

Strengthening International Science for the Benefit of Society



ICSU

International Council for Science

Regional Office for Asia and the Pacific

Annual Report 2013

<http://www.icsu.org/asia-pacific>

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.

ICSU Mission

ICSU mobilizes knowledge and resources of the international science community for the benefit of society, 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 in the international scientific endeavour, regardless of race, citizenship, language, political stance and gender
- Provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society and the private sector

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Message from the Director



Mohd Nordin Hasan

Director

ICSU Regional Office for Asia and the Pacific

Much of our efforts this year were directed towards developing awareness of Future Earth in Asia and the Pacific. The Office organised, assisted in organising or made presentations about Future Earth in Bangkok, Beijing, Colombo, Kuala Lumpur, Seoul, Singapore, Taipei, Yokohama, and Suva. Understanding of Future Earth in Asia and the Pacific is on the whole good because of these activities. The National member of ICSU in Japan, the Science Council of Japan (SCJ), and our partner the Research Institute for Humanity and Nature (RIHN), Kyoto in particular, played key roles in encouraging organizations in Asia and the Pacific to plan for the implementation of Future Earth.

The development of pilot projects in urban health and wellbeing that adopts the systems approach progressed extremely well. Pilot project development in Pune, India successfully bid for project development support from the Swedish Secretariat for Environmental Earth System Sciences (SSEESS), and ROAP provided the necessary assistance to groups in Taipei and Bangkok to complete the preparation of their proposals for submission to funding bodies. Work in the hazards and disasters priority area at ROAP successfully obtained funding support from the IRDR International Center of Excellence (IRDR-ICoE) located in Taipei to organize capacity building advanced institutes for three years beginning in 2014. Other than the IRDR-ICoE, the programme will be implemented with the support of the International Union

of Psychological Science (IUPsyS), Institute of Psychology of the Chinese Academy of Sciences (CAS), Chinese Psychological Society of the Chinese Association of Science and Technology (CAST) and the United Nations University International Institute for Global Health (UNU-IIGH).

Relations between ICSU ROAP and regional science organizations were strengthened this year. In particular ICSU ROAP partnered the Science Council of Asia in organising a panel discussion on Future Earth at the Council's Annual Conference in Bangkok in May. A keynote presentation about Future Earth was also made during the opening session of the 12th Pacific Science Inter-Congress of the Pacific Science Association (PSA), in Suva, Fiji. In addition a symposium on Future Earth that discussed possible ways forward for Future Earth in the South Pacific was also organised at the Inter-Congress.

Overall the year saw greater impact of the work of ROAP at the regional and global levels. It contributed significantly to policies developed by the Monsoon Asia Integrated Regional Study (MAIRS) project of the Earth System Science Partnership (ESSP), and by the Asia Pacific Network for Global Change Research (APN). The ideas from ROAP also had considerable impact on the development of the new ICSU international programme on urban health and wellbeing as well as in the planning of its International Programme Office which will now be located at the Institute of Urban Health, Chinese Academy of Sciences (CAS) in Xiamen, China.

We thank all our partners and supporters for assisting our work and look forward to a more exciting and productive year ahead.

Message from the Chair of the Regional Committee



Hong Kum LEE

Chair

Regional Committee for Asia and the Pacific

On behalf of Regional Committee for Asia and the Pacific, I would like to express my sincere thanks to all members of RCAP and ROAP. 2013 marks another milestone for ROAP in implementing Future Earth for Asia and the Pacific. I warmly congratulate the Director and the staff of ROAP on this great achievement.

We all know that there is no spare Earth. This is a situation where we cannot put our minds at ease and we ought to find solutions towards a sustainable future. To lead the development of Asia and the Pacific, in any of the agreed priority areas of the region and the ICSU Strategic Plan 2012 – 2017, RCAP members lead Programmes such as Hazard and Disasters, Health and Wellbeing in the Changing Urban Environment, Sustainable Energy, and Ecosystem.

More than 10 meetings were held to discuss how to build our research community and draw up implementation strategies for the Future Earth initiative in Asia and the Pacific region. The 5th ICSU Regional Consultation themed Future Earth in Asia and the Pacific and the 16th Meeting of RCAP

was held on 26 - 28 November 2013 in Seoul. During the meeting, a new initiative, 'Sustainable Initiative in the Marginal Seas of East Asia (SIMSEA)' was proposed. This initiative will follow the principles of Future Earth. It will seek scientific excellence and link earth systems research to global sustainability.

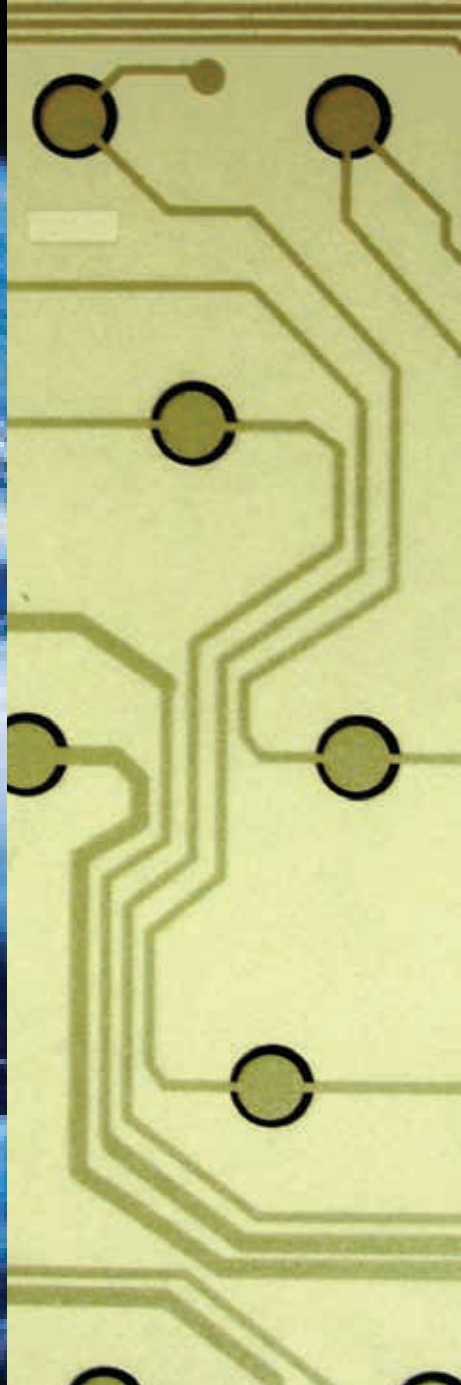
Under the terms of appointment the membership of the RCAP members, Soottiporn Chittmittrapap, Javed Iqbal, Jianxin Zhang, Toshio Yamagata, came to an end on 31 December 2013. They were reappointed for another three years.

