STRENGTHENING INTERNATIONAL SCIENCE
FOR THE BENEFIT OF SOCIETY

ANNUAL REPORT

INTERNATIONAL
COUNCIL
FOR SCIENCE

2016

The long-term vision of the International Council for Science (ICSU) is for a world where excellence in science is effectively translated into policymaking and socio-economic development. In such a world, universal and equitable access to 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.

The International Council for Science is a non-governmental organization with a global membership of national scientific bodies (122 members, representing 142 countries) and international scientific unions (31 members). ICSU mobilizes the knowledge and resources of the international scientific community to strengthen international science for the benefit of society.

MESSAGE FROM THE PRESIDENT

The year 2016 was one that saw the start of what might be a defining moment in the history of ICSU. In late 2015, I exchanged letters with Alberto Martinelli, the President of the International Social Science Council (ISSC) to explore with him the possibility of a closer alignment and even potential amalgamation of ICSU and ISSC, two organizations that have a long history of fruitful collaboration around a range of projects. The ISSC President responded favourably, and throughout 2016 we worked hard with colleagues at the ISSC and a number of eminent experts from outside the network to explore future scenarios.

This culminated in a historic first joint General Assembly of both organizations held in Oslo, Norway, in October. There, the members of the two organizations voted in principle in favour of a merger between the two Councils, with the final decision to be taken at the 32nd ICSU General Assembly following the development of a new strategy and statutes for the proposed new Council. I am delighted by the strong show of support by our Members and by the many encouraging conversations I had with colleagues from the scientific world, who have confirmed that the time is right for the natural and social sciences to come together in one unified organization to address global challenges.

In the meantime, ICSU continued to deliver excellence in its core areas of work. There were a number of highlights in 2016 on the science-policy front, including the provision of scientific inputs to the UNISDR Science and Technology Conference on the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 and the UN Commission on Science & Technology for Development. Scientific side events were organized at the High-Level Political Forum on the Sustainable Development Goals at the United Nations in New York and at the 22nd Conference of the Parties on Climate Change in Marrakech. The 2016 Habitat III: UN Conference on Housing and Sustainable Urban Development, Quito, Ecuador, recognized the fundamental importance of addressing sustainable development issues in cities. The Council, with partners, organized Habitat X Change to promote science and data visualization for the urban future. The space quickly became the focal point for science–policy dialogue at the conference. The Future Earth Urban Knowledge Action Network was launched at the conference and this will work with the ICSU co-sponsored Health and Wellbeing in the Changing Urban Environment programme in addressing complex urban issues.

It is with great pride that I look back on ICSU's achievements in 2016. Going forward, as we continue to work on a proposed merger with the International Social Science Council, I feel confident that the long history of successful collaboration between the two organizations in key programmes such as Future Earth and the Integrated Research on Disaster Risk Programme can only point to an even brighter common future for both.

As President, I wish to thank all our National and International Union Members for their support, and the Secretariat members – including those in our Regional Offices – for their outstanding contributions during 2016. I look ahead, very positively, to great accomplishments during 2017.

Gordon McBean, President

MESSAGE FROM THE EXECUTIVE DIRECTOR

For the International Council for Science, 2016 was a year of engaging with change. The impetus for innovation and creativity came from a number of directions. One was our commitment to push on with implementing the Executive Board's responses to the 2014 External Review; another, the need to develop ideas for taking ICSU beyond its current strategic plan.

In October, these two strands of strategic development effectively converged when, during a historic joint General Assembly with the International Social Science Council (ISSC), our Members gave us a strong mandate to pursue the idea of a merger between the two organizations. Following this decision in principle, the Executive Board decided not to continue with the development of a new, independent ICSU strategy. Instead, the thinking that had gone into this process, as well as the External Review response, has been embedded within the remit of two new ICSU and ISSC working groups – a Strategy Working Group and a Transition Task Force – that have been tasked to develop proposals for a high-level strategy and organizational structures for a new, merged organization. In October 2017, our members will make a final decision in favour of, or against, a merger, and they will do so on the basis of the outputs of these two groups. I am confident that

ICSU's achievements in 2016 will contribute significantly to inspiring their work. In this regard I am particularly proud of the progress we made throughout 2016 in taking forward several new ideas, including:

- The launch of a call for applications to support our Union members to work together on developing three-year international projects on science education, outreach and public engagement.

- The signing of a five-year agreement with Sida, the Swedish International Development Cooperation Agency, putting ICSU in the lead of a new capacity development initiative involving the ISSC and the Network of African Science Academies (NASAC) as partners. Launched in July, LIRA 2030 supports early career scientists in Africa to collaborate on projects that address the challenges Agenda 2030 poses for the continent.

- The success of the first Science International campaign on Open Data, with endorsements of the Accord, which was launched during the first Science Forum SA in December 2015, now standing at more than 100. And one year later, under the leadership of CODATA, the launch during the second Science Forum in Pretoria, of an African Open Science Platform, an initiative to promote the value and exploit the potential of Open Data for science in Africa. Inspired by this success, CODATA and ROLAC have started collaborating with ICSU members on the development of a similar initiative in Latin America.

- The rapid and impactful growth of the International Network on Government Science Advice (INGSA), which now operates formally under the aegis of ICSU. INGSA held its second international conference, which was hosted by the European Commission, in September, and beginning in February started rolling out a series of capacity-building workshops for both scientists and policy practitioners on the provision of robust science advice to decision-makers.

These activities really highlight the importance for ICSU of synergistic, action-oriented partnerships, starting with our members and extending to our Interdisciplinary Bodies and other international scientific organizations. Drawing effectively on these partnerships will be critical at this moment of reinvention in which we now find ourselves. We will be working hard throughout 2017 to dig deeply into the creative resources and support of our Members and partners as we move forward.

Heide Hackmann, Executive Director


THON
HOTELS

STRATEGIC PLANNING

TOWARDS A MERGER OF ICSU AND ISSC

Reflecting on current challenges facing both science and the societies of which it is a part, the 2014 External Review of ICSU concluded that ICSU and its counterpart organization for the social sciences, the International Social Science Council (ISSC), "need to accelerate their partnering relationship, as there are few major science policy issues whose framing can do without major social science input". Following publication of the Review, and based on a proposal by the ICSU Executive Board, the Executives of both ICSU and ISSC appointed a Joint Working Group to explore closer institutional alignment, and possible amalgamation, between the two councils.

The Group was co-chaired by Khotso Mokhele, former ICSU Vice-President for Scientific Planning and Review (nominated by ICSU) and Pierre Ritchie, former Secretary-General of the International Union of Psychological Science (nominated by ISSC). The ISSC delegation comprised Alberto Martinelli (ISSC President), Saths Cooper (ISSC Vice-President for Information and Communication Outreach) and Renée van Kessel (ISSC Executive Committee Member). The ICSU delegation comprised Gordon McBean (ICSU President), Jinghai Li (ICSU Vice-President for Scientific Planning and Review) and David Black (ICSU Secretary-General).

