

Strengthening international science for the benefit of society





ICSU REGIONAL OFFICE FOR ASIA AND THE PACIFIC

ANNUAL REPORT 2015



ICSU VISION AND MISSION	2
MESSAGE FROM THE DIRECTOR MESSAGE FROM THE CHAIR OF THE REGIONAL COMMITTEE	3 4
EVENTS IN 2015	6
PLANNING, COORDINATING AND PROMOTING RESEARCH	11
Health and Wellbeing in the Changing Urban Environment	1
 Meeting of Urban Health and Wellbeing Regional Science Committee 	1′
Urban Health Pilot Project Secures Funding	11
Natural Hazards and Risk	13
 3rd Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk 	13
 4th International Tsunami Field Symposium 	14
 4th Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk 	14
 Meeting of Planning Group on Psychological Intervention After Disasters 	15
 4th International Workshop on Psychological Intervention After Disasters 	15
FUTURE EARTH IN ASIA AND THE PACIFIC	19
 Development of Future Earth in Asia and the Pacific 	19
 Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA) 	20
REGIONAL NETWORKING	25
 Science Council of Asia 15th Annual Conference 	25
 Science and Technology in Society Forum in Kuala Lumpur 	25
 SAKURA Exchange Programme in Science 	26
Discussion with Max Weber Foundation	26
GOVERNANCE	29
19 th Meeting of Regional Committee	29
 20th Meeting of Regional Committee 	29
ICSU IN THE ASIA AND THE PACIFIC	3′
 Regional Committee for Asia and the Pacific 	3′
Secretariat	33
FINANCIAL SUMMARY	35
MEMBERSHIP OF ICSU	37
National Members	37
Scientific Unions	40
Interdisciplinary Bodies	41
Scientific Associates	4′



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 and serves 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



MESSAGE FROM THE Mohd. Nordin Hasan DIRECTOR

Director

ICSU Regional Office for Asia and the Pacific

t has been another exciting and productive year at the ICSU Regional Office for Asia and the Pacific (ROAP). Its role in the development of Future Earth continues to flourish with the consolidation of the development phase of its new programme - Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA). This is one of ROAP's main contribution to the growth of Future Earth in Asia. It serves as an example of how regional collaboration in transdisciplinary solutions oriented research can be planned and developed. In addition to this, two of ROAP's Regional Committee members, Soottiporn Chittmittrapap and Nordin Hasan, were invited to the Regional Advisory Committee (RAC) of Future Earth in Asia. Nordin was subsequently selected to Chair the RAC.

The work of ROAP on hazards and risk led by the Steering Group on Natural Hazards and Risk (SGNHR) continues to progress. In the vear under consideration it was involved in research on historical records of high energy events in the Gulf of Thailand, co-organised the 4th International Tsunami Field Symposium, in Phuket, Thailand, and convened a symposium session in the 12th Annual Meeting of the Asia Oceania Geosciences Society in Singapore. The Chair of SGNHR represented ROAP in several meetings at the global level including the Science and Technology Major Group Meeting which presented a Plenary Statement at the UN 3rd World

Conference on Disaster Risk Reduction in Sendai, Japan. He also represented ROAP in the IRDR Science Committee meeting in Stellenbosch University, South Africa.

One of the pilot projects developed under the guidance of the Urban Health and Wellbeing programme of ROAP obtained funding for implementation. This is a landmark achievement spearheaded by the Research Center for Environmental Changes of the Academy of Sciences located in Taipei. The project will use the systems approach to research green transportation and urban health in the face of climate change in the city of Taipei. This pioneering effort will engage with nine different groups of researchers and illustrate the development of practical approaches to integrative research and decision-making in complex systems.

The collaboration with the International Union of Psychological Sciences (IUPsyS) on capacity development for research in psychological intervention after disasters entered its 4th year in 2015. The 4th International Workshop on the subject was successfully held in Taipei, hosted by the Center for Sustainability Science, and the Research Center for Environmental Changes of the Academy of Sciences located in Taipei. We thank all partners who made the workshop possible, and the mostly early career scientists who attended the workshop.



In the science for policy arena, ROAP participated in several national and regional meetings, the most significant of which were the 3rd UN Secretary-General Scientific Advisory Board Meeting, the International Symposium on Transnational Cooperation towards Enhancing Ocean Governance, on World Ocean Day, and the Science, Technology and Society (STS) Forum ASEAN-Japan Workshop for Innovation, Science and Technology Cooperation, all held in Kuala Lumpur.

The agreement between ICSU and the Government of Malaysia on the hosting of ROAP ends in September 2016. I would like to take this opportunity to thank the Ministry of Science, Technology and Innovation, Government of Malaysia, which through its agency the Academy of Sciences Malaysia (ASM) provided solid support to ROAP since its inception in 2006. I hope the collaboration between ICSU and the Government of Malaysia will continue to grow as an epitome of what is possible in international collaboration in science for the benefit of society.



MESSAGE FROM THE CHAIR OF THE REGIONAL Lourdes J. Cruz COMMITTEE

Chair

Regional Committee for Asia and the Pacific



et me begin by congratulating Director Nordin Hasan who was selected as Chair by the recently formed eightmember Regional Advisory Committee (RAC) for Future Earth in Asia. Congratulations also to Professor Emeritus Dr. Soottiporn Chittmittrapap, a member of the ICSU Regional Committee for Asia and the Pacific (RCAP), who was also selected as one of the members of RAC. This committee is expected to evolve into a full Future Earth Regional Committee for Asia (RCAP) and become an effective advocate of Future Earth in the region.

2015 turned out to be a very good year for ICSU Regional Office for Asia and the Pacific (ROAP). ROAP successfully led the development of several pilot project proposals on the systems approach for urban health and wellbeing (UHWB). One of these, "Planning Green Transportation for Better Urban Health under Climate

Change" successfully bid for funds from the Ministry of Science and Technology in Taiwan an is currently an on-going research project at the Research Center for Environmental Changes of The Academy located in Taipei. The Steering Group on Natural Hazards and Risk (SGNHR) of ICSU ROAP was also successful in obtaining funds to support a twoyear research project on coastal hazards in South-East Asia from Zayed University where the Chair, James Terry is based. Additional funds for the project was obtained from the National University of Singapore.

