified during this process. The consultation involved over 200 people from 16 countries, including the academic, governmental and private sectors, as well as grass-roots social organizations and non-governmental organizations at different levels. This was

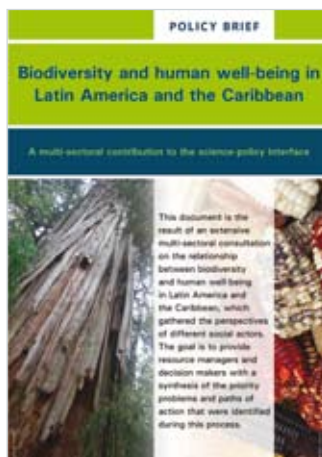
completed by a discussion and synthesis workshop, held in Rio de Janeiro, Brazil, in April 2009, with representatives from the different sectors and supported by an ICSU Grant.

The outcome, synthesized in the Policy Brief, was a set of research, management and policy-making priorities, as well as recommendations on new institutions and social practices that will make progress possible on these priority themes.

The Policy Brief was widely distributed, to ICSU National Members and Unions, and to relevant Ministries in the region.

The electronic version is available in English, Spanish and Portuguese at the ICSU ROLAC website:

<http://www.icsu.org/latin-america-caribbean/publications/policy-briefs/policy-brief-biodiversity/>



Regional workshop “Facilitating the dialogue among national, regional and international databases on biodiversity”

The Regional workshop “Facilitating the dialogue among national, regional and international databases on biodiversity” took place in Buenos Aires, Argentina, from August 16th to 18th 2010, at the *Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”*.



A joint initiative of the Regional Office for Latin America and the Caribbean of the International Council for Science, CONICET Argentina and BIOTA FAPESP, it had as its main objective to bring together specialists and/or representatives of different biodiversity institutes of Latin America and the Caribbean to develop a regional initiative for facilitating the dialogue among national, regional and international databases on biodiversity. The workshop aimed at starting a dialogue leading to the identification of joint initiatives in a regional framework. After a substantive and lively debate, the following recommendations were agreed upon:

1. The participants of the workshop agreed on the importance of a regional initiative in Latin America and the Caribbean that enlarges and strengthens the existing information on biodiversity, and that contributes to the definition of priorities for the region.
2. The participants recognized the existence of important international initiatives to which the regional initiative should complement and enhance.
3. The participants acknowledged the need for a harmonious development of exchange of information in the region. To

Photo:

Mahabir Gupta, Edgardo Romero, Alice Abreu, Patricia Koleff, Arturo Martinez, Laura Leff, Jorge Tezón, Esteban Jobaggy, Martín Ramirez., Monica Vera, David Oren, Alba Puig, Francisco Squeo, Carlos Joly, Francisco Cejas, Eliana Sobral

achieve this, cooperation with countries that have larger needs in this issue should be promoted.

4. The following actions were identified:

- In spite of the efforts of many countries in the region to digitalize their biological collections, it is important to continue with this activities and it was recommended that the governments should define a quota to be adopted by the countries of the region;
- Stimulate and strengthen scientific interchange and capacity building to contribute to the participation of scientists of the region in regional and international networks; as well as to facilitate the use and analysis of biodiversity information systems for the generation of new knowledge and for the development of human well being;
- The convergent and complementary use of the existing biodiversity information in the region should be promoted by encouraging researchers to use the existing national and multilateral instruments, and new stimulus should be generated;
- Taking into account that the information on biodiversity of the region is often found outside of the region, repatriation programs of biodiversity information should be created and stimulated;
- The information on marine biodiversity of Latin America and the Caribbean should be enlarged and strengthened; A better understanding of the shared ecosystem services in Latin America and the Caribbean should be stimulated.