The Group met twice between January and April 2016. Based on its advice, the Executive bodies of both ICSU and ISSC unanimously agreed to propose to their members that the two councils merge to form a single international organization for the social and natural sciences. In preparation for a decision on this proposal by ICSU and ISSC Members, the Working Group developed a narrative report on the need for a unified, interdisciplinary voice for science at the global level; a draft planning framework with options for the strategic, governance and organizational arrangements of a new organization; as well as a proposed roadmap for membership engagement, consultation and decision-making on the proposed merger.

OSLO GENERAL ASSEMBLY

As a first milestone on the proposed roadmap, ICSU held an extraordinary General Assembly to coincide with the ISSC General Assembly in Oslo, Norway, in October 2016. This historic meeting was hosted by the Norwegian Research Council, a member of the ISSC. Its main purpose was to secure an in-principle agreement of the membership of both Councils to pursue the idea of a merger. Members were asked to discuss and provide feedback on the motivation to merge, as well as on the draft planning framework, and to agree on the appointment of a Transition Task Force which would lead the development of detailed plans for a proposed merger. In addition, ICSU members were asked to extend the mandate of its current Executive Board by one year, i.e. until October 2018, in order to ensure leadership continuity in the transition planning and possible implementation phase of the proposed merger process.

The Oslo vote was overwhelmingly positive. It showed strong support by ICSU Members for the Council to pursue the idea of a merger with the ISSC (76% positive votes), and to extend the mandate of the current ICSU EB by one year (80% positive votes). Members of both ICSU and ISSC supported the appointment of a Transition Task Force (TTF), and further agreed on the need for a separate Strategy Working Group (SWG) that should engage member representatives in preparing a high-level strategy proposal that should provide a clear framework for the substantive development of a new, merged organization.

The two working groups were set up in December 2016 following an open call for nominations to ICSU and ISSC members.

The SWG is co-chaired by Jinghai Li (ICSU Vice-President) and Saths Cooper (ISSC Vice-President), and includes an additional 12 representatives of the Members of each organization. The task of the SWG is to provide strategic proposals for vision and mission, core values and principles, and priorities of a new, merged organization.

The TTF membership includes the Presidents of both ICSU and the ISSC, namely Gordon McBean and Alberto Martinelli respectively, two additional members of the Executive bodies of each organization, as well as nine representatives of the members of each organization. Khotso Mokhele, a former ICSU Vice-President for Scientific Planning and Review, and former member of the ISSC Committee for Developing and Transition Economies, acts as Facilitator of the group. The TTF is responsible for developing proposed new statutes and rules of procedure for a merged organization, including a new membership structure, governance and secretariat arrangements and a detailed financial analysis.

The outputs of the SWG and TTF will be submitted to ICSU and ISSC members in July 2017, ahead of the ICSU General Assembly and ISSC Extraordinary General Assembly scheduled to take place in Taipei in October. It is at this meeting that our members will take the final decision on whether they want to go ahead with the merger.

Joint ICSU-ISSC General Assembly in Oslo, Norway

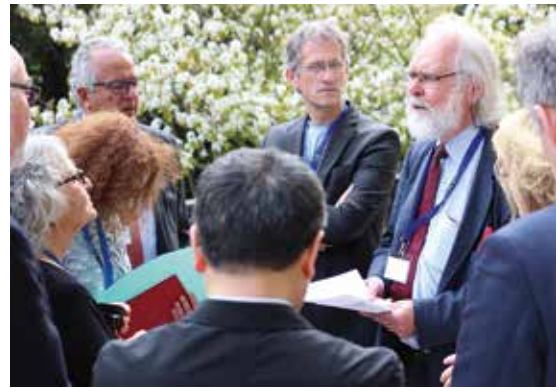
UNIONS MEETING

The triennial meeting of the International Council for Science's International Union Members took place at the Fondation Simone et Cino del Duca in Paris, France on 12-13 April 2016.

At the meeting, representatives from the Council's 31 Union Members received updates on its activities since the General Assembly in Auckland in 2014, shared their own reports on major activities, and discussed the way forward for the Council and the Unions over the coming 18 months until the General Assembly in Taipei in October 2017.

Union Members were given an update on key challenges and concrete actions of the ICSU Executive Board's response to the 2014 External Review. One such action was the redesigned ICSU Grants Programme, which provides three grants of up to 300,000 € each for a period of three years. The goal of new ICSU Grants Programme is to support Unions to lead on the development of impactful international scientific initiatives.

A particular focus of the discussion was on the ongoing process to develop a new strategic plan for the organization. The meeting also provided the opportunity for participants to network informally with members of the Council's Executive Board and the Directors of several of its interdisciplinary bodies.



Meeting of ICSU Union Members in Paris, France, April 2016

INTERNATIONAL RESEARCH COLLABORATION

FUTURE EARTH

Last year, Future Earth launched its flagship Knowledge-Action Networks (KANS) to catalyse new research and partnerships around the key challenges to sustainability. These networks are a key mechanism that Future Earth employs to generate solutions-focused and societally-relevant research. Since the inception of these KANS, ICSU has collaborated with Future Earth to not only foster their development, but to uniquely place these at the interface with policy. Over the course of the year, ICSU has helped develop KANS on Health, Cities, SDGS and Oceans.

In February 2016, ICSU hosted a discussion meeting on Planetary Health in Paris to discuss the direction of the Health KAN and its collaboration with stakeholders such as ICSU's Urban Health and Wellbeing programme, the United Nations University International Institute of Global Health, and the World Health Organization (see also item on Habitat III below). Following a scoping workshop held later in the year at the Rockefeller Foundation, Bellagio, Italy, an action agenda of potential priorities was developed. ICSU and many other stakeholders including representatives from the World Bank, the Convention on Biological Diversity, and other Future Earth Core Projects such as EcoHealth Alliance and the Earth Systems Governance Project are co-designing the research agenda for the KAN.

ICSU co-sponsored a workshop on the Development of an Integrative Ocean Research Network (Future Earth Ocean KAN) in Kiel, Germany in December. A range of stakeholders and partners took part, including ICSU's Scientific Committee on Oceanic Research (SCOR), the World Climate Research Programme (WCRP), ICSU's Regional Office for Asia and the Pacific and representatives of its SIMSEA project. The workshop sought to scope new international transdisciplinary ocean research activities that could be pursued within an integrative ocean research network in the coming years. Next steps are to appoint a Steering Committee for the Ocean KAN, which will develop a Research and Engagement Plan based on the scoping activities of the workshop, and to engage in the UN Ocean Conference in June 2017 in New York in support of the implementation of Sustainable Development Goal 14

ICSU also helps strengthen the links between Future Earth and local research communities, and co-organized with the Future Earth Paris Global Hub the first Future Earth Days in Paris on 30 November – 1 December. The meeting aimed to raise awareness of Future Earth among the French global sustainability research community, and find ways to help them get involved.