Looking back on the year, we have been strengthening our planned activities following the second ICSU Strategic Plan 2012-2017 and the major new initiative, Future Earth. We have consolidated our experience how to build our research community and draw up implementation strategies to stimulate collaboration and cooperation in Asia and the Pacific. The role of ICSU ROAP and RCAP members in achieving this will be further optimized for the benefit of society and sustainable future.

ICSU Regional Office for Asia and the Pacific 2013 Events Register

DATE	EVENT
29 – 30 January	Workshop on Development of Project Proposals for ICSU ROAP Urban Health and Wellbeing Programme Kuala Lumpur, Malaysia
7 – 11 February	International Conference on Coastal Cities at Risk: Building Adaptive Capacity for Managing Climate Change in Coastal Megacities Manila, Philippines
28 February	APL-SATREPS Symposium on Living in the Changing Planet: Future Earth Designed by Simulation Tokyo, Japan
18 – 19 March	Workshop on Research Cooperation between Developed and Developing Countries in the Area of Climate Change Adaptation and Biodiversity at the OECD Global Science Forum Nanyang Technological University Singapore
25 – 26 March	MAIRS 8 th Scientific Steering Committee Meeting Guangzhou, China
8 – 9 April	Brainstorming on Future Earth in Asia Taipei, Chinese Taipei
8 – 9 April	ICSU Integration Workshop on Sustainable Energy Mexico City, Mexico
10 – 12 April	APN Intergovernmental Meeting (IGM) and Science Planning Group (SPG) Meeting Kobe, Japan
25 – 26 April	15 th Meeting, ICSU Regional Committee for Asia and the Pacific Kuala Lumpur, Malaysia
25 – 26 April	Sida - Result Based Management Training Paris, France
7 – 8 May	ICSU Regional Implementation Workshop on Sustainable Energy on sub-Saharan Africa Nairobi, Kenya
7 – 9 May	Science Council of Asia (SCA) 13 th Annual Conference Bangkok, Thailand

22 – 24 May	Meeting of ROAP Steering Committee on Urban Health and Wellbeing Kuala Lumpur, Malaysia
23 May	Symposium on Urban Health and Wellbeing Kuala Lumpur, Malaysia
8 – 12 July	12 th Pacific Science Inter-congress Suva, Fiji
31 July – 2 August	MAIRS Future Earth in Asia Strategic Plan Drafting Workshop Hong Kong, China
21 August	ISIS-ICSU Roundtable on Future Earth: Pathways to Sustainability Kuala Lumpur, Malaysia
11 – 13 September	Symposium on A Systems Approach to Urban Health and Wellbeing in Asia – Pacific. International Conference on Urban Dynamics and Health: Concepts, methods and applications, University of West Paris Paris, France
17 – 18 September	National Coordination Workshop on Future Earth: Developing a Science Technology and Innovation (STI) Agenda for Sri Lanka towards Future Earth Colombo, Sri Lanka
26 September	International Workshop on Future Earth Beijing, China
10 - 14 October	IUPsyS Capacity Building Workshop on Building Individual and Organizational Capacity for Psychological Intervention After Disasters in the Asia and Pacific Region Beijing, China
5 – 6 November	ICSU Chairs, Directors and Officers Meeting Paris, France
26 – 28 November	16 th Meeting, ICSU Regional Committee for Asia and the Pacific Seoul, Republic of Korea
26 – 27 November	5 th ICSU Regional Consultation in Asia and the Pacific Seoul, Republic of Korea



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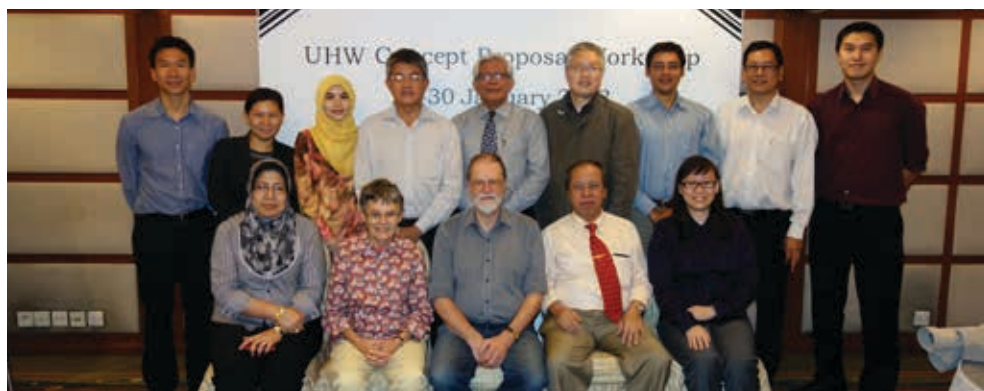
Planning, Coordinating and Promoting Research

Health and Wellbeing in the Changing Urban Environment

This priority area of ICSU ROAP was very active during the year. The following suite of activities reflects the achievements of ROAP in promoting the growth of the concept of a systems approach in research on urban health and wellbeing in Asia and the Pacific. Activities included an advanced training workshop, joint regional and international committee meetings, and the organization of a symposium on urban health and wellbeing in Asia. In addition, ROAP participated in the International Conference on Urban Dynamics and Health: Concepts, Methods and Applications, held at the University of Paris West, at Nanterre, France.