The documents and list of participants related to this activity can be found at

<http://www.icsu.org/latin-america-caribbean/what-we-do/priority-areas/biodiversity/activities-biodiversity/regional-workshop-2010/facilitating-the-dialogue-among-national-regional-and-international-databases-on-biodiversity/>

Proposal for the “Establishment of an Inter-American Research Network in Sustainable Energy: Design of a Regional Program”

In October 2010 the ICSU Regional Office for Latin America and the Caribbean was invited to present a proposal for the Inter-American Development Bank, assessing a pilot program for the support and strengthening of Renewable Energy and Energy Efficiency Research and Innovation Network(s) in Latin America and the Caribbean.

The proposal, which was approved by the IADB and provided the basis of the project signed by ICSU, suggested the development of a Sustainable Energy Research Network, to foment the exchange and integration between active institutes and research groups in sustainable energy in the Americas, as well fostering innovation links with the private sector.

Its main objective of the network is to promote collaboration in the Americas in the following areas of sustainable energy: (i) Biomass; (ii) Solar; (iii) Wind; (iv) Others, such as small scale hydroelectric, geothermic, energy from waves and tides; and (v) maximum energetic efficiency, including engineering and architecture and reduction of carbon intensity.

The Regional Office appointed a working group of five experts who presented their report on the 29th of December 2010, with the understanding that additions and corrections would be made during the first months of 2011.

This project will provide a solid base to develop the main priorities of the ICSU ROLAC science plan in Renewable Energy.

Working group of experts:

Décio Gazzoni (Brazil) – Chair

Gabriel Blanco (Argentina)

Anibal Borroto (Cuba)

Isaias Macedo (Brazil)

Arturo Morales (México)



ICSU Grants Programme

Extreme Natural Hazards and Societal Implications (ENHANS) - IUGG

Capacity Building in Biophysics: Training African Graduate Students in Latin America - IUPAB

Capacity Building in Chemical Risk Assessment in Latin America - IUTOX

ICSU Grants Programme

Since the 2008-2009 awards, the Regional Office has been a partner to several ICSU Grants, with different results and outcomes. In 2010 ICSU awarded three new grants co-sponsored by the Regional Office.

Extreme Natural Hazards and Societal Implications (ENHANS) - IUGG

The proposal presented by IUGG was closely linked to the priority area of Natural Hazards and Disasters of the Regional Office. IUGG organized, under the capable coordination of Alik Smail Zadeh, ENHANS project leader, a concerted participation in different activities at the Meeting of the Americas 2010 of the American Geophysics Union, listed below.

Symposium “International Collaboration in Earth and Space Sciences: Present Status, Needs, and Future Perspectives”, with the presentations of several international programs and projects, among which a presentation from the Director of ROLAC, Alice Abreu.

Symposium “Natural Hazards and Disaster Risk in Latin America and the Caribbean”. Three members of the Scientific Planning Group in Natural Hazards and Disasters participated: Allan Lavell (Costa Rica) spoke on the new multidisciplinary research program of ICSU “Integrated Research on Disaster Risk” and discussed the content and significance of the program when looking at concrete examples of the social construction of risk in the Latin American and Caribbean region; Tony Gibbs (Barbados) presented a paper on meteorological hazards and associated risks in the Caribbean; and Omar Cardona (Colombia) spoke on indicators of disaster risk and risk management in the Americas.

The poster is for a town hall meeting held on Tuesday, 10 August, from 12:45h to 1:45h in Room Balboa (Ignacio L. Riquelme Hotel and Convention Center). The title is "Natural Hazards in Latin America and Caribbean: From Risk to Opportunity by Partnership of Science and Society". The meeting addresses three main topics: 1. How science (both natural and social) and society can form partnership for disaster reduction? 2. How science and society partnership can convert natural disaster risk to opportunity? 3. What are the urgent issues of disaster risk in Latin America and the Caribbean cities and regions under intensifying natural and social pressure? The speakers listed are Allan Lavell (Latin American Social Sciences Faculty and the ICSU Program Officer for Latin America and the Caribbean), Alik Smail Zadeh (German/France), and Jaime Limóna Funguacachi (Mexico). Moderators are Alik Smail Zadeh and Jaime Limóna Funguacachi. Panelists include A. Alcantara Azula (Mexico), M. McPhaden (USA), and K. Mifflin (UK). The poster also features logos for IRDR, IUGG, AGU, IUGG, ICSU, and IUGG.