Impressions from the Future Earth Days in Paris

The Future Earth Early Career Network of Networks was a direct result of ICSU and ISSC's Villa Vigoni conferences for early career researchers (see Annual Reports 2013-15). In December, ICSU hosted the inaugural meeting of the network, bringing together various early career networks such as the Global Young Academy, IPBES Young Fellows, the Earth System Governance Project, the Young Earth System Scientists Community (YESS), INNGE, NESSE, and the Association of Tropical Biology and Conservation capacity building committee, with the goal of seeing and fostering more early career involvement in Future Earth's internal structures and across the KANS.

WORLD CLIMATE RESEARCH PROGRAMME (WCRP)

The World Climate Research Programme (WCRP) has facilitated climate research for over 35 years. Unprecedented changes in weather and environmental indicators during 2016 have led to a sense of urgency throughout the research community. What do warmer mean surface temperatures, high atmospheric CO_2 levels and low sea-ice conditions – to name just a few indicators – mean for our future? WCRP's collaborative international research focuses on skilful climate modelling and reliable observations, a combination necessary to answer critical questions.

Throughout 2016 WCRP's Core Projects – on atmosphere, land, ocean and ice – Advisory Councils, Working Groups and various activities stimulated, coordinated and promoted climate science through a wide range of projects, events and activities. One success of the programme emerges through the Coupled Model Intercomparison Project (CMIP), which provides a fundamental basis for international climate research and contributes to Intergovernmental Panel on Climate Change (IPCC) assessments. Phase 5 of CMIP represented a remarkable technical and scientific coordination effort across dozens of climate modelling centres involving more than 1,000 researchers. Phase 6 includes 21 endorsed model intercomparison projects that span the fields of climate research.

WCRP's Grand Challenges (GCS) address high-priority research requiring international partnership and coordination. In 2016 WCRP introduced two new GCS, on Carbon Feedbacks in the Climate System and on Near-Term Climate Prediction, addressing key questions about how the carbon cycle interacts with climate and how climate predictions between a year and decade ahead can be improved and made operational. In terms of new initiatives, WCRP and the Prince Albert II of Monaco Foundation jointly promoted a Polar Challenge, offering a reward of 400,000 CHF to the first team to complete a 2,000 km autonomous vehicle mission under Arctic or Antarctic sea ice.

WCRP recognizes that many of the challenges ahead must be addressed by future generations of scientists. To stimulate involvement of Early Career Researchers (ECRS), WCRP supported several ECR events and activities during 2016, including workshops, symposia and competitions. WCRP encourages the engagement of ECRS across the full scope of the programme. To strengthen links with ECRS and to foster future leaders, the WCRP Joint Scientific Committee endorsed partnership with the Young Earth System Scientists community.

In 2017 WCRP will continue to build new partnerships and deliver fundamental climate research, looking at innovative ways to meet the research challenges of a fast-changing climate. A strategy document outlining the direction of the programme from 2017-2022 will be available later this year.

Aftermath of the April 2016 earthquake in Ecuador

INTEGRATED RESEARCH ON DISASTER RISK (IRDR)

Following the adoption by UN member states of the Sendai Framework for Disaster Risk Reduction in 2015, IRDR continued its efforts to bring science to the forefront in delivering the Framework. IRDR, together with ICSU and other partners, co-organized the UNISDR Science and Technology Conference on the implementation of the Sendai Framework in Geneva in January. At the conference, a global Science and Technology Partnership was launched and a roadmap for science until 2030 discussed. At the conference, IRDR presented a recent publication "Forensic Investigations of Disasters (FORIN): a conceptual framework and guide to research", which lays out a set of methodological principles to identify and analyse processes of risk construction.

IRDR co-organized the first Asian Science and Technology Conference for Disaster Risk Reduction (ASTCDRR) in August in Bangkok that also recognized the need for better understanding of risks in all their dimensions to reduce exposure and vulnerability. It was followed by a workshop to strengthen advisory capacities for DRR co-organized with ICSU ROAP with the support of the IRDR International Centre of Excellence located in Taipei. The event brought together scientists and policy-makers from across the region to share experiences and best practices on the mobilization of scientific evidence in DRR policy-making, and support the elaboration of national DRR science plans. IRDR jointly published, together with the Future Earth Integrated Risk Governance project, a report

assessing the current status of science and technology capacities in 11 Asian countries and their capacity to mobilise S&T for the implementation of the Sendai Framework. The report proposes a set of indicators to assess a country's S&T readiness including data availability, endogenous research on disaster-related issues, collaboration with civil society and the private sector, science advisory structures in government, etc.

IRDR also welcomed four new International Centres of Excellence (ICOE) into the IRDR network:

- ICOE on Disaster and Medical Humanitarian Response (Hong Kong SAR, China) supported by Collaborating Centre for Oxford University and the Chinese University of Hong Kong for Disaster and Medical Humanitarian Response (CCOUC)
- ICOE on Disaster Risk and Climate Extremes (Malaysia) supported by the Southeast Asia Disaster Prevention Research Initiative, Universiti Kebangsaan Malaysia (SEADPRI-UKM)
- ICoE on Earthquake Technology (Nepal) supported by the National Society for Earthquake Technology-NEPAL (NSET)
- ICOE on Spatial decision support for integrated DRR (the Netherlands), supported by the University of Twente.

Finally and importantly, IRDR was the subject of an independent review commissioned by the three co-sponsors of the programme, namely ICSU, the International Social Science Council (ISSC), and the United Nations Office on Disaster Risk (UNISDR). The seven-member review panel came up with important findings regarding the programme's achievements over the past six years, and made key recommendations for the future. The review pointed to the importance of IRDR's initial vision and high ambition to catalyse and demonstrate the value of integrated research for disaster risk reduction. Important achievements include putting the science agenda forward in the context of the Sendai Framework, and mobilizing an international community of outstanding scientists. However, the review highlighted shortcomings that require corrective action, including a lack of stable leadership, little involvement of the co-sponsors in oversight of the programme and a lack of funding to support dedicated scientific projects and activities. The review concluded by recommending that the programme move towards collective impact by operating as a global action network and by undertaking context-sensitive, innovative comparative work that can strengthen science for policy and practice. ICSU is working with the IRDR leadership and partners to address the challenges and opportunities raised in the review.

URBAN HEALTH AND WELLBEING

In its second year of operations, the international programme office of the Urban Health and Wellbeing (UHWB) programme continued to support the development of the programme's science framework, promoted systems science generally and continued to develop the network of the programme.

In April the office of the UHWB programme organized a milestone science-policy dialogue on "Modeling urban health and wellbeing for policy and action: Algorithms vs. Institutions". Participants from different parts of the world addressed the issue of rising health risks and inequality. The science–policy dialogue brought together mathematical, agent-based, systems dynamics and participatory modelers from science with societal decision-makers who are concerned with implementing policies and actions to make cities healthier and more sustainable places for their citizens and the surrounding ecosystem.