Training Workshop in Systems Thinking

A two-day workshop was held in Kuala Lumpur on 29 and 30 January 2013 as a step forward in the Urban Health Programme. In late 2012 ROAP received proposals for pilot projects in the region. This workshop was designed to help scientists associated with the proposed projects to learn more about systems approaches, to adapt them to their projects, and to develop their concept into full project proposals for submission to funding bodies. Twelve scientists from the region attended the workshop, which was facilitated by



Barry Newell and Katrina Proust from the Australian National University. Participants were introduced to some basic concepts and tools associated with complex systems, feedback dynamics and systems thinking. Newell and Proust also presented an overview of an approach that they have developed which can guide the application of system dynamics methods in investigations of complex human-environment problems.

Meeting of ROAP Steering Committee

The Regional Steering Committee on Urban Health and Wellbeing met in Kuala Lumpur during 22-24

May 2013 to discuss progress in, and future directions of, the Urban Health and Wellbeing (UHW) Programme. The Committee was informed of the pilot projects that are under development, and of the role of systems approaches in the programme.

The meeting was held back-to-back with the second meeting of the ICSU Scientific Committee on Urban Health. This enabled the two committees to have a joint meeting to discuss development of the UHW Programme. It was acknowledged that ROAP, with its members, has played an important role in spearheading the global programme.





Kuala Lumpur Symposium on Urban Health and Wellbeing

A half-day symposium on urban health and wellbeing was organized in conjunction with the meetings in May 2013. In addition to invited speakers from Asia, members from both committees gave presentations at the symposium. They included: Prof Indira Nath, Chair of ICSU Science Committee on Urban Health; Dr Katrina Proust, the Australian National University; Professor Susan Parnell, University of Cape Town; Dr Lai Choo Malone-Lee, Center for Sustainable Asian Cities, National University of Singapore; Dr Yong-Guan Zhu, Institute of Urban Environment, Chinese Academy of Sciences; and Prof Dr Lai-Meng Looi, Co-chair of the Inter-Academy Medical Panel (IAMP).

International Conference on Urban Dynamics and Health: Concepts, Methods and Applications

This conference was held at the University of Paris West, Nanterre, during 11-13 September 2013. The aims of the conference were to build bridges between researchers, civil society and decision-makers in the field of public health; to facilitate better understanding of the forces affecting urban health and of the links between urbanization and population health; and to assist and inform better public action.

ROAP organised a plenary session, entitled *A Systems Approach to Urban Health and Wellbeing in the Asia-Pacific Region*, which demonstrated activities in the region concerning

taking a systems approach to research on health in the changing urban environment. The symposium comprised four interconnected presentations:

1. The ICSU ROAP Urban Health and Wellbeing Programme, by Prof Nordin Hasan, Director ICSU ROAP.
2. Collaborative Conceptual Modelling: Unravelling Dynamic Complexity, by Dr Barry Newell, The Australian National University.
3. Urban Health Dynamics: The Challenge of Designing a Systems Programme, by Dr Katrina Proust, The Australian National University.
4. Green Transportation for Better Urban Health: a Systems Approach, by Dr Candice Lung, Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan.

Key points from the session included: the need for researchers to work together across disciplines and sectors, so that they develop a shared understanding of the dominant forces influencing urban health; and the importance of cross-sector feedback in policy-making and management in urban health systems.

The plenary session received much attention and response from international organizations, such as the International Society of Urban Health (ISUH), and the Inter-Academy Medical Panel (IAMP). It has also prompted an on-going discussion with proponents of the European-African Network of Urban Health about taking a systems approach.



Hazards and Disasters

Coastal Cities at Risk: Building Adaptive Capacity for Managing Climate Change in Coastal Megacities

ICSU ROAP participated in the International Conference on Coastal Cities at Risk: Building Adaptive Capacity for Managing Climate Change in Coastal Megacities in Manila on 7 – 11 February 2013. The project is part of an International Research Initiative on Adaptation to Climate Change (IRIACC) spearheaded by ICSU's President elect Professor Gordon McBean. It is

a five-year programme involving in-depth studies of coastal megacities in Canada, Thailand, Nigeria, and the Philippines. IRIACC is managed by Canada's International Development Research Centre (IDRC) and funded jointly by IDRC and Canada's three main research granting bodies, known as the Tri-Council consisting of the Canadian Institute of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC). The Director of ROAP is a member of the project's International Advisory Panel that is chaired by Gordon.



Psychological Intervention after Disasters in the Asia - Pacific Region

The International Union of Psychological Science (IUPsyS) in partnership with the Institute of Psychology, Chinese Academy of Sciences (CAS) and the Chinese Psychological Society of the Chinese Association of Science and Technology (CAST), with support from the ICSU Regional Office for Asia and the Pacific (ROAP) organized a capacity building workshop on psychological intervention after

disasters in Beijing, China from 10 – 14 October 2013. The aims of the workshop were to present participants with the most recent scientific and applied scientific evidence and knowledge relevant for psychological intervention after disasters; show the constraints and opportunities of working with particular target groups, such as children and adolescents; develop relevant knowledge provision, education and training in academic programs of psychology; and help develop a regional network to support continuance in scientific training in mental health support following disasters.





The overall long-term aim of the Workshop is to use existing IUPsyS experience and its access to international scientific and applied expertise on resilience in the face of stressful and traumatic events, to help researchers, educators and practitioners in Asia and the Pacific region to increase their understanding of, and ability to respond to the mental health

consequences of regional disasters. It is expected that this workshop will further the longer-term plans of IUPsyS and its partners towards meeting these aims, especially with regard to establishing a regional network of professionals with skills for psychological interventions after major disasters