ICSU ROAP together with the International Centre of Excellence on Integrated Research on Disaster Risk (IRDR-ICoE), Taipei organized the 4th International Workshop on Psychological Intervention after Disasters (PIAD 2015) in November 2015. The series of workshops for capacity building is spearheaded by the International Union of Psychological Science (IUPsyS) with support from ICSU and other partners. The training provided focuses on enhancing the science needed to better understanding the scientific basis of psychological interventions after disasters.

The Sustainability Initiative for the Marginal Seas of South and East Asia (SIMSEA), a flagship project of ROAP is now in its second

year of development. SIMSEA is seen as "an international alliance of physical, ecological and social scientists working together in collaboration with other stakeholders to generate policy and community-relevant knowledge towards sustainability of the marginal seas of South and East Asia".

During the year ICSU ROAP was independently reviewed to assess its functioning and achievements over the past five years. Quoting from the executive summary of the review, "ICSU ROAP is viewed upon favourably and positively in the region, with all feedback from interviewees generally positive". It has "exhibited very good adherence to the ICSU strategic plan and all initiatives undertaken have been consistent with the overall direction of the strategic plan". On assessing the performance of ICSU ROAP over the past five years, the Review Panel's report stated that "despite its limited financial and human resources, ICSU ROAP is extremely effective." Thus the Panel's recommendation is "to maintain the office with its current staff, as the work undertaken is exemplary. The strong network the office has fostered can only be a benefit to international science and the visibility of regional science".

Let us commend ICSU ROAP for its excellent performance!





ICSU REGIONAL OFFICE FOR ASIA AND THE PACIFIC 2015 EVENTS REGISTER

DATE	EVENT
19-27 January	3 rd International Workshop on Future Earth in Asia Kyoto, JAPAN
10 – 11 February	2 nd SIMSEA Steering Committee Meeting Kuala Lumpur, MALAYSIA
24 – 25 February	3 rd Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk (SGNHR) Kuala Lumpur, MALAYSIA
6 March	4 th Meeting of ICSU ROAP Science Committee on Urban Health and Wellbeing Kuala Lumpur, MALAYSIA
9 March	2 nd SIMSEA Japan Workshop Tokyo, JAPAN
23 – 27 March	4 th International Tsunami Field Symposium Phuket, THAILAND
15-23 April	The 18 th Pacific Asian Marginal Seas (PAMS) meeting Osaka, JAPAN
23-24 April	19 th Meeting ICSU Regional Committee for Asia and the Pacific Kuala Lumpur, MALAYSIA
27-30 April	4 th PIAD Planning Group Meeting Taipei, TAIWAN
14-16 May	15 th Science Council of Asia (SCA) Conference Siem Reap, CAMBODIA
25-26 May	3 rd UN Secretary-General Scientific Advisory Board Meeting Kuala Lumpur, MALAYSIA
27 May	Universiti Malaysia Terengganu National Dialogue of Natural Resources and Environment 2015 Kuala Lumpur, MALAYSIA
8 June	World Ocean Day - International Symposium on Transnational Cooperation Towards Enhancing Ocean Governance Kuala Lumpur, MALAYSIA



11 June	ASEAN-Japan Workshop for Innovation, Science and Technology Cooperation Kuala Lumpur, MALAYSIA
3 August	4 th Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk (SGNHR) SINGAPORE
3-4 August	12 th Annual Meeting - Asia Oceania Geosciences Society (AOGS) 2015 SINGAPORE
6 August	Future Earth as Global Knowledge Platform for Healthy and Sustainable Development Kuala Lumpur, MALAYSIA
10-16 August	2 nd China-Association of Southeast Asian Nations (ASEAN) Workshop on Ocean Science and Technology Hangzhou, CHINA
5-8 October	3 rd SIMSEA Steering Committee Meeting Manila, PHILIPPINES
21-22 October	2 nd International Symposium on Co-design for Urbanization in China and Asia-Pacific Region Xiamen, CHINA
26-28 October	ICSU ROAP Review Panel site visit Kuala Lumpur, MALAYSIA
9-12 November	4 th International Workshop on Psychological Intervention After Disasters (PIAD) Taipei, TAIWAN
16-19 November	Officers, Regional Chairs and Directors Meeting Paris, FRANCE
24-25 November	20 th ICSU Regional Committee Meeting Chiang Rai, THAILAND



PLANNING, COORDINATING AND PROMOTING RESEARCH

10

FUTURE EARTH IN ASIA AND THE PACIFIC

18

REGIONAL NETWORKING

24





GOVERNANCE 27

ICSU IN ASIA AND THE PACIFIC

30

FINANCIAL SUMMARY

34



PLANNING, COORDINATING AND PROMOTING RESEARCH

HEALTH AND WELLBEING IN THE CHANGING URBAN ENVIRONMENT

Systems approach in research on urban health and wellbeing in the Asia and the Pacific continues to be actively promoted by ICSU ROAP. This year saw a milestone achievement where scientists from the Research Center for Environmental Changes, Academy of Sciences located in Taipei, secured funding from the Ministry of Science and Technology, Taiwan, to undertake a pilot project developed through the ICSU ROAP sponsored work in its priority area on urban health and wellbeing.

Urban Health and Wellbeing Regional Science Committee Meeting in Kuala Lumpur

The ICSU ROAP Regional Science Committee on Urban Health and Wellbeing met in Kuala Lumpur on 6 March 2015 to review the progress of its work on urban health and wellbeing, and plan for the future direction of the programme. The programme has two final regional pilot projects that are ready for funding - Planning *Green Transportation for Better Urban Health under Climate Change* from Chinese - Taipei and *The Threat of Urban Development in a Thai Farming*

Community: A Systems Approach from Thailand. A third pilot project also on air pollution and urban health is being developed for Xiamen city in China. Dr Franz Gatzweiler, Executive Director of the newly established ICSU International Programme Office (IPO) on Urban Health and Well-Being based at the Institute for Urban Environment of the Chinese Academy of Sciences in Xiamen, attended the meeting as observer. The Committee continued to assist the pilot project teams to secure funding for their research. It would also continue strengthening the knowledge base and building capacities in the interdisciplinary and integrated systems approach to research on health and wellbeing. The meeting was hosted by the United Nations University International Institute for Global Health (UNU - IIGH) located in Kuala Lumpur.