Town Hall meeting: “Natural Hazards in Latin America and Caribbean (LAC): From Risk to Opportunity by Partnership of Science and Society”. The meeting addressed the following major topics: (i) how science (both natural and social) and society can form partnership for disaster reduction? (ii) how science and society partnership can convert natural disaster risk to opportunity? And (iii) what are the urgent issues of disaster risk in LAC cities and regions under intensifying natural and social pressure? Two members of the Scientific Planning Group of ROLAC participated in this session: Allan Lavell (Latin American Social Sciences Faculty – FLACSO and LA RED, Costa Rica; spoke on increasing the salience of disaster risk management on the political agenda; and Omar Cardona presenting his network on disaster risk.

The full report can be found at <http://www.enhans.org>.

Capacity Building in Biophysics: Training African Graduate Students in Latin America - IUPAB

The proposal presented by IUPAB was primarily intended to foster the development of science in general, and biophysics in particular in Africa, through the training of a group of African graduate students at the III Latin American Postgraduate Program of Biophysics Course. This program, coordinated by Marcelo Morales from the Federal University of Rio de Janeiro, has been operating since 2008 with great success. In 2010, 410 students attended the course and 120 posters were presented.

As part of the ICSU project, with the direct help of the ICSU Regional Office for Africa, nine African students were selected to attend the course. They came from South Africa, Kenya, Morocco, Zimbabwe, Uganda, Mozambique and Ethiopia.

The program had special arrangements for this group, including simultaneous translation of all lectures. The African participants also had, as part of the project, a one-week individual “internship” in biophysics research labs at the Federal University of Rio de Janeiro. For additional information go to <http://iupab.org/news/new/>

Capacity Building in Chemical Risk Assessment in Latin America - IUTOX

IUTOX in conjunction with the Brazilian Society of Toxicology (BSTox) asked for the support of the Regional Office for a program of capacity building for young scientists from Latin America to be held in Brazil; that would influence and benefit the practice of chemical risk assessment throughout Latin America and the Caribbean region.

The III Latin America Risk Assessment Workshop was held at Águas de São Pedro, Brazil with 29 participants from April, 11th to 18th, 2010. Thirty-six applications were received and 29 were selected for the workshop. With this number they have reached a total of 70 participants during the last three years. The ICSU Grant was complemented by several other funding agencies.

Reaching out

ICSU Family

International Organizations

Reaching out

Strengthening relations with the ICSU family

The Regional Office continued to engage in strengthening relations with the large and complex ICSU family in 2010. Two ICSU meetings should be highlighted: the ICSU International Scientific Unions Meeting in April and the ICSU Officers Meeting in October. In both occasions ROLAC made a presentation about its activities and about the priority areas.

The Regional Office was represented by Mahabir Gupta at the CFRS organized Workshop “Science in Media”.



Meeting of the ICSU International Scientific Unions, Paris, 7th-8th April, 2010 and 102nd Executive Board Meeting, 9th April, 2010

Visit CONICET Argentina, Buenos Aires, 24th June, 2010

Meeting of the Americas 2010, American Geophysics Union. Foz do Iguaçu, Brazil, 8th to 12th August, 2010

ICSU Officers Meeting and 103rd Executive Board Meeting, Paris, 25th to 31st October, 2010

9th Meeting of ICSU Committee on Freedom and Responsibility in Science and Workshop “Science in Media”, 15th to 19th November, 2010, Bogota, Colombia. (ROLAC was represented by Mahabir Gupta)

International Conference “Getting Post 2010 Biodiversity Targets Right” Biota FAPESP Bragança Paulista, Brazil, 11th to 15th December, 2010

Photo:

Sergio Pastrana, Alice Abreu and Manuel Limonta at the ICSU Officers Meeting

The relations with the Scientific Unions continued to be strengthened in 2010, and 14 Unions have now appointed a contact person for Latin America and the Caribbean.