Sustainable Energy

Global - Regional Integration Workshop on Sustainable Energy

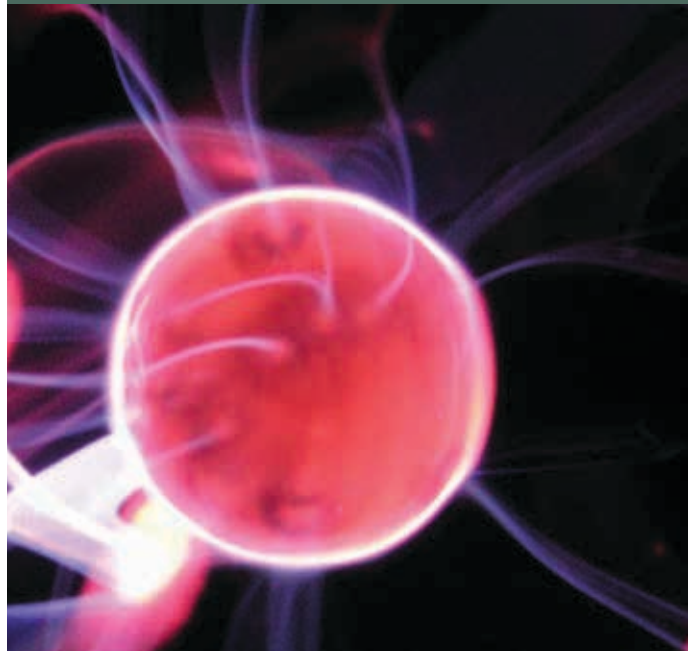
ICSU ROAP contributed to two workshops on sustainable energy, one in Latin America and the other in Africa. The Global – Regional Integration Workshop on Sustainable Energy was held on 8 – 9 April 2013 in Mexico City. The workshop aimed to integrate the various ICSU regional science plans and activities in sustainable energy into a coherent global-regional framework that focuses on areas where ICSU can make a unique and valuable contribution. Regional needs and the potential for intra- and inter-regional cooperation were assessed. A total of 36 participants from Latin America and the Caribbean, Africa, Asia and the Pacific participated in the workshop. It focused on how science can contribute to the sustainable energy initiative both at the global and regional levels. Participants also

shared information on current and potential future cooperation that can enrich the content of regional activities with new science and research initiatives. Case studies from each of the regions were presented with a view to share experiences and lessons learnt in order to shape regional activities in future. The workshop identified important common issues, problems and themes in sustainable energy between countries and regions and made key recommendations for collaborative research.

Implementation Workshop on Sustainable Energy in sub-Saharan Africa

The Implementation Workshop on Sustainable Energy in sub-Saharan Africa was organised by the ICSU Regional Office for Africa, in collaboration with Maseno University, Kenya. The workshop,

which was held in Nairobi, Kenya on 7 – 8 May 2013, brought together 36 energy scientists as well as representatives of key energy initiatives and international organizations from 16 countries. ICSU ROAP was represented at the workshop by Dr Hezri Adnan, Research Fellow at the Institute of Strategic and International Studies (ISIS), Malaysia. The event provided a platform for key regional players and other stakeholders in energy research, to network and deliberate on issues related to Sustainable Energy research with the aim of harmonizing ICSU's activities in this field within and outside the Region. The participants worked to design a framework for development of projects on sustainable energy research that will be implemented within the context of the Future Earth framework.





Future Earth in Asia and the Pacific

Much of our efforts this year were directed towards developing awareness of Future Earth in Asia and the Pacific. The Office organised, assisted in organising or made presentations about Future Earth in Bangkok, Beijing, Colombo, Hong Kong, Hyderabad, Kuala Lumpur, Seoul, Singapore, Suva and Taipei. Understanding of Future Earth in Asia and the Pacific is on the whole good because of these activities.

Bangkok

The Science Council of Asia (SCA) endorsed Future Earth as a very important global research framework, at its 13th Annual Conference held in Bangkok, Thailand on 7 - 9 May 2013. Professor Chao Han Liu (Center for Sustainability Science, Academia Sinica), speaking during a panel discussion on Future Earth at the Conference said that many answers are needed from Asia and the Pacific on the question of global sustainability. Alternatives needed to be found for the currently energy and material intensive approach to development practised by industrialised countries. In

addition research are needed on tipping points arising from albedo changes in the Tibetan Plateau, and on transformations of the ENSO triggering mechanism of the Indian Monsoon. The effects of the thawing of the Siberian permafrost and release of greenhouse gases have yet to be completely understood too. According to a recent publication permafrost covers 24 percent of the land surface of the Northern Hemisphere and significant thawing could affect vast areas and release billions of tons of carbon. This has huge implications for ecosystems in the region. The need for a new form of science that was more transdisciplinary in character was highlighted. Professor Supakorn Chinvanno of the Southeast Asia Start Regional Center in Bangkok stressed the need for regional scale research that was holistic and a paradigm shift was required to design appropriate research frameworks on these issues. The theme of the SCA's Annual Conference and General Assembly in 2014 will be Future Earth: Research for global sustainability and a holistic understanding of sustainable development in Asia. The Conference will be held in June 2014 in Kuala Lumpur, Malaysia



Beijing

The International Workshop on Future Earth in China was organized also in September 2013 in Beijing. It discussed the research themes of Future Earth in general and reviewed progress of global change studies in China especially with regard to climate change prediction, science-policy interface, biodiversity monitoring and informatics, and natural disaster management and mitigation. Urbanization and urban development were also the focus of discussions including China's strategy on energy for sustainable development. Of particular interest was the discussion at the Workshop on the topic of working with social scientists and policy makers. The President of ICSU delivered a

keynote address that provided an Asian perspective on sustainable development. The Director ROAP summarized the findings of the many national, regional and sub-regional Future Earth workshops held in Asia and the Pacific since the end of 2012.

Colombo

The Sri Lankan Coordinating Secretariat for Science, Technology and Innovation (COSTI) held a coordinating workshop on Future Earth on 17 and 18 September 2013 in Colombo to develop an appropriate Future Earth research agenda for Sri Lanka. Discussions centered around a framework that would enable the identification, design and development of modalities to co-implement research activities

related to Future Earth, including demand driven R&D by scientists, policy makers and end-users. The workshop discussed opportunities and challenges for implementing Future Earth in Sri Lanka, and explored the best possible ways of establishing a national interface for Future Earth. The Chair of the Scientific Committee of Future Earth, Mark Stafford-Smith delivered a video-message at the start of the workshop. The Senior Minister of Scientific Affairs of Sri Lanka, and Minister of Environment and Sustainable Energy gave welcome addresses. The President of ICSU Yuan Tseh Lee delivered a keynote speech entitled “Sustainable transformation of human society”. Director of ICSU ROAP and Heinz Gutscher, a member of the science committee of Future Earth, presented keynotes on possible

Future Earth research agenda and of a fresh approach to global change research respectively, at the beginning of the workshop.