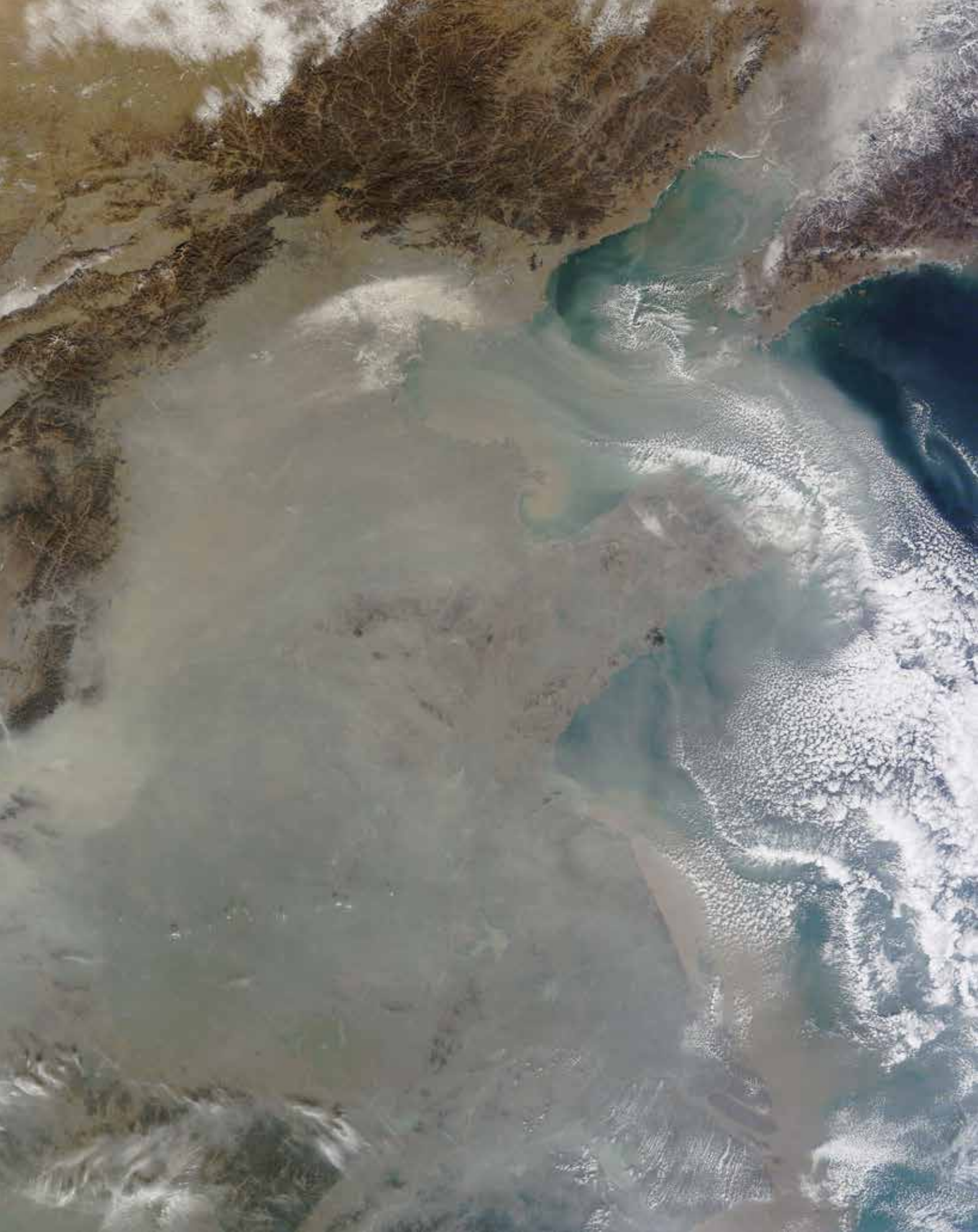
The UHWB programme continued its work on mainstreaming the systems approach. The members of the scientific committee published a book on a systems approach to Urban Health and Wellbeing with Zhejiang University Press and Springer. The book contains a foreword by ICSU President Gordon McBean and a detailed theoretical as well as conceptual framework and description of the systems approach. The programme's systems approach has also been published in a peer-reviewed journal together with colleagues from Future Earth and is gaining acceptance and popularity in the science community as an innovative and transdisciplinary approach to science.

In September the office supported the ICSU Regional Office for Latin America and the Caribbean (ROLAC) in organizing its first science workshop in San Salvador in partnership with the Ministry of Science and Technology of El Salvador. The aim of the workshop was to assess the conditions of urban health and to identify current challenges of the country and the region as well as to identify knowledge gaps and research needs.

Ahead of of the UN's Habitat III Conference on Housing and Sustainable Urban Development in Quito, Ecuador in October, the programme participated in the Health & Wellbeing Urban Thinkers Campus, organized by the United Nations University Institute for Global Health (IIGH) in Kuching, Malaysia and co-produced the Kuching statement on Healthy, Just and Sustainable Urban Development.

The programme was also active at Habitat III, where it convened a panel discussion on urban health at Habitat X Change, an exhibition space co-organized by ICSU. The Habitat III conference adopted the New Urban Agenda (NUA), a document that is intended to guide urban development for the coming decades. Significantly, 'health' is referred to 29 times in the Agenda, indicating a recognition of health as a common and integrating concept for the NUA and the Sustainable Development Goals (see also Science for Policy section below).

The skies over northern China shrouded with a thick haze in December 2013. Beijing and Hebei, both west of the Bohai Sea, are complete enshrouded.




HABITAT III EXHIBITION
EXPOSICIÓN HABITAT III
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SCIENCE FOR POLICY

HABITAT III

At the UN's Habitat III conference ICSU played a role convening the scientific community and providing a platform for engagement. With its co-sponsored programmes, it advocated for a strong role for science in the New Urban Agenda, the outcome document of the conference, which should in turn support the implementation of Sustainable Development Goal 11 on cities.

The contribution of the scientific community is vital for supporting the technical, design, institutional and governance challenges facing individual towns and cities and the global system of cities. Science is also key to understanding life within urban ecosystems and the impact of cities on future global environmental change.

Habitat III, which took place in Quito, Ecuador on 17-20 October, was the most inclusive of all the UN framework processes to date, providing multiple entry points for civil society engagement. The most prominent of these was the General Assembly of Partners (GAP). The GAP was open to virtually any organization, individual or stakeholder group with an interest in sustainable urbanization. Its membership ranges from individual city policymakers to organized groups – similar to the Major Group system at the United Nations – of women, professionals and academics, indigenous peoples, foundations, parliamentarians, farmers, children and the media, as well as business and trade unions. ICSU participated actively in the process, feeding in knowledge from its scientific community.