SCIENTIFIC UNIONS REGIONAL CONTACTS

IAU - International Astronomical Union - Marta Rovira

IGU - International Geographical Union - Irasema Alcántara-Ayala

IMU - International Mathematical Union - Marcelo Viana

IUGG - International Union of Geodesy and Geophysics - Luiz Paulo Souto Fortes

IUGS - International Union of Geological Science - Marta Mantovani

IUPAB - International Union for Pure and Applied Biophysics - Marcelo Morales

IUPAC - International Union of Pure and Applied Chemistry - Ram S. Lamba

IUPAP - International Union of Pure and Applied Physics - Carmen Cisneros

IUPsyS - International Union of Psychological Sciences - Juan Jose Sanchez Sosa

IUTAMX - International Union of Theoretical and Applied Mechanics - Luiz Bevilacqua

URSI - International Union of Radio Science - Emanuel Costa

IUFRO - International Union of Forest Research Organizations - Bastiaan Louman

ISPRS – Internl. Society for Photogrammetry and Remote Sensing - Myriam Ardila-Torres

IPY - International Polar Year - Miriam Hebling Almeida

Reaching out to International Organizations

During 2010, the Regional Office continued to extend its contacts to several international organizations, making known the proposed development of the priority areas defined by the Regional Committee, and exploring possibilities for collaboration and support.

Especially important were two activities at the Organization of American States, the OAS. In April the Regional Office represented ICSU in the signing of a General Cooperation Agreement, and in September the Regional Office participated in the 6th Meeting of the Science and Technology Committee, making a short presentation about ROLAC and its activities.

The participation at the Microsoft Research 6th Annual Latin American Faculty Summit should also be highlighted, with a presentation at the Keynote Panel Session "Science, Technology and Innovation Collaboration in Latin America and the Caribbean: Specific Actions"

The President Elect of ICSU, Professor Yuan Lee, was the keynote speaker at the XVII World Congress of Sociology.

The Regional Office was represented by Sergio Pastrana at the Inaugural Meeting of the Caribbean Science Foundation.



Meeting of the Gender Advisory Board Executive Board, Paris, 18th and 19th January, 2010

UK Brazil Women for Science Meeting. Brasilia, Brazil, 1st and 2nd February, 2010

Organization of American States – OAS. Signing of General Cooperation Agreement. Washington DC, USA, 26th April 2010

Microsoft 6th Annual Latin American Faculty Summit, Guarujá, Brazil, 12th to 14th May, 2010

Workshop Scientific Issues on Biofuels. FAPESP, ABC and IAP, São Paulo, Brazil, 24th and 25th May, 2010

International Workshop on International Research Collaborations. National Science Foundation, Washington, USA, 3rd and 4th June, 2010

XVII World Congress of Sociology. International Sociological Association – ISA. Gothenburg, Sweden, 7th to 8th July 7, 2010

Organization of American States – OAS. 6th Sixth Regular Meeting of the Inter-American Committee on Science and Technology (COMCYT). Washington DC, USA. 9th to 10th September, 2010

Caribbean Science Foundation. Inaugural meeting. Trinidad and Tobago, 20th to 24th September, 2010. (ROLAC was represented by Sérgio Pastrana)

Photos:

1. Yuan Tseh Lee, President Elect of ICSU, at the 17th ISA World Congress of Sociology, 11-17 July 2010 in Gothenburg, Sweden

2. Alice Abreu and Ambassador Alfonso Quiñonez at the Organization of American States

The Regional Office

Secretariat

Financial Summary

The Regional Office

The Secretariat

The Regional Office for Latin America and the Caribbean was hosted by the Brazilian Academy of Sciences until October 2010. The Director, Alice Abreu, remained in office until December 2010.