Scientists of Academy of Sciences located in Taipei Secured Funding for Green Transportation Project

Scientists from the Research Centre for Environmental Changes, Academy of Sciences located in Taipei initiated work entitled *Planning Green Transportation* for Better Urban Health under Climate Change. The grant obtained from MOST, will enable several

teams of researchers from the Center and elsewhere to collaboratively use the systems approach in research to better plan and manage urban health and wellbeing in Taipei. The systems approach involves multidisciplinary collaborative research among scientists from several disciplines. In this pilot project it will involve environmental chemists, human health specialists and transportation scientists. The ICSU

ROAP priority area on urban health and wellbeing developed a science plan in 2011 that outlined why we need to move to more holistic approaches to urban health and wellbeing planning and management, and the tools available to do so. The pilot project will show how the use of the systems approach in urban health research will produce more holistic and comprehensive solutions.





Personality Focus - Urban Health and Wellbeing

Katrina Proust and Barry Newell are affiliated with the Fenner School of Environment and Society at the Australian National University in Canberra, and with the United Nations University International Institute for Global Health (UNU-IIGH) in Kuala Lumpur. Their research is focused on the development of practical approaches to integrative research and decision—making in complex systems. In this work they blend system dynamics, history, and cognitive linguistics. Together they are developing a practical system—analysis approach called Collaborative Conceptual Modelling (CCM). CCM has been used successfully with student, community, academic, industrial, and professional groups to promote effective communication and to improve understanding of complex-system causation, particularly in the urban health arena.

Proust and Newell have worked with ICSU ROAP since 2010. They contributed to the development of the ICSU ROAP Science Plan on Health and Wellbeing in the Changing Urban Environment: A Systems Approach (2011). Subsequently, Proust became a member of the ICSU ROAP Steering Committee for research on urban health and wellbeing, and Newell a technical advisor to that Committee. As part of their work with ICSU ROAP they have been involved in the identification of potential pilot projects that could demonstrate the approach outlined in the Science Plan. As part of this endeavour they have run CCM workshops to train members of potential project teams in system approaches. They continue to work with a project team in Taipei that obtained support from a local funding source for their study of green transportation and health

NATURAL HAZARDS AND RISK

ICSU ROAP promotes the scientific study of natural hazards and risk for the benefit of sustainability and human resilience in the Asia and the Pacific region.

3rd Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk

The Steering Group on Natural Hazards and Risk (SGNHR) of ICSU ROAP met in Kuala Lumpur on 24 and 25 February 2015. The Group is chaired by James Terry, Professor at Zayed University. Dubai, United Arab Emirates (UAE). It has 4 other members, Dr Kruawun Jankaew (Chulalongkorn University), Nigel Spear (SCOR Services Asia-Pacific Pte Ltd), Professor James Goff (University of New South Wales) and Professor Jianxin Zhang (Institute of Psychology,

Chinese Academy of Science). Professor Emeritus Nordin Hasan the Director of ICSU ROAP is an ex officio member of the group. High on the agenda of the meeting were the participation of the SGNHR in the 4th International Tsunami Field Symposium which would be held in March 2015 in Thailand, and on the role that the Steering Group would play in the 3rd UN World Conference on Disaster Risk Reduction in Sendai, Japan, also in March 2015. The Steering Group discussed in detail steps that would be taken to enhance ties with catastrophe assessment needs of the Asian re-insurance industry. The SGNHR has also been successful in securing funding to support a two-year research project on coastal hazards in South-East Asia from Zayed University where the Chair is based. Additional funds from the National University of Singapore have also been committed for the project in its first year (2015).



Personality Focus - Natural Hazards and Risk



Professor James Terry is the Chair of the ICSU ROAP Steering Group on Natural Hazards and Risk (SGNHR), which meets twice a year. He is currently based at Zayed University in Dubai, with earlier positions at the National University of Singapore and the University of the South Pacific (where he served as Head of the School of Geography). As a field-based geoscientist, Prof. Terry has 25 years of research experience in natural hazards; coastal & fluvial geomorphology; hydrology, water resources & land degradation.

In 2015, Steering Group meetings were held in Kuala Lumpur in February and Singapore in August. Achievements of SGNHR in 2015 include securing funding of approximately USD31000 from Zayed University for two research projects examining the risk of coastal hazards (storms and tsunamis) in the Gulf of Thailand and the South China Sea. In March, the Chair represented the Steering Group on the Science and Technology Major Group, which presented a Plenary Statement at the UN 3rd World Conference on Disaster Risk Reduction in Sendai. Japan. Also in March, Steering Group member Dr Kruawun Jankaew organized the 4th International Tsunami Field Symposium, which attracted over 100 leading international scientists to Phuket, Thailand. Steering Group member Prof. James Goff and The Chair help organise the 12th Annual Conference of the Asia Oceania Geosciences Society in Singapore. This involved running the Interdisciplinary Geosciences Section of the conference, including several sessions on natural hazards themes. In November, The Chair participated in the IRDR programme Science Committee meeting in Stellenbosch University, South Africa, to represent the interests of ICSU ROAP and share progress on the Steering Group activities.

4th International Tsunami Field Symposium

The Department of Geology, Faculty of Science, Chulalongkorn University, Bangkok organised the 4th International Tsunami Field Symposium on 23 - 27 March 2015 in Phuket Thailand. The ICSU Regional Office for Asia and the Pacific (ROAP) was an organising partner of the symposium. Dr Kruawun Jankaew, a member of ROAP Steering Group on Natural Hazards and Risk (SGHNR) was one of the Symposium Organizing Committee members. The symposium was held once in 3 to 5 years to disseminate the science of tsunamis and integrate scientific findings with disaster mitigation. The major topics of the symposium included topics on science, technology and disaster mitigation.