At the European Regional Preparatory Conference in Prague in March 2016, ICSU joined the Research & Academia group of the GAP. Sue Parnell, made a statement in plenary on behalf of ICSU to highlight the need for a global science, technology and innovation system to support and monitor efforts to secure the urban transition to a more sustainable world. She also called for the New Urban Agenda to have a stronger focus on human health and wellbeing.

In July of 2016, ICSU, together with the World Health Organization, the governments of Ghana and Norway, the United Nations University Institute of Global Health, and the International Society for Urban Health, convened an expert meeting to coordinate the community's input to the New Urban Agenda. The meeting resulted in proposed language which was ultimately included in the New Urban Agenda, and a report on "Health as the pulse of the New Urban Agenda", which outlines critical connections between health and urban

policies and will serve as the basis for further action by ICSU's Urban Health and Wellbeing programme.

A key component of the work coordinated by ICSU and Future Earth for Habitat III relates to an identified need for a global knowledge platform to emerge in the implementation phase of the New Urban Agenda.

The need for systematic, practical and evidence-based guidance for national, regional and local public and private decision-makers about sustainable urban development has grown dramatically in the wake of several important global agreements that emphasize the importance of cities and urbanization. ICSU joined Future Earth, Adelphi, the Penn Institute for Urban Research, the Prince's Trust International Sustainability Unit and UCL's City Leadership Initiative in convening a workshop in September. The workshop issued a call to action and some participant came together around a commentary in Nature, published just ahead of Habitat III. The knowledge coalition formed in Quito will provide the knowledge platform for various actors to engage in the implementation of the New Urban Agenda (looking towards the World Urban Forum in 2018 as a key milestone for engagement).

As part of its science advocacy and stakeholder engagement remit, ICSU partnered Future Earth and the University of Applied Sciences in Potsdam in the design and execution of a knowledge exchange platform at Habitat III called Habitat X Change. A total of 17 events were held in the space, ranging from science policy dialogues, the launch of Future Earth's Knowledge Action Network to co-organized events with city stakeholder groups such as C40, WHO and UCLG.

Franz Gatzweiler (r.), Executive Director of the Urban Health and Wellbeing programme, exchanging business cards with the Deputy Mayor of Xiamen, China.

INTERACTIONS ACROSS THE SUSTAINABLE DEVELOPMENT GOALS

Building on its 2015 report assessing the Sustainable Development Goal (SDG) targets, ICSU is working on a new report on interactions across the SDGs. It seeks to make a case for the importance of identifying and understanding how the 17 goals and 169 targets interact with each other. The aim is to support effective implementation of the SDGs and achieve the desired outcomes across the economic, social and environmental dimensions of sustainable development. ICSU kicked off this work with a brainstorming meeting in January which led to the publication of a working paper entitled "A draft framework for understanding SDG interactions" in June, accompanied by a commentary in Nature by Nilsson et al. The framework consists of a seven-point scale that characterizes the range of positive and negative interactions that can occur between targets and goals, from one goal counteracting or even cancelling another to one creating the conditions or even being indispensable for the achievement of another. The framework also identifies a set of key dimensions such as governance, geography or technology that also needs to be taken into account when analysing interactions.

ICSU is working on the new report in partnership with the Institute for Advanced Sustainability Studies (IASS), the Kiel-based Future Ocean cluster, the International Food Policy Research Institute (IFPRI), the French Institute of Research for Development (IRD), the International Institute for Applied Systems Analysis (IIASA), Monash University, the New Zealand Centre for Sustainable Cities, and the Stockholm Environment Institute. The report, expected to be published in the first half of 2017, will provide a focused analysis of key interactions on 4 of the 17 goals (agriculture, health, energy and life below water) as a first step, include location-specific examples of key interactions, and identify important knowledge gaps and policy options to manage synergies and trade-offs. The report is aimed at policy-makers interested in identifying and managing synergies and trade-offs and in promoting an integrated approach to implementation of the SDGs that minimizes negative outcomes.

High-Level Political Forum 2016, session on the science-policy interface - new ideas, insights and solutions.

GLOBAL SUSTAINABLE DEVELOPMENT REPORT

In 2016, ICSU stepped up collaboration with UN DESA to engage the international scientific community on contributing to the 2016 edition of the Global Sustainable Development Report (GSDR), a United Nations publication that aims to strengthen the science-policy interface at the High-Level Political Forum (HLPF) on Sustainable Development. Since the first prototype GSDR in 2014, ICSU has worked closely with the UN and its partners to engage the scientific community in this process.

The ICSU community contributed to the report by submitting briefing notes, participating in Expert Group Meetings convened by UN DESA, peer-reviewing chapters, and raising awareness of the report. The 2016 Global Sustainable Development Report (GSDR) was launched in France at a high-level event at the French Foreign Ministry in October, preceded by a one-day workshop at Sciences Po. The aim of the events – co-organized by UN DESA, ICSU, the Institute for Sustainable Development and International Relations (IDDRI) and the *Institut de recherche pour le développement* (IRD) – was to engage the Francophone scientific community towards the next edition to be published in 2019.

The high-level event, which was opened by Andre Vallini, Minister of State for Development and Francophonie, attached to the Minister of Foreign Affairs and International Development, brought together a diverse range of actors from academia, government and civil society.

Thomas Gass, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs in UN DESA, gave an overview of the report and stressed that the GSDR was not just a report, but also a mobilizing process for scientific communities from all over the world, notably non-Anglophone communities. ICSU President Gordon McBean provided some remarks on the Council and its scientific programmes.

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

As co-organizer of the Scientific and Technological Community Major Group, ICSU participated in the High-Level Political Forum on Sustainable Development (HLPF) in July in multiple contexts. First, ICSU organized a side event to present a draft framework for understanding SDGS interactions. The event involved ICSU President Gordon McBean, who highlighted the Council's work in promoting integrated science in key areas of the SDGS, the French National Research Institute for Sustainable Development (IRD) on key impacts of agriculture and land-use change on human and ecosystem health in the Amazon region and a delegate from the Government of Colombia commenting on the overall approach to interactions and discussing specific challenges faced at national level. It was attended by representatives of Member States and stakeholders and successfully raised awareness on the need to identify and manage interlinkages across the SDGS to achieve positive outcomes across all dimensions, and the role of the scientific community in providing the evidence base to support a coherent implementation of the SDGS.

At a session on the science–policy interface chaired by Hector Alejandro Palma Cerna, Deputy Permanent Representative of Honduras to the UN and Vice-President of ECOSOC, a lively discussion was moderated by the Head of Science Programmes at ICSU. The session included a presentation of the newly released 2016 Global Sustainable Development Report, an "assessment of assessments" that involved 245 scientific experts seeking to synthesize scientific evidence on sustainable development issues and strengthening the science–policy interface. ICSU also moderated a side event organized by UN DESA on the 2016 Global Sustainable Development Report.

CLIMATE CHANGE/ COP22

At COP22, the International Council for Science, in partnership with the Scientific Committee on Antarctic Research (SCAR), the Inter-American Institute for Global Change Research (IAI), the World Climate Research Programme (WCRP), and the Intergovernmental Panel on Climate Change (IPCC) Working Group I convened a side event on key issues in fundamental climate research following the Paris Agreement.