The Regional Office was supported by Eliane Sobral as Administrative Officer until the closure of the Office in Brazil. Alicia Vargas, from January to July, and Patrick de Melo, from January to October, were part of the internship program during 2010.

The incoming Director Manuel Limonta was appointed in October 2010, and together with Alice Abreu, assured the smooth relocation of the Regional Office from Brazil to Mexico. The new offices, hosted by the Mexican Academy for Sciences in Mexico City, were opened in 2011.



ICSU ROLAC (January to October 2010)

Rua Anfilóbio de Carvalho, 29/1004

Rio de Janeiro RJ 20030-060 Brazil

ICSU ROLAC (From January 2011)

"Casa Tlalpan", Km. 23.5 Carretera Federal México-Cuernavaca

Avenida Cipreses s/n

Col. San Andrés Totoltepec, Tlalpan, 14400 México, D.F.

Tel.: + 52 55 58 49 20 32

Fax: + 52 55 58 49 51 08

Email: secretariat@icsu-latin-america-caribbean.org

Site: www.icsu.org/latin-america-caribbean



Photos:

1. Eliane Sobral, Alicia Vargas, Alice Abreu, Patrick de Melo

2. Alice Abreu and Manuel Limonta, Mexico City, December 2010

Financial summary

The Regional Office's main funding in 2010 came from the Brazilian Government, through one of the agencies of the Ministry of Science and Technology, the *Financiadora de Estudos e Projetos*, FINEP.

The Office received a thirty-five thousand EUR grant from ICSU, in January 2010. A twenty-five thousand USD grant from CONACYT Mexico was received in July 2010 to support the relocation process.

The ICSU and CONACYT grants were fundamental to support the expenses of the last two months of activities, including travel and accommodation for the incoming director and a visit to Mexico by the outgoing director.

In 2010, the Regional Office also received relevant non-budgetary support from other institutions. The Brazilian Academy of Sciences continued to generously host the Office until the end of October. The Regional Workshop on Biodiversity Databases was co-sponsored by CONICET Argentina, which funded accommodation and all local expenses.

The daily official exchange rate from the Brazilian Central Bank was used to find the dollar equivalent of all expenses. The documents and official records are filed at the Financial Department of the Brazilian Academy of Sciences and are available for consultation.

Financial Summary 2010				
	Credit R\$	Credit USD	Expenses R\$	Expenses USD
FINEP	223 841	127 564		
ICSU	119 227	66 977		
CONACYT	44 494	26 024		
Total	387 562	220 565		
Balance Transfer to FINEP			21 710	12 588
Expenses				
Meetings and Programs RCLAC				
RCLAC Travel			15 475	8 875
RCLAC Accommodation			17 175	9 420
Workshop Biodiversity Data Bases				
Workshop Travel			8 980	5 065
Workshop Per diem			1 505	849
Working Group SE				
Working Group Travel and Accommodation			5 400	3 160
ROLAC Secretariat				
Staff			159 447	90 459
Taxes and Obligations			86 202	49 219
Internships			12 360	6 918
Other Services			15 257	8 644
Editing and Printing			9 520	5 574
Office Supplies			1 768	1 008
Secretariat Travel Expenses			32 761	18 704
Total Expenses			387 562	220 482



The International Council for Science

Benefits of Joining ICSU

ICSU Interdisciplinary Bodies

ICSU Scientific Unions

ICSU Scientific Associates

ICSU National Members

Benefits of Joining ICSU

The benefits of membership in ICSU are manifold and Members make greater or lesser use of the opportunities available to them as they wish. The main difference between full National membership and that of Associates status is that Members have voting rights at the General Assembly and thus help determine ICSU's future direction.