4th Meeting of ICSU ROAP Steering Group on Natural Hazards and Risk

The Steering Group on Natural Hazards and Risk (SGNHR) of ICSU ROAP held its fourth meeting in Singapore on 3 August 2015. This Steering Group was established to promote the scientific study of natural hazards and risk for sustainability and human resilience in the region. The meeting was held in conjunction with the 12th Annual Conference of the Asia Oceania Geosciences Society (AOGS). The SGNHR acknowledged the support of AOGS for this 4th meeting by providing the meeting venue and complementary registrations to the 12th Annual Conference for its members. The SGNHR also convened a Session on "The Special Vulnerability of Asia -Pacific Islands"







to Natural Hazards" at the AOGS Conference as the contribution of the Steering Group to the conference. The SGNHR meeting discussed how to increase the Group's participation and visibility, research, funding possibilities and grant applications, recruitment of new members into the Steering Group, recent developments in the insurance / reinsurance industry, and the progress with enhancing industry ties. The members also had the opportunity to participate in AOGS conference and activities.

evidence relevant for psychological intervention after disasters; show the opportunities and constraints of working with particular target groups, such as children and adolescents; offer relevant knowledge provision, suitable for education and training in academic programs of psychology; and help develop a regional network to support continuance in scientific knowledge dissemination and training in mental health support following disaster.

PIAD 2015 Planning Group Meeting

The planning group of the 4th International Workshop on Psychological Intervention After Disasters met in Taipei on 28 and 29 April 2015 to prepare plans for the implementation of the 2015 workshop. The meeting was hosted by the Integrated Research on Disaster Risk - International Center of Excellence (IRDR-ICoE), the Academy of Sciences located in Taipei. PIAD is an activity led by the International Union of Psychological Sciences (IUPsyS). The Academy of Sciences located in Taipei was the main sponsor and host of the workshop in 2015. As in previous years, the workshop presented participants with the most recent scientific and applied scientific knowledge and

4th International Workshop on Psychological Intervention After Disasters

The 4th International Workshop on Psychological Intervention After Disasters (PIAD 2015) was held at the International Centre of Excellence on Integrated Research on Disaster Risk (IRDR-ICoE), Taipei from 9 - 12 November 2015. The workshop is an annual activity spearheaded by the International Union of Psychological Science (IUPsyS) with support from ICSU and its partners since 2012. This year, a total of 25 participants from eight Asian countries attended the workshop. Faculty for the workshop consisted of scholars from Australia, China, New Zealand, Taiwan and USA who are leaders in their fields of research. Core funding for the workshop was provided by IRDR-



4th International Workshop on Psychological Intervention After Disasters

ICoE-Taipei with additional support from the Jacobs Foundation and the Chinese Society for Psychological Science. Organization of the workshop was undertaken primarily by the ICSU Regional Office for Asia and the Pacific (ICSU ROAP) and IRDR-ICoE. Other partners included the Centre for Applied Developmental Science of the Friedrich-Schiller University, Jena, and the United Nations University -International Institute for Global Health (UNU-IIGH). The workshop used international scientific and applied expertise to help researchers, educators and practitioners from the Asia and the Pacific to have a better understanding of, and ability to respond to the mental health consequences of disasters in the region, based on recent scientific evidence on factors influencing the

short and long-term psychosocial reactions. The focus was on events that have a tremendous negative impact on large sections of the population in the affected area, such as natural catastrophes, warfare or pandemics. The workshop also set out to address particular groups that have been relatively overlooked in this regard, namely, children and adolescents. In addition to focusing on the science needed to enhance the relevance of psychological interventions, the workshop also sought to increase the capacity for sustained theoretical and applied research in PIAD in the Asia and the Pacific. Plenary presentations by faculty during the workshop are available for viewing at https://www.youtube.com/results?search_ query=Presentation+IUPsyS





FUTURE EARTH IN ASIA AND THE PACIFIC

ICSU ROAP continued to contribute to the development of Future Earth in the region by its involvement in the many strategic Future Earth regional programmes and activities.

International Symposium on Co-design for Urbanization in China and Asia-Pacific Region

This four-day International Symposium on Co-design for Urbanization in China and the Asia-Pacific Region was held in Xiamen, China, from 20 - 23 October 2015. The symposium was convened by the Chinese Association for Science and Technology (CAST) and its partners to explore ways of meeting the urban challenge in Future Earth, the new platform for international research on global sustainability. In his presentation, Mark Stafford-Smith the Chair of the Science Committee of Future Earth outlined how Future Earth is developing globally and regionally and how urbanization can be used as a case to develop a more nimble global research and innovation agenda under Future Earth. Sustainable urbanization is one of the eight goals of the societal challenges in the vision of Future Earth. It is also a key in the UN sponsored Sustainable Development Goals (SDGs), the unified vision for all nations to adopt in order to eradicate poverty and develop within planetary boundaries. ICSU ROAP was represented by its Director, Professor Emeritus Mohd Nordin Hasan at the symposium. Professor Javed Iqbal, a member of the Regional Committee for Asia and the Pacific (RCAP) was one of the speakers at the Symposium.





Regional Advisory Committee for Future Earth in Asia

The Regional Advisory Committee (RAC) for Future Earth in Asia was launched by the Centre (hosted by Research Institute for Humanity and Nature) in November. Its aim is to accelerate the development of the Future Earth in Asia. Initially the RAC consisted of eight members selected through an international call for recommendations. Professor Emeritus Mohd Nordin Hasan, the Director of the International Council for Science Regional Office for Asia and the Pacific (ROAP), was selected as the RAC Chair. Professor Emeritus Dr Soottiporn Chittmittrapap, a member of the ICSU Regional Committee for Asia and the Pacific (RCAP) was also selected as one of the RAC members. The RAC is expected to evolve into a full Regional Committee for Asia, whose role is to be an effective advocate for Future Earth in the region and to be an effective advocate for regional interests in the global Future Earth platform.

Sustainable Initiative for Marginal Seas in South and East Asia (SIMSEA)

SIMSEA, a flagship programme of ICSU ROAP on Future Earth in Asia is now in its second year of development. Its Programme Office at the University of the Philippines, Los Banos is currently functional and a Programme Executive and Programme Assistant were appointed in May 2015.