The event brought together a group of high-level scientists, representatives of research agencies and funding agencies. The event was moderated by Valérie Masson-Delmotte, co-chair of IPCC Working Group I, and David Carlson, Director of WCRP.

Scientists emphasized that the Paris Agreement has liberated climate research from discussing what we already know – the world is warming, and humans are largely responsible – and that now climate research must define new frontiers and probe deeper into the unknown. They argued that basic climate research can sharpen its view through three simple yet powerful guiding questions:

- Where does the carbon go?
- How does the weather change with climate?
- How does climate influence the habitability of the Earth and its regions?

Scientists stressed that these guiding questions not only help to shape the fundamental research agenda, but are at the heart of what society needs to know to prepare for the climate change challenges ahead. The session was live streamed and is available at http://bit.ly/2locg5O

Following the side event, a commentary "Climate research must sharpen its view" was published in Nature Climate Change, which is available at http://go.nature.com/2kyU7v2.

INTERNATIONAL NETWORK ON GOVERNMENT SCIENCE ADVICE (INGSA)

The year 2016 proved to be a landmark in the development of the International Network for Government Science Advice (INGSA). The network, which was launched in Auckland, New Zealand in 2014, operates formally under the aegis of ICSU.

The year started with the Science Advice Workshop in South Africa (26-27 February 2016), organized by INGSA in partnership with the Academy of Science of South AFRICA and the Department of Science and Technology. This workshop brought together scientists (both young and established researchers) and key stakeholders for a dialogue on models of science advice and promising practices for working at the interface between science and policy. The INGSA Africa Chapter is a product of this successful workshop and is designed to enhance science advice capacity in the continent. The ICSU Regional Office for Africa is represented on the Steering Committee of INGSA Africa.

In September, INGSA, in partnership with the European Commission, organized its 2nd International Science Advice to Government conference in Brussels. More than 600 participants – policymakers, practitioners and scientists – from 72 countries met to discuss the principles and practice of feeding evidence into policy processes.

Over the course of the two days, the theory and practice of science advice were examined from many angles. Plenary and parallel sessions explored such topics as how to respond to global policy challenges such as climate change, migration and health; how to develop the practice of science advice and build capacity; providing advice in crisis situations; the relationship between society and science advice; and how to provide science advice across borders and boundaries.

A recurring theme in the discussion was the idea of post-normal science – when science no longer deals with certainty but with probability, the need for decisions is urgent and the risks are high. In such a climate, the notion of trust both in science and in the mechanisms or institutions for science advice was cited as key.

ICSU was well represented at the conference. Its President Gordon McBean spoke in a session on climate change and the road beyond the 2015 Paris climate talks. President-Elect Daya Reddy spoke about the role of science in the implementation of the Sustainable Development Goals. Executive Director Heide Hackmann was a speaker in the plenary that discussed the way forward for science advice and INGSA. The next edition of the conference will be held in 2018 in Tokyo.

Just ahead of the 2nd International Science Advice to Government conference ICSU and UNESCO entered a formal partnership on the provision of science advice for public policy. This collaboration will be operationalized through INGSA.

Flavia Schlegel, UNESCO's Assistant Director-General for Natural Sciences and Heide Hackmann, Executive Director of ICSU, signed an agreement committing the two organizations to:

- Assist countries with the development and/or strengthening of advisory systems, particularly in the developing world;
- Enable improved dialogue between scientific and policy communities, with linkages between research programmes and policy needs;
- Provide a forum for policy-makers, practitioners, national academies and academics to develop and enhance approaches to the use of scientific evidence in informing policy at all levels of government.

During the closing session of the 2nd edition of the Science Forum South Africa in December, South Africa's Minister of Science and Technology, Naledi Pandor, awarded INGSA the Science Forum South Africa 2016 Science Diplomacy Award, in the category for an international STI partnership which has made an outstanding contribution to harnessing scientific advice for multilateral decision-making.

Heide Hackmann, Executive Director of ICSU and member of the INGSA Advisory Panel, accepted the award on behalf of INGSA along with Tolullah Oni, steering committee member of INGSA-Africa.

UNIVERSALITY OF SCIENCE

Leiv K. Sydnes, Chair of CFRS, signing the UNESCO & L'Oreal Women in Science Manifesto on behalf of ICSU

FREEDOM AND RESPONSIBILITY (CFRS)

The Committee on Freedom and Responsibility in the conduct of Science (CFRS) is ICSU's custodian of the Principle of Universality of Science, which supports scientists' freedom of movement, association, expression and communication, and promotes equitable and non-discriminatory access to science. In 2016, both the number and the variety of violations of the Principle considered by the committee increased. The committee paid special attention to gender issues in the context of fieldwork, mobility and internationalization. However, the committee's attention to individual scientists whose rights are under threat also remained high.

GENDER ISSUES

The Principle of Universality of Science clearly covers gender equality and equitable access to all resources in the practice of science. In spite of this, many forms of gender-based harassment and discrimination against women, and occasionally men, are being reported. In order to shed light on such issues, a workshop entitled "Gender issues in field research: Mobility and internationalization of science" was held in Mexico City in April 2016, in cooperation with the Mexican Academy of Sciences and the ICSU Regional Office for Latin America and the Caribbean. The potential for gender-based harassment in academic and research institutions was discussed, analysed and documented, along with the potential to harm the research community and undermine victims' commitment to scientific research. The Chair signed the UNESCO & L'Oreal Women in Science Manifesto online on behalf of ICSU during the workshop, and all participants were encouraged to sign the document in their personal capacity. A visible outcome of the workshop was the advisory note on "Mobility and Field Research in the Sciences: Gender Equality and Prevention of Harassment", which was published on the ICSU website on 25 November 2016, to coincide with the International Day for the Elimination of Violence against Women.

INDIVIDUAL CASES

The committee considered 15 cases from around the world where the rights and freedom of scientists to conduct their work may have been restricted. Some cases have been ongoing for years, like that of Büşra Ersanli, a Turkish professor in political science arrested in October 2011. Her case has been going through the courts for more than four years without any clear outcome. Other cases are new, such as those of a number of Turkish academics and researchers who have been removed from their positions at universities following the failed coup d'état on 15 July 2016. ICSU published a statement about the situation in Turkey on its website on 28 July 2016.

Two individual cases were resolved to the committee's satisfaction. First, the charges against Heinz Richter, a historian at the University of Mannheim in Germany, of racism in his depiction of Greek resistance during World War II were dropped. Second, Omid Kokabee, an Iranian physicist and a PHD student at the University of Texas, was granted parole from his 10-year prison sentence. The committee has followed his situation closely since he was arrested in 2011 during a trip to his home country.