Hong Kong

The Monsoon Asia Integrated Regional Study (MAIRS) organized a meeting to input into Future Earth and to develop a strategic science plan for Future Earth in Monsoon Asia. The meeting was hosted by the Hong Kong Polytechnic University. ROAP was represented at the meeting by its Director. Representatives from APN, RIHN and key natural and social scientists in Asia also attended the meeting. The preparation of the plan would assist agenda setting for Future Earth across Asia.



Hyderabad

A full day of the 4-day Annual Convention of the Indian Geophysical Union (IGU) was devoted to presentations and discussions on Future Earth. The President of ICSU Professor Yuan Tseh Lee, inaugurated the Convention which was also the Golden Jubilee Convention of the Union. Professor Lee delivered a keynote address entitled “The Sustainability of Human Society” during the full-day session on Future Earth. The Director of ROAP made a presentation of the results of the Regional Workshop on Future Earth held in Kuala Lumpur in November 2012. The session served to raise the awareness of geophysicists and other scientists in India on research for global sustainability and how they can contribute to the initiative.

Kuala Lumpur

The Institute for Strategic and International Studies (ISIS) Malaysia and ICSU ROAP organized a Roundtable on Future Earth: Pathways to Sustainability in Kuala Lumpur. It was attended by 40

invited researchers and stakeholders who discussed the implementation of Future Earth in developing countries with particular reference to Malaysia. It provided participants the opportunity to learn more about this emerging international research program on global sustainability and identify gaps in current research on global change in developing countries. The Roundtable paid particular attention to how science can inform policy processes for sustainability in the future and discuss how co-design and co-production of knowledge may be achieved in Malaysia.

Seoul

ICSU ROAP organized its 5th ICSU Regional Consultation in Asia and the Pacific on 26 and 27 November 2013 in Seoul, Korea in conjunction with the 16th Meeting of the ICSU Regional Committee for Asia and the Pacific. Regional Consultations are held once in two years to provide ICSU National Members in the Region, Scientific Unions, Interdisciplinary Bodies, and Scientific Associates the opportunity to engage and contribute in the planning of the work of the Regional Office for Asia and the Pacific (ROAP) in

the next two years. The theme of the 5th Consultation was *Future Earth in Asia and the Pacific*. The development of research on global sustainability that is the central focus of Future Earth is anticipated to be the principal activity of ROAP in the next two years. The Consultation's main aim was to further enhance understanding of Future Earth particularly in relation to determining what is needed to promote on-the-ground transdisciplinary integrative research that can point the way towards transformative pathways to global sustainability. It also explored the cross-cutting capabilities needed to support Future Earth research in Asia and the Pacific and the means of funding and implementation of a programme to enhance these capabilities. The Consultation also discussed the opportunities and challenges in building a Future Earth research community in Asia and the Pacific, especially in the developing countries of the region. This is a topic that has not been discussed much in Future Earth fora. The consultation was attended by 60 participants from the Asia - Pacific region. It was agreed that the Asia - Pacific region is fully capable of initiating transformations that will drive the transition towards global sustainability under the Future

Earth programme. It not only has the essentials, it also has the opportunity to manage development differently. There is enough diversity and scope to join forces and benefit from complementarities within the region. The major stakeholder groups in the region are ready for international, integrated, collaborative and solutions-oriented research in response to the urgent challenges of global environmental change and sustainable development.

Singapore

The Director of ROAP introduced ICSU and spoke about Future Earth at the 17th International Conference on Materials for Advanced Technologies (ICMAT 2013) organised by the Materials Research Society of Singapore (MRS-S). ICSU President Professor Yuan Tseh Lee delivered a public lecture entitled *Sustainable development of Human Society*. The Materials Research Society of Singapore was created in 1999 as a not-for-profit organisation to serve the materials science community in Singapore. The Society is closely affiliated with the International Union of Materials Research Societies (IUMRS). ICMAT attracts more than 2000 delegates from all over the world.

Suva

ICSU ROAP participated in the 12th Pacific Science Inter-Congress from 8 to 12 July 2013 in Suva, Fiji. The theme of the inter-congress was *Science for Human Security and Sustainability in the Pacific Islands and Rim*. The Director of ROAP delivered a keynote address entitled *Future Earth: A New International Platform for Research on Global Sustainability*. The Inter-Congress was organized by the Pacific Science Association (PSA) and the University of the South Pacific (USP). A symposium was conducted to discuss the implementation of *Future Earth* in the Pacific Island countries. A presentation was also made at a different workshop of the Inter-Congress, of the urban





health and wellbeing pilot projects that was under development by ROAP. The Official Resolutions of the Inter-Congress recorded strong support of Future Earth and encourages the programme to fully engage with the Pacific Island community so that their perspective and solutions can be articulated in a global forum and the particular concerns of the region can be better addressed.

Taipei

A brainstorming session on *Future Earth* in Asia was organized in April in Taipei. It was attended by representatives from the Academy of Sciences located in Taipei, ICSU, the Science Council of Japan, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Australia and the Chinese Academy of Sciences. Academics from the Australian National University, National Sun Yat-sen University and National Taipei University also participated. The meeting discussed a potential framework for developing scientific

programmes under the umbrella of *Future Earth* with a specific focus on issues of urbanization, development and management of coastal zones, and demographic challenges and core values for global sustainability. In terms of the implementation of *Future Earth*, the meeting discussed the possible layering of governance structures at the whole programme level with that at the regional level. It was emphasised that there should be a supra-national neutral office in the Asia-Pacific region that would serve to coordinate and promote *Future Earth* in the region. A design