Professor Toshio Yamagata continued his strong support for the development of SIMSEA. The Marine Crisis Watch Programme (MCW) recently established by Ocean Policy Research Institute (OPRI) of the Sasakawa Peace Foundation (SPF) will be strategically linked to the work at SIMSEA. SIMSEA and MCW will focus on research on stressors that endanger sustainability in the marginal seas of Asia and the Pacific, including ocean warming and acidification, and policy mechanisms for the enhancement of trust and stability in the region. The group will also invest in capacity development activities to enhance the ability of countries in the region to monitor and evaluate likely future scenarios of sustainability in the marginal seas of Asia and the Pacific.







Personality Focus - SIMSEA

Dr. Annadel Salvio Cabanban is the Programme Executive of the Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA), a regional research programme developed by ICSU ROAP. Annadel was an academic in Malaysia and the Philippines and has experience as a consultant in regional projects of the Asian Development Bank, United Nations Environment Programme, United Nations Development

Programme, Conservation
International-Philippines, World Wide
Fund for Nature-Malaysia, and the
Global Environment Facility Evaluation
Office, World Bank. She was part of
the team that developed the Marine
Laboratory at Silliman University, and
the Borneo Marine Research Institute,
Universiti Malaysia Sabah. She was
also involved in the development of
the Sulu-Sulawesi Marine Ecoregion
Programme of WWF-Malaysia.



The second meeting of SIMSEA Steering Committee was convened in Kuala Lumpur in February 2015. At the centre of discussion was the findings of the SIMSEA research prioritization workshop held in Manila in November 2014. The meeting recognised the need to enhance the co-design of solutions oriented research on sustainability in the marginal seas of South and East Asia and to engage with and involve larger numbers of researchers from the social sciences, especially in the design and conduct of research on transformations towards sustainability. The Committee recognised that the marginal seas of Asia will come under more severe pressure as the region further develops. It is optimistic that with greater knowledge and understanding from integrated multidisciplinary research, development in the region and that of the world as a whole, can stay within planetary boundaries.

The Second SIMSEA Japan Workshop was held at the University of Tokyo in March 2015. It was convened by Professors Toshio Yamagata of Application Laboratory, Japan Agency of Marine-Earth Science and Technology (JAMSTEC), and Mitsuo Uematsu of Center for International Collaboration, Atmosphere and Ocean Research Institute (AORI) of the University of Tokyo. This Second SIMSEA Japan workshop brought lead researchers from Japan to further develop initial ideas raised during the first workshop held in AORI in October 2014 on how researchers in Japan can engage and develop concrete research questions along the lines of the priorities identified in previous SIMSEA workshops.

SIMSEA was represented at the Second China -Association of Southeast Asian Nations (ASEAN) Workshop on Ocean Science and Technology by its Programme Director Dr Annadel Cabanban. The workshop took place from August 10 - 16, 2015 in Hangzhou, China. It was co-organized and co-hosted by Zhejiang University and the Second Institute of Oceanography (SOA) of China. The theme of the workshop was Science and Technology for a Blue Economy and Healthy Oceans.





The SIMSEA Steering Committee met for the third time in Manila in October 2015. The meeting was hosted by the SIMSEA Programme Office located at the Marine Science Institute, University of the Philippines, Diliman. The meeting noted the progress made since SIMSEA's

initiation in July 2014, reviewed plans to promote SIMSEA and decided on possible ways to enhance the participation of researchers in the programme. The Steering Committee also initiated plans for a regional symposium in September 2016.







REGIONAL NETWORKING

15th Annual Conference of Science Council of Asia

The Science Council of Asia held its 15th Annual Conference at the Angkor Paradise Hotel in Seam Reap, Cambodia on 15 and 16 May 2015. The Conference, organised by the Ministry of Youth and Sports (MOEYS), Science Council of Asia (SCA) and the Royal Academy of Cambodia (RAC) was hosted by the Institute of Technology of Cambodia (ITC). It was co-sponsored by the Ministry of Culture and Fine Arts of Cambodia, Science Council of Japan (SCJ), and the Architectural Institute of Japan (AIJ). The Conference brought together scientists, decision makers and representatives from state agencies, experts on innovation from universities, research and development centres, technology transfer centres, start-up centres, and practitioners (SMEs, business incubators and business support organizations), to discuss and exchange knowledge and information on the theme of this year's Conference, "Science and Technology Contributions to Culture". Other than four keynote papers, a total of 60 scientific papers were presented during the two days of the Conference.

Science and Technology in Society (STS) Forum in Kuala Lumpur

The Science and Technology in Society forum (STS) held the ASEAN-Japan Workshop for Innovation, Science and Technology Cooperation in Kuala Lumpur Malaysia on 11 June 2015. This was only the second time the forum has organized a meeting outside Japan. The first was in Singapore last year. STS fora are annual events held in Kyoto, in the month



of October. It provides a mechanism for high-level open discussion to build consensus and networks to resolve issues arising from the use and application of science and technology around the world. The forum in Kuala Lumpur was officiated by the Deputy Minister of Science, Technology and Innovation of Malaysia, Datuk Dr Abu Bakar Md Diah. The forum was divided into two workshop sessions that consisted of plenary presentations and group discussions. The first workshop session discussed what was required for an innovative Asia and how cooperation between ASEAN and Japan can facilitate further development of innovation in the region. The second session examined how youth and women can be further empowered through innovation, science and technology.









Visit by Max Weber Foundation

ICSU ROAP received Franz Waldenberger and Joachim Rohr of the Deutsches Institut fur Japanstudien (DIJ) Max Weber Foundation for discussions at ROAP and at the Universiti Kebangsaan Malaysia Institute of Ethnic Studies (KITA). The purpose of the visit was to explore possibilities for future research collaboration in the area of social sciences and humanities with a regional focus on South East Asia. The Max Weber Foundation currently sponsors 10 research institutes globally including the DIJ in Tokyo. Plans were afoot to expand into other regions such as South East Asia by establishing research groups or transnational research centres. At ROAP the visitors were briefed about the work of ICSU and the Future Earth programme. At KITA, the Director of the Institute gave a warm and comprehensive account of the Institute's roles and functions, and its current and future research. All parties involved actively engaged in indepth discussion of the research landscape in social sciences and humanities in Malaysia and Asia, the national and regional research systems, and the major international networks with which KITA interacts. ICSU ROAP looks forward to further discourse and the development of potential collaborative initiatives with the Foundation in the near future.