NEW SECRETARIAT

The location of the CFRS secretariat moved from the Swiss Academy in Bern to the Royal Society of New Zealand Te Apārangi in Wellington during the year. ICSU is most grateful for the six years Roger Pfister served as the Executive Secretary for CFRS, and the committee welcomed Roger Ridley as his successor at the meeting in October.

LEADING INTEGRATED RESEARCH FOR AGENDA 2030 IN AFRICA (LIRA 2030)

In 2016, as part of its mission to support integrated, solutions-oriented science globally, the International Council for Science signed a five-year agreement with the Swedish International Development Cooperation Agency (Sida) for a 5 million euro programme to strengthen research capacity for sustainability in Africa. The programme, entitled Leading Integrated Research for Agenda 2030 in Africa (LIRA 2030 Africa), will be delivered by ICSU in conjunction with its Regional Office for Africa (ICSU ROA), the Network of African Science Academies (NASAC) and the ISSC.

The programme seeks to develop the potential of next-generation scientists in Africa in the production and communication of policy-relevant knowledge. The knowledge generated by the programme is expected to inform policy processes such as the Agenda 2063 of the African Union and the 2030 Agenda for Sustainable Development.

Training event on trans-disciplinary research in Nairobi, Kenya, October 2016

It provides two-year collaborative research grants with a thematic focus on global environmental change, disaster risk reduction, sustainable energy, human health and well-being in urban environments and related nexus issues. ICSU's co-sponsored international research programmes – Future Earth, Integrated Research on Disaster Risk, and Health and Wellbeing in the Changing Urban Environment –provide an overall thematic framing for the programme's activities. The programme will also promote the integration of gender and poverty reduction concerns.

The grants are intended to support integrated and solutions-oriented research by reaching across disciplines, and engaging with other knowledge partners (e.g. civil society, policy makers, and private sector).

Activities also include training for early-career scientists on co-design and co-production, science communication, proposal writing and data management.

Annual events will be organized to promote scientific exchange and provide opportunities for South–South and North–South research collaboration. Outstanding early-career scientists will also have opportunities for career development through participation in international scientific committees and conferences, working groups and inter-governmental policy processes.

An advisory committee was appointed in June 2016 to define the programme's scientific strategy and to make research funding decisions. The committee includes natural and social scientists from Africa, stakeholder representatives and leadership representatives of all partners involved.

The first call for pre-proposals was launched in July to identify up to 10 collaborative research projects across Africa (to the value of up to 90,000 euros each over two years) to build understanding of the "Energy–Health–Natural Disasters" nexus in African cities.

Thirty-five pre-proposals were short-listed from a total of 165 applications, and representatives of those pre-proposals from 16 countries across Africa attended a training event on trans-disciplinary research in Nairobi, Kenya in October. The event included modules on research co-design and co-production, science communication, open data management and proposal writing.

Researchers then submitted full proposals which were reviewed by the advisory committee. In January 2017, the advisory committee selected nine interdisciplinary projects for funding. See next page for table of projects.

THE NINE PROJECTS AWARDED FUNDING BY LIRA 2030

Project	Project Leader
Assessment and characterization of volcanic and flood hazards and their health implications in the cities of Goma (Democratic Republic of Congo), Buea and Limbe (Cameroon)	Mabel Nechia Wantim, University of Buea, Cameroon
Towards healthy communities: citizen science for improved air quality in Nairobi (Kenya) and Addis Ababa (Ethiopia)	Osano Philip, Stockholm Environment Institute, Nairobi, Kenya
Delivery of clean air strategies for mitigating household air pollution and associated respiratory illnesses in urban informal settlements in Dar es Salaam (Tanzania) and Lilongwe (Malawi)	Ng'weina F. Magitta, University of Dar es Salaam, Tanzania
Reducing human exposure to combustion-derived pollutants in urban areas of the Lake Victoria watershed; Improvement of indoor air quality in selected urban communities of Kampala (Uganda) and Mwanza (Tanzania)	Kenneth Arinaitwe, Makerere University, Uganda
Biogas-supported decentralized water treatment system for communities in Diepsloot (South Africa) and Chambishi (Zambia) townships: A feasibility study	Keneiloe Sikhwivhilu, MINTEK, South Africa
Health effects of indoor air pollution from cooking stoves in Kigali (Rwanda) and Dar er Salaam (Tanzania)	Kabera Telesphore, University of Rwanda
Co-designing energy communities with energy poor women in urban areas (Kenya, Uganda and South Africa)	Ambole Lorraine Amollo, University of Nairobi, Kenya
Limiting the health hazards of fossil fuel generators' use in Lagos (Nigeria) and Dakar (Senegal) with traditional knowledge	Eze Kevin, University of the Sahel, Senegal
Mitigating risks to flood-related waterborne diseases in Abidjan (Ivory Cost) and Kampala (Uganda)	Kouamé Parfait Koffi

SCIENCE INTERNATIONAL

Science International was launched in 2015 as a series of regular meetings by ICSU in collaboration with the Inter-Academy Panel, the International Social Science Council (ISSC) and The World Academy of Science (TWAS). In 2016, Science International published the Accord – "Big Data in an Open Data World" – and launched a campaign for endorsements.

The Accord proposes 12 principles to guide open access to publicly funded big data. It states that open data is critical to assure the rigour of research findings because it would provide researchers worldwide with the opportunity to replicate experiments and observations – basically revisiting and double-checking the research results and verifying conclusions. For least-developed countries, open data provides an opportunity to participate more fully in the global research enterprise.

The list of endorsers now comprises more than 100 organizations, including many regional and national science academies, representing Bangladesh, Benin, Brazil, the Caribbean, Colombia, Ethiopia, Hungary, Malaysia, the Netherlands, Nigeria, Republic of Korea, South Africa and Switzerland, among others. International scientific organizations have also endorsed the accord, including the unions on mathematics, pure and applied chemistry, soil sciences and toxicology. Among the other endorsers are universities, university libraries, research institutes and civil society groups.

Many endorsing organizations have detailed their future plans in support of the Accord's principles.

For example, ISRIC World Soil Information, a global centre for soil data, is planning a wide range of open datasets and web services that will be helpful to solving food insecurity, climate change, environmental degradation, water scarcity and threats to biodiversity. The International Mathematical Union is planning to use its Committee on Electronic Information and Communication to draw attention to the importance among mathematicians of open data. Mathematicians are especially critical for developing ways to analyse and organize large amounts of data, such as data-mining.

The Network of Academies of Science in Countries of the Organization of the Islamic Conference (NASIC) hosted a discussion on open data at its October 2016 conference in Malaysia. The Committee on Space Research (COSPAR) planned to advertise its endorsement of the Accord to its scientific community of nearly 10,000. The Latin American Council of Social Sciences (CLACSO) agreed to promote the Accord's principles across the region.