- All Members receive copies of ICSU publications: the electronic newsletter ICSU Insight, Annual Reports, as well as any other publications or series of publications produced (e.g. the report produced during the preparation of ICSU's Strategic Plan 2006-2011, or the series produced in connection with the World Summit on Sustainable Development (WSSD)).
- Members have access to the Member Zone on the ICSU website and thus to documents not made available to the general public and they can search the ICSU database. Members also benefit from access to different committees of ICSU, for example, the Committee on Freedom and

Responsibility in the conduct of Science which, inter alia, helps solve visa problems for scientists wishing to attend scientific meetings and gives advice to organizers of international meetings. Even more importantly, Members gain access to the global scientific community and to the enormous network of scientists comprising the membership of ICSU, and the prestige provided by the ICSU umbrella.

- ICSU's International Scientific Unions and National Scientific Members (National Academies of Science or National Research Councils for the most part) meet every three years in the ICSU General Assembly. Members get an excellent cross-discipline opportunity for the exchange of ideas and also get access to a wide spectrum of scientific expertise. This enables Members to address major international, interdisciplinary issues, which they could not undertake alone.
- For full information on the range of ICSU's activities, see the new ICSU interactive website: www.icsu.org

Interdisciplinary Bodies

The Interdisciplinary Bodies of ICSU bring together different scientific disciplines to address scientific issues of international relevance that are of interest to ICSU Members. Some of these bodies are co-sponsored with other organizations. Interdisciplinary Bodies as at 31 December 2010:

Thematic Bodies

Committee on Space Research (COSPAR)
Integrated Research on Disaster Risk (IRDR)
Programme on Ecosystem Change and Society (PECS)
Scientific Committee on Antarctic Research (SCAR)
Scientific Committee on Oceanic Research (SCOR)
Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)

Global Environmental Change Programmes

DIVERSITAS: An International Programme of Biodiversity Science
International Geosphere-Biosphere Programme (IGBP)
International Human Dimensions Programme on Global Environmental Change (IHDP)
World Climate Research Programme (WCRP)

Monitoring/Observation Bodies

Global Climate Observing System (GCOS)
Global Ocean Observing System (GOOS)
Global Terrestrial Observing System (GTOS)

Data and Information Bodies

Committee on Data for Science and Technology (CODATA)
International Network for the Availability of Scientific Publications (INASP)
Scientific Committee on Frequency Allocations for Radio Astronomy and Space Science (IUCAF)
World Data System (WDS)

Scientific Unions

The 30 international Scientific Union Members provide the disciplinary backbone of ICSU. They play a central role in bringing together scientists from all parts of the world to consider the issues of particular interest to individual disciplines. Scientific Union Members as at 31 December 2010:

International Astronomical Union (IAU)
International Brain Research Organization (IBRO)
International Geographical Union (IGU)
International Mathematical Union (IMU)
International Union for Quaternary Research (INQUA)
International Society for Photogrammetry and Remote Sensing (ISPRS)
International Union of Anthropological and Ethnological Sciences (IUAES)
International Union of Biochemistry and Molecular Biology (IUBMB)
International Union of Biological Sciences (IUBS)
International Union of Crystallography (IUCr)
International Union of Food Science and Technology (IUFoST)
International Union of Forest Research Organizations (IUFRO)
International Union of Geodesy and Geophysics (IUGG)
International Union of Geological Sciences (IUGS)
International Union of History and Philosophy of Science (IUHPS)
International Union of Immunological Societies (IUIS)
International Union of Materials Research Societies (IUMRS)
International Union of Microbiological Societies (IUMS)
International Union of Nutritional Sciences (IUNS)
International Union for Pure and Applied Biophysics (IUPAB)
International Union of Pure and Applied Chemistry (IUPAC)
International Union of Pure and Applied Physics (IUPAP)
International Union for Physical and Engineering Sciences in Medicine (IUPESM)
International Union of Basic and Clinical Pharmacology (IUPHAR)
International Union of Physiological Sciences (IUPS)
International Union of Psychological Science (IUPsyS)
International Union of Soil Sciences (IUSS)
International Union of Theoretical and Applied Mechanics (IUTAM)
International Union of Toxicology (IUTOX)
Union Radio Scientifique Internationale (URSI)