Sakura Exchange Programme in Science

The Japan-Asia Youth Exchange Program in Science (better known as the SAKURA Exchange Program in Science) successfully hosted the visit to Japan of 10 young scientists from five countries in Asia (China, Malaysia, Chinese Taipei, The Philippines, and Vietnam). The program was aimed at enhancing scientific exchange between Asia and Japan among youths who will have a more central role in the future of science and technology in their own countries. The exchange was coordinated by the Research Institute for Nature and Humanity (RIHN) a Japan Science and Technology Agency (JST) institute based in Kyoto. The theme of this year's programme was "Transformations toward Sustainability: Voices of Early-Career Asian Scholars". Participants had to make a presentation of their work and experience of the topic. They visited the International Digital Earth Applied Science Research Center (IDEAS) at Chubu University near Nagoya, and participated in a dialogue on "Issues Facing Rural Japan: Local Eco-branding COOL VEGE & Micro-hydro Installation", following an excursion to farm sites in Kameoka in Northern Kyoto. ICSU ROAP is a "sending organization" to the Programme.





GOVERNANCE

19th Meeting of ICSU RCAP

The ICSU Regional Committee for Asia and the Pacific (RCAP) held its 19th meeting in Kuala Lumpur on 23 and 24 April 2015. The new ICSU Executive Director Dr Heide Hackmann who is an ex officio member of the RCAP attended the meeting. Professor Lourdes Cruz of the Philippines chaired the meeting of the Committee for the first time since election as Chair after the end of the period of appointment of the former chair, Dr Hongkum Lee of South Korea. The RCAP welcomed its two new members - Dr Aswatini Raharto. Chair of the Division for Social Sciences and Humanities. Indonesian Institute of Sciences (IPSK-LIPI) and Professor Jung - Hye Roe, Professor at the School of Biological Sciences, Seoul National University. Dr Heide Hackmann presented to the meeting the challenges and opportunities facing ICSU in the transition to sustainability, and the members of RCAP were most appreciative of the opportunity to interact with her.

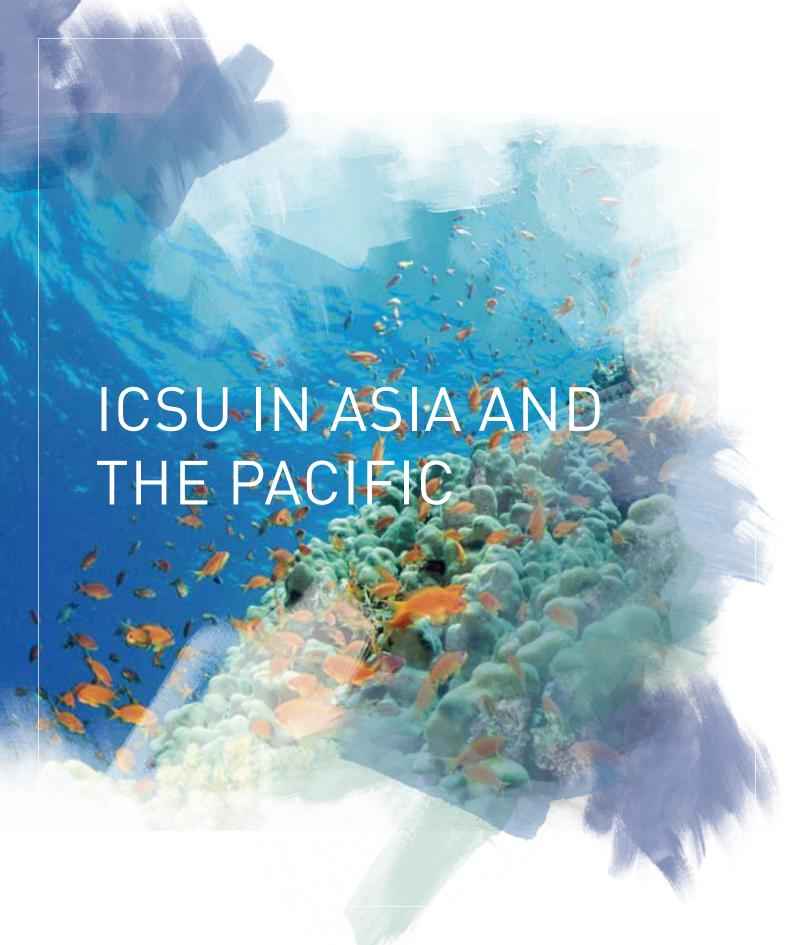
20th Meeting of ICSU RCAP

The 20th meeting of the ICSU Regional Committee for Asia and the Pacific (RCAP) was held on 24 and 25 November in Chiang Rai, Thailand. It was hosted by the National Research Council of Thailand (NRCT),

whose immediate past Secretary General, Professor Soottiporn Chittmittrapap is a member of RCAP. The Committee discussed progress of work in its four priority areas viz. hazards and disasters, urban health and wellbeing, ecosystems, and sustainable energy. Also discussed were recent developments in Future Earth, the new international platform for research on global sustainability. As part of its programme to interact with scientists in the local area, the RCAP members made a visit to the Mae Fah Luang University in Chiang Rai on the second day of the meeting. Two RCAP members, Professors Toshio Yamagata and Jung-Hye Roe gave lectures on recent advances in science for staff and students of the university at a seminar organised by the university. Prior to the start of the seminar the President of the University Dr Vanchai Sirichana gave a warm welcome to all members of RCAP and introduced the university which was established in 1998 to all present.







REGIONAL COMMITTEE FOR ASIA AND THE PACIFIC

Lourdes J. Cruz (Chair - 2015-2017)

Member & Immediate Past-President,
National Research Council of the Philippines
Department of Science & Technology
General Santos Avenue
Taguig City 1631
PHILIPPINES

Soottiporn Chittmittrapap (2014-2016)

Secretary-General, 196 Phaholyothin Road, Chatuchak, Bangkok 10900 THAILAND

B.V.R. Chowdari (2015-2017)

.................