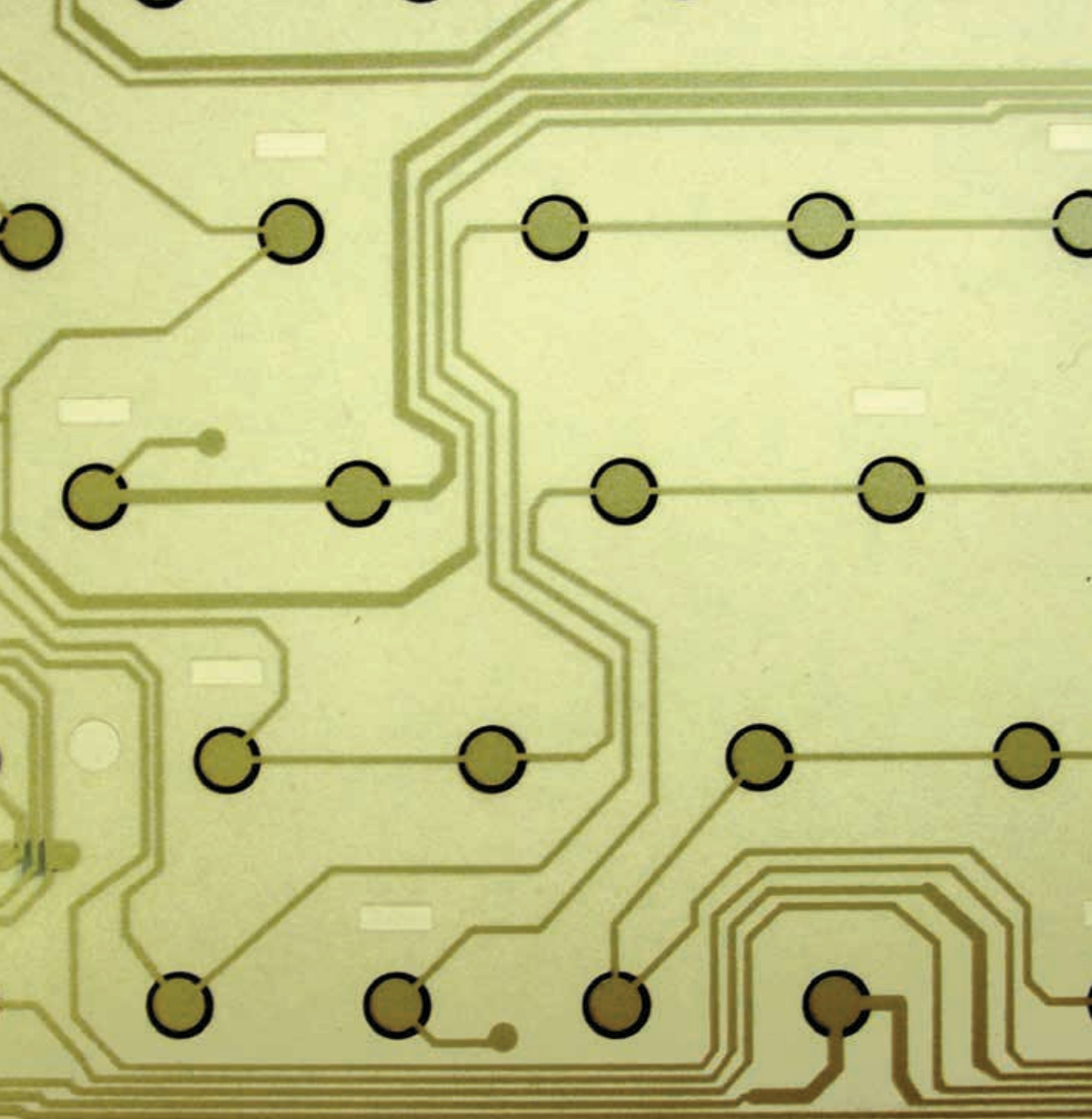




meeting was planned that would refine and finalize the ideas that arose from the meeting and develop an operational framework to take *Future Earth* forward in Asia. The meeting was hosted and funded by the Academia Sinica located in Taipei.

A Young Scientists' Conference on Integrated Research on Disaster Risk, Future Earth, and Sustainability was also held in October in Taipei. The Conference was sponsored by the Integrated Research on Disaster Risk International Centre of Excellence (IRDR-ICoE) located in Taipei and organized by the international secretariat of the

global change capacity building programme System for Analysis, Research and Training (START). The Conference provided an interdisciplinary platform for young scientists from Asia to present their research findings to one another and to leading scientists in the field. It is aimed to encourage excellence, reward performance, and foster development of personal and institutional research networks among young and early career scientists in the region. The Conference was hosted by the Center for Sustainability Science, Academia Sinica.



Regional Networking

Science Council of Asia (SCA)

The 13th Science Council of Asia (SCA) Annual Conference was held from 7 – 9 May, 2013 in Bangkok, Thailand. The Conference was attended by thirteen member countries. This year's SCA Annual Conference endorsed Future Earth as a very important global research framework. Future Earth was addressed at the Panel Discussion during the Conference. The session was moderated by Mohd Nordin Hasan, President of SCA and also Director of ICSU ROAP. Professor Chao Han Liu, one of the session panellists emphasised the importance of Asia and the Pacific region in global sustainability.

Asia-Pacific Network for Global Change Research (APN)

The APN 18th Inter-Governmental Meeting (IGM)/Scientific Planning Group (SPG) Meeting and associated committee meetings were convened in Kobe, Japan from 10 – 12 April 2013. It was hosted by the Ministry of the Environment, Japan, and the Hyogo Prefectural Government. APN national Focal Points and Scientific Planning Group members from its 22 Member Countries, donor representatives and invited experts participated in this annual gathering. Director of ROAP attended the meeting and spoke about Future Earth the new international research platform on global sustainability.



Application Laboratory - Japan Agency for Marine-Earth Science and Technology (APL - JAMSTEC)

The Director of ROAP visited the Application Laboratory (APL) of JAMSTEC, the Japan Agency of Marine Earth Science and Technology, to learn of its functions and activities. The Application Laboratory does research on ways and means of applying the results of climate change prediction, climate modeling, and atmospheric composition studies, simulation

technologies, and tropical Pacific Ocean climate study to benefit society. The visit was made in conjunction with attendance of the APL-SATREPS Symposium entitled *Living in the Changing Planet* that was held to mark the end of the collaboration between Japan and South Africa that built capacity on the prediction of climate variations and its applications in South Africa. The visit and attendance at the Symposium enabled ROAP to forge closer ties with JAMSTEC and other JAMSTEC agencies responsible for research on global environmental change, the evolution of the earth, and on biogeosciences.