Scientific Associates

Scientific Associates as at 31 December 2010:

Academy of Sciences for the Developing World (TWAS)
Academia de Ciencias de America Latina (ACAL)
Engineering Committee on Oceanic Resources (ECOR)
Federation of Asian Scientific Academies and Societies (FASAS)
International Arctic Science Committee (IASC)
International Association of Hydraulic Engineering and Research (IAHR)
International Cartographic Association (ICA)
International Commission for Acoustics (ICA)
International Commission for Optics (ICO)
International Council for Laboratory Animal Science (ICLAS)
International Council for Scientific and Technical Information (ICSTI)
International Federation for Information Processing (IFIP)
International Federation of Library Associations and Institutions (IFLA)
International Federation of Societies for Microscopy (IFSM)
International Federation of Surveyors (FIG)
International Foundation for Science (IFS)
International Institute for Applied Systems Analysis (IIASA)
International Union for Vacuum Science, Technique and Applications (IUVSTA)
International Water Association (IWA)
Pacific Science Association (PSA)
Society for Social Studies of Science (4S)
Union Internationale de Spéléologie (UIS)

National Members

National Members as at 31 December 2010. *National Associates **National Observers
Members from Latin America and the Caribbean are highlighted

Albania • Academy of Sciences
Angola • Foundation of Science and Development
Argentina • National Scientific and Technological Research Council
Armenia • National Academy of Sciences of the Republic of Armenia
Australia • Australian Academy of Science
Austria • Die Osterreichische Akademie der Wissenschaften
Azerbaijan** • Azerbaijan National Academy of Sciences
Bangladesh • Bangladesh Academy of Sciences
Belarus** • National Academy of Sciences
Belgium • Royal Academies for Science and the Arts of Belgium
Bolivia** • Academia Nacional de Ciencias de Bolivia
Bosnia & Herzegovina: ANUBiH • Academy of Sciences and Arts of Bosnia and Herzegovina
Bosnia & Herzegovina: ANURS • Academy of Sciences and Arts of the Republic of Srpska
Botswana • Ministry of Communications Science and Technology
Brazil • Academia Brasileira de Ciências
Bulgaria • Bulgarian Academy of Sciences
Burkina Faso* • Centre National de la Recherche Scientifique et Technologique
Cameroon • Cameroon Academy of Sciences
Canada • National Research Council of Canada
Caribbean*1 • Caribbean Academy of Sciences
Chile • Academia Chilena de Ciencias
China: CAST • China Association for Science and Technology
China: Taipei • Academy of Sciences located in Taipei
Colombia • Academia Colombiana de Ciencias Exactas, Físicas y Naturales

1 Covering the following: Antigua and Barbuda, Bahamas, Barbados, Dominica, Grenada, Guyana, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

Costa Rica • Academia Nacional de Ciencias
Côte d'Ivoire Académie des Sciences, des Arts, des Cultures
d'Afrique et des Diasporas Africaines
Croatia • Croatian Academy of Sciences and Arts
Cuba • Academia de Ciencias de Cuba
Czech Republic • Academy of Sciences of Czech Republic
Denmark • Royal Danish Academy of Sciences and Letters
Dominican Republic • Academy of Sciences of the Dominican
Republic
Egypt • Academy of Scientific Research and Technology
Estonia • Estonian Academy of Sciences
Ethiopia • Ethiopian Science and Technology Agency
Finland • Delegation of the Finnish Academies of Science and
Letters
France • Académie des Sciences
Georgia* • Georgian Academy of Sciences
Germany • Deutsche Forschungsgemeinschaft
Ghana** • Ghana Acad. of Arts & Sciences
Greece • Academy of Athens
Guatemala* • Academia de Ciencias Médicas Físicas y
Naturales de Guatemala
Hungary • Hungarian Acad. of Sciences
India • Indian National Science Academy
Indonesia • Indonesian Institute of Sciences
Iran • University of Tehran
Iraq • Ministry of Science and Technology
Ireland • Royal Irish Academy
Israel • Israel Academy of Sciences and Humanities
Italy • Consiglio Nazionale delle Ricerche
Jamaica • Scientific Research Council
Japan • Science Council of Japan
Jordan* • Royal Scientific Society
Kazakhstan* • National Academy of Sciences of the Republic
of Kazakhstan
Kenya • Kenya National Academy of Sciences
Korea, DPR** • State Academy of Sciences
Korea, Republic of • National Academy of Sciences of the
Republic of Korea
Lao, PDR • Lao National Science Council
Latvia • Latvian Academy of Sciences
Lebanon • National Council for Scientific Research