......

Senior Executive Director
President's Office
Professor
School of Materials Science & Engineering
Nanyang Technological University
50 Nanyang Avenue
SINGAPORE 639798

Togtokh Chuluun (2015-2017)

Director Institute for Sustainable Development National University of Mongolia Ikh Surguuliin gudamj -1, P.O.Box -46A/523 210646 Ulaanbaatar MONGOLIA

Prof Javed Igbal (2014-2016)

Founder and Chairman Cosmic Therapeutics 48, Villa Greens, Gandipet Hyderabad 500075 INDIA

Toshio Yamagata (2014-2016)

Director
Application Laboratory
Japan Agency for Marine-Earth Science and Technology
(JAMSTEC)
3173-25, Showa-machi, Kanazawa-ku, Yokohama
Kanagawa, 236-0001
JAPAN

Jianxin Zhang (2014-2016)

Professor of Psychology Institute of Psychology #A4, DaTun Road, BeiShaTan, ChaoYang District Beijing 100101 CHINA

Aswatini Raharto (2015-2017)

• · · · · · · · · · · · · · · · · ·

Sasana Widya Sarwono 3rd Floor Jl. Jend. Gatot Subroto No.10 Jakarta INDONESIA



Jung-Hye Roe (2015-2017)

Professor School of Biological Sciences, Seoul National University, Seoul 151-742 REP OF KOREA

Ex Officio

Heide Hackmann

Executive Director
International Council for Science (ICSU)
5 rue Auguste Vacquerie
75016 Paris
FRANCE

••••••

Ex Officio

Mohd Nordin Hasan

ICSU Regional Office for Asia & Pacific 902-4, Jalan Tun Ismail, Kuala Lumpur MALAYSIA

Sukiman Sarmani

(ASM Representative)
School of Chemical Sciences & Food Technology
Faculty of Sciences & Technology
Universiti Kebangasaan Malaysia
43600 Bangi, Selangor
MALAYSIA

•••••

Kazuyuki Tatsumi

(ICSU Executive Board Liason)
Past President, IUPAC
Graduate School of Science
Research Centre for Materials Science &
Department of Chemistry
Furo-cho, Chikusa-ku, Nagoya
JAPAN

SECRETARIAT

Director

1 Mohd Nordin Hasan FASc
(nordin.hasan@icsu-asia-pacific.org)

Senior Science Officer

Tengku Sharizad Tengku Dahlan
(sharizad.dahlan@icsu-asia-pacific.org)

Senior Administrative Officer

Mohd Hizamddin Jaafar
(hizam.jaafar@icsu-asia-pacific.org)





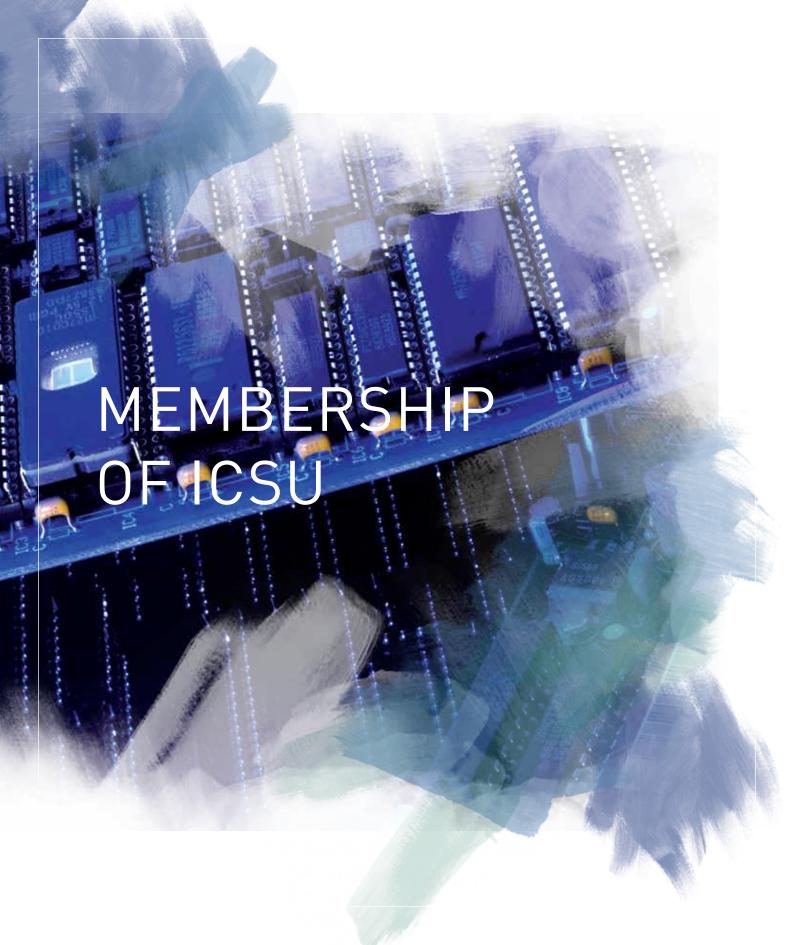




FINANCIAL SUMMARY JANUARY - DECEMBER 2015

INCOME	MYR	EUR
Annual Grants		
M	00/ 000 00	175 777 70
Malaysian Government	826,000.00	175,744.68
ICSU – PARIS	299,869.50	63,802.02
Sub Total	1,125,869.50	239,546.70
Other Income		
Balance b/f 2014	920,694.03	195,892.34
Earmarked funds		
PIAD - Received from Paris @ USD50,000	175,850.00	37,414.89
PIAD – Received from Paris @ USD13,000	56,849.00	12,095.53
PIAD – Received from Silberaisen @ USD15,000	72,385.50	15,401.17
Sub Total	1,225,778.53	260,803.93
	0.054.//0.00	500.050.70
TOTAL INCOME	2,351,648.03	500,350.63
EXPENDITURE	MYR	EUR
Emolument	595,065.52	126,609.68
Communication & Utilities	19,699.24	4,191.32
Supplies/other materials	12,500.00	2,659.57
Maintenance/repairs	12,391.12	2,636.40
Services	2,855.13	607.47
Meetings/Consultations & Activities expenditure	1,048,880.85	223,166.13
Total Expenditure	1,691,391.86	359,870.57
BALANCE C/F TO 2016	660,256.17	140,480.06

EUR1.00:RM4.70



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.