Pacific Science Association (PSA)

The Pacific Science Association (PSA), founded in 1920, is a regional, nongovernmental, scholarly organization that seeks to advance science and technology in and of the Pacific region by fostering interdisciplinary and international research and collaboration. ROAP has had close relations with the PSA since its inception in 2006 as there is close overlap of the mission of ICSU ROAP with that of the PSA *viz.* engaging science in the service of human needs and improving both the environment and the quality of life of the region's peoples by serving as a catalyst for scientific and scholarly collaboration. This year ROAP contributed significantly to the 12th Pacific Science Intercongress organised by the PSA at the University of the South Pacific, in Suva, Fiji, by providing a keynote address as well as holding

a symposium about Future Earth, and making a presentation about its new urban health and wellbeing programme at one of the sessions of the Inter-Congress.

Research Institute for Humanity and Nature (RIHN)

Linkage with the Kyoto based Research Institute for Humanity and Nature (RIHN) is strengthening because of ROAP's engagement in the development of Future Earth in Asia and the Pacific. The Director of RIHN Professor Tetsuzo Yasunari is a member of the Scientific Committee of Future Earth and is Chair of the National Committee for Future Earth in Japan. This National Committee is hosted by the Science Council of Japan. ROAP has contributed to workshops on Future Earth in Asia organised by RIHN since 2012.





Science for Policy

OECD Global Science Forum

The Global Science Forum (GSF) provides a venue for consultations among senior science policy officials of OECD member countries. It produces findings and action recommendations on high-priority science policy issues requiring international consultations/co-operation, and identifies opportunities for collaboration on major scientific undertakings. Specifically, the GSF serves its members in the formulation and implementation of their science policies by: 1) exploring opportunities for new or enhanced international co-operation in selected scientific areas; 2) defining international frameworks for vital national or regional science policy decisions; and 3) addressing the scientific dimensions of issues of global concern.

The Forum conducted a Workshop on Research Cooperation between Developed and Developing Countries in the Area of Climate Change Adaptation and Biodiversity in Singapore on March 18-19, 2013. It was hosted by the

Nanyang Technological University, Singapore. ICSU ROAP was represented at the Workshop by its Director.

The Workshop sought to refine and expand the findings of the OECD Global Science Forum (GSF) study of research cooperation between developed and developing countries in the area of climate change adaptation and biodiversity conservation that was undertaken to explore ways in which both the scientific and development benefits of research cooperation can be optimized. This study is a follow-on to earlier work of the OECD GSF entitled *Opportunities, Challenges and Good Practices in International Research Cooperation between Developed and Developing Countries*. This workshop aimed to go further to document good examples of international research cooperation between developed and developing countries, to understand how best to design such cooperation and discuss how to create impacts from collaborative projects.



Governance

15th Meeting of ICSU RCAP

The ICSU Regional Committee for Asia and the Pacific (RCAP) held its 15th Meeting in Kuala Lumpur on 25 and 26 April 2013. The meeting was chaired by Dr Hong Kum Lee, the Director General of the Korean Polar Research Institute (KOPRI). She has been a member of RCAP since 2009 and was appointed Chair in 2012. The meeting discussed the planning of the ICSU ROAP activities and the implementation progress of the programmes in its priority areas.





16th Meeting of ICSU RCAP

The 16th RCAP Meeting held on 26 – 28 November in Seoul, the Republic of Korea was hosted by the Korean Polar Research Institute (KOPRI). It welcomed Professor Sukiman Sarmani the new representative from the Council of the Academy of Sciences Malaysia, the host organization of ICSU Regional Office for Asia and the Pacific (ROAP). The meeting reviewed progress of its work in four priority areas in 2013.

The 5th ICSU Regional Consultation in Asia and the Pacific was also organized in conjunction with the 16th RCAP meeting. It focused on the new 10-year international research programme, Future Earth. The Consultation explored how Future Earth may be implemented in Asia and the Pacific focusing on transformative pathways, capacity building and funding needs.





ICSU in Asia & the Pacific

ICSU in Asia and the Pacific

Regional Committee for Asia & the Pacific

Hong-Kum Lee - Chair
Principal Researcher
Korea Polar Research Institute (KOPRI)
REPUBLIC OF KOREA

Soottiporn Chittmittrapap
Secretary-General,
National Research Centre Thailand
THAILAND

B.V.R. Chowdari
Executive Director
NUS-India Research Initiatives
Office of the Deputy President
(Research & Technology), Department
of Physics,
National University of Singapore
SINGAPORE

Togtokh Chuluun
Science Advisor to the Minister of
Environment and Green Development
Ministry of Environment & Green
Development
MONGOLIA

Lourdes J. Cruz
Member and
Immediate Past - President
Department of Science & Technology
National Research Council of the
Philippines
THE PHILIPPINES

Keith Hunter
Pro-Vice-Chancellor
Division of Sciences
University of Otago
NEW ZEALAND

Javed Iqbal
Honorary Professor/President
Cosmic Discoveries Pvt Ltd, Hyderabad
Dr. Reddy's Institute of Life Sciences
(DRILS)
Institute of Life Sciences, University of
Hyderabad
INDIA

Marshall Jayasuriya
Malabe
SRI LANKA

Toshio Yamagata
Director
Application Laboratory
Japan Agency for Marine-Earth Science
and Technology (JAMSTEC),
JAPAN

Jianxin Zhang
Professor of Psychology
Institute of Psychology
Chinese Academy of Sciences
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Ex-Officio
Mohd Nordin Hasan
ICSU Regional Office for Asia & Pacific
MALAYSIA

Sukiman Sarmani
(ASM Representative)
School of Chemical Sciences & Food
Technology
Faculty of Sciences & Technology
Universiti Kebangsaan Malaysia
MALAYSIA

Steven Wilson
International Council for Science (ICSU)
FRANCE

Guoxiong Wu
(ICSU Executive Board Liason)
Laboratory of Numerical Modeling for
Atmospheric Sciences & Geophysical
Fluid Dynamics (LASG)
Institute of Atmospheric Physics
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Secretariat