Lesotho • Department of Science and Technology
Lithuania • Lithuanian Academy of Sciences
Luxembourg • Fonds National de la Recherche
Macedonia, Macedonian Academy of Sciences and Arts
Madagascar* • Ministère de l'Enseignement Supérieur et de
la Recherche Scientifique
Malawi • National Research Council of Malawi
Malaysia • Academy of Sciences Malaysia
Mauritius • Mauritius Research Council
Mexico • [Academia Mexicana de Ciencias](#)
Moldova** • Academy of Sciences of Moldova
Monaco • Centre Scientifique de Monaco
Mongolia • Mongolian Academy of Sciences
Montenegro • Montenegrin Academy of Sciences and Arts
Morocco • Centre National de la Recherche Scientifique et
Technique
Mozambique • Scientific Research Association of Mozambique
Namibia • Ministry of Education: Directorate of Research,
Science and Technology
Nepal • Royal Nepal Academy of Science and Technology
Netherlands • Koninklijke Nederlandse Akademie van
Wetenschappen
New Zealand • Royal Society of New Zealand
Nigeria • Nigerian Academy of Science
Norway • Norwegian Academy of Sciences and Letters
Pakistan • Pakistan Association for the Advancement of Science
Panama • [Universidad de Panama](#)
Peru • [Academia Nacional de Ciencias](#)
Philippines • National Research Council
Poland • Polish Academy of Sciences
Portugal • Academia das Ciencias de Lisboa
Romania • Academia Română
Russian Federation • Russian Academy of Sciences
Rwanda** • Kigali Institute of Science and Technology
Saudi Arabia • King Abdulaziz City for Science and Technology
Senegal • Association des Chercheurs Sénégalais
Serbia • Serbian Academy of Sciences and Arts
Seychelles • Seychelles Centre for Marine Research and
Technology
Singapore • Singapore National Academy of Science
Slovak Republic • Slovak Academy of Sciences

Slovenia* • Slovenian Academy of Sciences and Arts
South Africa • National Research Foundation (NRF)
South Pacific² • University of the South Pacific
Spain • Ministerio de Ciencia y Innovacion
Sri Lanka • National Science Foundation
Sudan** • National Centre for Research
Swaziland • National Research Council
Sweden • Royal Swedish Academy of Sciences
Switzerland • Swiss Academy of Sciences
Tajikistan** • Academy of Sciences of Republic of Tajikistan
Tanzania • Tanzania Commission for Science and Technology
Thailand • National Research Council of Thailand
Togo • Chancellerie des Universités du Togo
Tunisia* • Université Tunis El Manar
Turkey • Scientific and Technical Research Council of Turkey
Uganda • Uganda National Council for Science and
Technology
Ukraine • National Academy of Sciences
United Kingdom • Royal Society
USA • National Academy of Sciences
Uruguay** • [Comisión Consejo Nacional de Innovacion
Ciencia y Tecnologia](#)
Uzbekistan** • Uzbekistan Academy of Sciences
Vatican City State** • Pontificia Academia Scientiarum
[Venezuela** • Fondo Nacional de Ciencia, Tecnología e
Innovación](#)
Vietnam** • Vietnam Union of Science and Technology
Associations
Zambia • Zambia Academy of Sciences
Zimbabwe • Research Council of Zimbabwe

² Covering the following: Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Samoa.

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