- 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 Osterreichische 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)*
- Chile, Academia Chilena de Ciencias
- China: CAST, China Association for Science and Technology (CAST)
- China: Taipei, Academy of Sciences located in Taipei
- Colombia, Academia Colombiana de Ciencias Exactas, Fisicas y Naturales
- Costa Rica, Academia Nacional de Ciencias
- Cuba, Academia de Ciencias de Cuba
- Czech Republic, Czech Academy of Sciences
- Côte d'Ivoire, Académie des Sciences, des Arts, des Cultures d'Afrique et des Diasporas Africaines (ASCAD)**
- 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)
- El Salvador, Viceministerio de Ciencia y Tecnología de El Salvador
- Estonia, Estonian Academy of Sciences
- Ethiopia, Ethiopian Science and Technology Agency**
- Finland, Council of Finnish Academies
- 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
 Fisicas y Naturales de Guatemala*
- **Hungary**, Hungarian Academy of Sciences
- India, Indian National Science Academy
- Indonesia, Indonesian Institute of Sciences (LIPI)
- Iran Islamic Republic 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 Comission for Science and Technology
- 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, Hassan II Academy for Science and Technology
- Mozambique, Scientific Research Association of Mozambique (AICIMO)**
- Namibia, Ministry of Education: Directorate of Research, Science and Technology
- Nepal, Nepal Academy of Science and Technology (NAST)
- 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
- 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 Innovacion Ciencia y Tecnologia (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



SCIENTIFIC UNIONS

The 31 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.

- AU, International Astronomical Union
- IBRO, International Brain Research Organization
- ICA, International Cartographic Association
- IGU, International Geographical Union
- IMU, International Mathematical Union
- INQUA, INternational Union for QUAternary Research
- ISA, International Sociological Association
- ISPRS, International Society for Photogrammetry and Remote Sensing
- IUAES, International Union of Anthropological and Ethnological Sciences
- IUBS, International Union of Biological Sciences
- IUCr, International Union of Crystallography
- IUFRO, International Union of Forest Research Organizations
- IUFoST, International Union of Food Science and Technology
- IUGG, International Union of Geodesy and Geophysics
- IUGS, International Union of Geological Sciences
- IUHPST, The International Union for History and Philosophy of Science and Technology
- IUIS, International Union of Immunological Societies

- IUMRS, International Union of Materials Research
 Societies
- IUMS, International Union of Microbiological Societies
- IUNS, International Union of Nutritional Sciences
- IUPAB, International Union for Pure and Applied Biophysics
- IUPAC, International Union of Pure and Applied Chemistry
- IUPAP, International Union of Pure and Applied Physics
- IUPESM, International Union for Physical and Engineering Sciences in Medicine
- IUPHAR, International Union of Basic and Clinical Pharmacology
- IUPS, International Union of Physiological Sciences
- IUPsyS, International Union of Psychological Science
- IUSS. International Union of Soil Sciences
- IUTAM, International Union of Theoretical and Applied Mechanics
- IUTOX, International Union of Toxicology
- **URSI**, Union Radio Scientifique Internationale

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 BODIES

- **COSPAR** Committee on Space Research
- IRDR Integrated Research on Disaster Risk
- PECS Programme on Ecosystem Change and Society
- SCAR Scientific Committee on Antarctic Research
- SCOR Scientific Committee on Oceanic Research
- **SCOSTEP** Scientific Committee on Solar-Terrestrial Physics
- HEALTH AND WELLBEING IN THE CHANGING URBAN ENVIRONMENT.

GLOBAL ENVIRONMENTAL CHANGE PROGRAMMES

- **DIVERSITAS** An International Programme of Biodiversity Science
- FUTURE EARTH
- IGBP International Geosphere-Biosphere Programme
- IHDP International Human Dimensions Programme on Global Environmental Change
- WCRP World Climate Research Programme

MONITORING/OBSERVATION BODIES

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

DATA AND INFORMATION BODIES

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

SCIENTIFIC ASSOCIATES

Scientific Associates support the objectives of ICSU and uphold the principle of the Universality of Science. Scientific Associates must have been in existence for at least six years and do not have voting rights.

- 45, Society for Social Studies of Science
- AAS, African Academy of Sciences
- AASSA, Association of Academies and Societies of Sciences in Asia
- CIE, Commission Internationale de l'Eclairage
- FIG, Federation Internationale des Geometres
- IAHR, International Association for Hydro-Environment Engineering and Research
- IASC, International Arctic Science Committee
- ICA, International Commission for Acoustics
- ICIAM, International Council for Industrial and Applied Mathematics
- ICLAS, International Council for Laboratory Animal Science
- ICO, International Commission for Optics
- ICSTI, International Council for Scientific and Technical Information
- IFIP, International Federation for Information Processing
- IFLA, International Federation of Library Associations and Institutions
- IFS. International Foundation for Science
- IFSM, International Federation of Societies for Microscopy
- IIASA, International Institute for Applied System Analysis
- IUVSTA, International Union for Vacuum Science, Technique and Applications
- IWA, International Water Association
- PSA, Pacific Science Association
- **SCA**, Science Council of Asia
- **TWAS**, The World Academy of Sciences
- **UIS**, Union Internationale de Spéléologie





INTERNATIONAL COUNCIL FOR SCIENCE

REGIONAL OFFICE FOR ASIA AND THE PACIFIC

ICSU Regional Office for Asia and the Pacific 902-4, Jalan Tun Ismail 50480 Kuala Lumpur MALAYSIA

Tel: +603 26984192 Fax: +603 26917961

Email: secretariat@icsu-asia-pacific.org

www.icsu.org/asia-pacific