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Financial Summary

Financial Summary January - December 2013

INCOME	MYR	EUR
<u>Annual Grants</u>		
Malaysian Government	900,000.00	225,000.00
ICSU - PARIS	206,500.00	50,000.00
Sub Total	1,106,500.00	275,000.00
<u>Other Income</u>		
Balance b/f 2012	239,191.50	59,798.00
Reimbursement	20,187.02	5,047.00
Miscellaneous support	65,575.36	16,394.00
Other	597.67	149.00
Sub Total	325,551.55	81,388.00
TOTAL INCOME	1,432,051.55	356,388.00
EXPENDITURE	MYR	EUR
Emolument	302,618.59	75,655.00
Communication & Utilities	18,501.94	4,625.00
Supplies/other materials	12,450.00	3,112.00
Maintenance/repairs	9,356.00	2,339.00
Services	376.88	94.00
Meetings/Consultations & Activities expenditure	910,373.22	227,593.00
Total Expenditure	1,253,676.63	313,418.00
BALANCE C/F TO 2014	178,374.92	42,970.00
EUR1.00:RM4.00		



Membership of ICSU

National Members

ICSU's National Members provide input, from a national, multidisciplinary perspective, on priority areas for future ICSU activities. They also play an important role in facilitating links with national governments and science agencies. The majority of ICSU National Members are scientific academies, although some are national funding agencies or other nationally representative science bodies. The following list includes full Members, Scientific Associates*, and Observers**. Pacific Islands includes Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

Albania Academy of Sciences

Angola Foundation of Science and Development

Argentina National Scientific and Technological Research Council (CONICET)

Armenia National Academy of Sciences of the Republic of Armenia

Australia Australian Academy of Science

Austria Die Österreichische Akademie der Wissenschaften

Azerbaijan Azerbaijan National Academy of Sciences**

Bangladesh Bangladesh Academy of Sciences

Belarus National Academy of Sciences (NASB)**

Belgium Royal Academies for Science and the Arts of Belgium (RASAB)

Bolivia Academia Nacional de Ciencias de Bolivia (ANCB)**

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 Infrastructure Science and Technology

Brazil Academia Brasileira de Ciências (ABC)

Bulgaria Bulgarian Academy of Sciences (BAS)

Burkina Faso Centre National de la Recherche Scientifique et Technologique**

Cameroon Cameroon Academy of Sciences

Canada National Research Council of Canada

Caribbean Caribbean Academy of Sciences (CAS)* (1)

Chile Academia Chilena de Ciencias

China China Association for Science and Technology (CAST)
China Taipei Academy of Sciences located in Taipei
Colombia Academia Colombiana de Ciencias Exactas, Físicas y Naturales
Costa Rica Academia Nacional de Ciencias
Côte d'Ivoire Académie des Sciences, des Arts, des Cultures d'Afrique et des Diasporas Africaines (ASCAD)**
Cuba Academia de Ciencias de Cuba
Czech Republic Academy of Sciences of the 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 (ASRT)
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 (DFG)
Ghana Ghana Academy of Arts & Sciences**
Greece Academy of Athens
Guatemala Academia de Ciencias Médicas Físicas y Naturales de Guatemala*
Hungary Hungarian Academy of Sciences
India Indian National Science Academy
Indonesia Indonesian Institute of Sciences (LIPI)
Iran Islamic Rep. of 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 Democratic People's Republic of 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, Former Yugoslav Rep. of 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, Principauté de 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 (AICIMO)
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 Româna
Russian Federation Russian Academy of Sciences
Rwanda Kigali Institute of Science and Technology (KIST), Rwanda**
Saudi Arabia Kingdom of King Abdulaziz City for Science and Technology (KACST)
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 Pacific University of the South Pacific (2)
Spain Ministerio de Ciencia y Innovacion
Sri Lanka National Science Foundation
Sudan Republic of National Centre for Research**
Swaziland National Research Council**
Sweden Royal Swedish Academy of Sciences
Switzerland Swiss Academy of Sciences
Tajikistan Academy of Sciences of the Republic of Tajikistan**
Tanzania Tanzania Commission for S&T
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 (UNCST)
Ukraine National Academy of Sciences
United Kingdom Royal Society
United States National Academy of Sciences
Uruguay Comisión Consejo Nacional de Innovación Ciencia y Tecnología (CONICYT)
Uzbekistan Republic of 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

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

Scientific Unions

- International Astronomical Union (IAU)
- International Brain Research Organization (IBRO)
- International Geographical Union (IGU)
- International Mathematical Union (IMU)
- International Union for Quaternary Research (NQUA)
- 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 Organisations (IUFRO)
- International Union of Geodesy & Geophysics (IUGG)
- International Union of Geological Sciences (IUGS)
- International Union of the History and Philosophy of Science (IUHPS)
- International Union of Immunological Society (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 Pharmacology (IUPHAR)
- International Union of Physiological Sciences (IUPS)
- International Union of Psychological Sciences (IUPsyS)
- International Union of Soil Sciences (IUSS)
- International Union of Theoretical and Applied Mechanics (IUTAM)
- International Union of Toxicology (IUTOX)
- Union Radio Scientifique International (URSI)

Interdisciplinary Bodies

The Interdisciplinary Bodies bring together different scientific disciplines to address scientific issues of international relevance that are of interests to ICSU Members. Some of these bodies are co-sponsored with other organisations.

Thematic Organizations

- Programme on Ecosystem Change and Society (PECS)
- Integrated Research on Disaster Risk (IRDR)
- Committee On SPace Research (COSPAR)
- Scientific Committee on Antarctic Research (SCAR)
- Scientific Committee on Frequency Allocations for Radio Astronomy and Space Science (IUCAF)
- 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)
- WMO-ICSU-IOC World Climate Research Programme (WCRP)

Monitoring and Observations

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

Data and Information

- ICSU World Data System (WDS)
- Committee on DATA for Science and Technology (CODATA)
- International Network for the Availability of Scientific Publications (INASP)

Scientific Associates

- The Academy of Sciences for the Developing World (TWAS)
- Academia de Ciencias de América Latina (ACAL)
- 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 System 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)