An initiative to establish an African Open Science Platform to promote the value and leverage the potential of open data for science was launched by the Minister of Science and Technology, Naledi Pandor, at the Science Forum South Africa 2016. The Africa-wide initiative will promote the development and coordination of data policies, data training and data infrastructure. It is conceived as an integrated set of arrangements that provides a policy, capacity-building and infrastructural framework for enhanced accessibility and impact. The initiative will also focus on the creation of national open science fora through which policies and coordination can be discussed and established.

The pilot phase is supported by the South African Department of Science and Technology (DST), funded by the National Research Foundation (NRF), directed by CODATA, the Committee on Data of the International Council for Science (ICSU) and implemented by the Academy of Science of South Africa (ASSAF).

Talks are also underway for data initiatives in the Latin American region. The inauguration of the ICSU Regional Office for Latin America and the Caribbean (ROLAC) at a high-level ceremony involving several government ministers held in El Salvador included thematic presentations from ICSU representatives and others. There was also a seminar dedicated to *"The Open Science Imperative: Challenges and Opportunities"*. Geoffrey Boulton, President of CODATA and Jorge Tezon, Manager of Scientific and Technological Development from CONICET in Argentina, made presentations.

WORKING WITH THE REGIONS

REGIONAL OFFICE FOR ASIA AND THE PACIFIC

In 2016, the Regional Office for Asia and the Pacific (ROAP) developed a new activity on epigenetics. In October, a planning group met in Kuala Lumpur to develop a science plan on epigenetics and its relation to urban health in the region. The plan will review the epigenetic landscape in urban health, document what is known about triggers and epigenetic modifications and identify emerging research areas. This will include research on genetic products change, biochemical pathways and their relations to diseases in rapidly expanding urban populations.

The launch of Future Earth Korea in April was a milestone in the development of Future Earth in Asia. ROAP laid the groundwork for this development at the 5th ICSU ROAP Regional Consultation in Asia and the Pacific in 2013. ROAP also played a key role in the establishment of the UMS Sustainable Initiatives for Marginal Seas of East and South Asia (SIMSEA) Research Node, which will play a role in the development of the Future Earth Oceans Knowledge – Action Network. In October, ROAP organized the SIMSEA Regional Symposium in Manila.

ROAP also organized the 5th International Workshop on Psychological Intervention after Disasters (PIAD) in Manila in November, on behalf of ICSU Member the International Union of Psychological Science (IUPSYS). The workshop explored psychological research and practice concerning disasters and how people and communities deal with the effects of disasters on their biopsychosocial well-being.

September 2016 marked the end of ICSU ROAP's hosting agreement with the Government of Malaysia. The process of renewing the contract is currently ongoing. At the end of the year, Mohd Nordin Hasan, the founding Director of ICSU ROAP, stepped down from his post, after having served the Office since 2006.

REGIONAL OFFICE FOR AFRICA

The Regional Office for Africa (ROA) saw a number of staff movements in 2016, including the departure of Edith Madela-Mntla as Director in June. A new director will be recruited in early 2017, and in the interim Daniel Nyanganyura has been acting as director.

Through the Leading Integrated Research for Agenda 2030 in Africa (LIRA 2030) programme, the Office will recruit in early 2017 a Project Coordinator to manage and organize this programme's activities.

There were a number of governance meetings held during 2016, including a mid-GA National Members and Scientific Unions' Meeting in Johannesburg in June.

Fourteen African National Members were represented at this latter event, as were eleven International Scientific Unions, the Integrated Research on Disaster Risk (IRDR) programme and ASSAF (the host organization of ROA). Regional committee meetings were held in Pretoria in March and September.

In September, ROA organized in collaboration with the Human Sciences Research Council (HSRC) of South Africa a seminar on the Sustainable Development Goals and Agenda 2063 on the themes of sustainable energy, disaster risk reduction and global environmental change in Africa. The book "Natural and Human-Induced Hazards and Disasters in Africa", which was coordinated by ROA, was launched at the seminar.

All photos on this spread: Opening of the new ICSU ROLAC office in San Salvador

The second African Future Earth Committee meeting was held in Pretoria in December and brought together most committee members with representatives of the Future Earth global secretariat, Science Committee and South Africa's Department of Science. Discussions focused on the architecture of Future Earth in Africa and the science agenda in the region.

The Steering Committee of the Africa chapter of the International Network for Government Science Advice (INGSA) met on the sidelines of the 2nd Science Forum of South Africa (SFSA) in December. Committee members Dr M. Oladoyin Odubanjo and Dr Tolullah Oni made presentations on "Defining the Principles and Guidelines of Science Advice". At the end of the Forum, INGSA was honoured with the Forum's Science Diplomacy Award.

REGIONAL OFFICE FOR LATIN AMERICA AND THE CARIBBEAN

In 2016, the Regional Office for Latin America and the Caribbean (ROLAC) moved from Mexico to El Salvador. At an official ceremony, El Salvador's Education Minister, Carlos Mauricio Canjura Linares, welcomed the establishment of the Regional Office as "a breakthrough for education and science" in the country. Under the agreement signed by ICSU and the government of El Salvador, the Office will be hosted in that country for the next five years, starting in August 2016. Activities of the Office continued to focus on biodiversity, mathematics education, disaster risk reduction, sustainable energy, urban health and open data.

On biodiversity, ROLAC organized a Symposium on Biocultural Heritage in Mexico City in June. On mathematics education, the Regional Office and the Ministry of Education from the Dominican Republic organized a workshop in March. ROLAC staff also took part in workshops and meetings during the year related to disaster risk reduction, sustainable energy and Agenda 2030.

At the same time as the official opening ceremony in August for the new office in San Salvador, ROLAC organized a workshop on open data in El Salvador. A workshop on Urban Health entitled "Current and Future Opportunities for Urban Health situation in El Salvador" followed in October. In November, ICSU ROLAC and TWAS ROLAC jointly organized the first Young Scientists conference in El Salvador, which brought together 700 people.

Finally, ROLAC staff took part in a number of events including the 13th General Conference and 26th TWAS General Meeting in Vienna, Austria, the ICSU/Committee on Freedom and Responsibility in the Conduct of Science workshop on Gender issues in field research in Mexico, the International Union of Soil Sciences Inter-Congress Meeting in Kigali, Rwanda and the 100-year anniversary of the Brazilian Academy of Sciences.

Scenes from Habitat X Change at the Habitat III summit in Quito, Ecuador

COMMUNICATIONS

In 2016, the Council rolled out a new logo and brought to a close work on a new visual identity, and led the coordination of an ambitious science-policy engagement initiative at the UN's biggest ever conference on housing and sustainable urban development, Habitat III, in Quito, Ecuador. The communications team also provided support to the communication of the transition work towards a potential merger of ICSU and the ISSC.

In April, Road to Paris sunsetted its operations on the occasion of the signing of the Paris Agreement. In the 22 months it ran, it proved that audiences can be engaged around complex scientific topics through interesting journalistic content. The project saw rapid social media growth, at times growing at twice the rate of ICSU's own institutional account. It also served as a vehicle to support the launch of the 2015 Review of Targets for the SDGS, where an article about the report written by a science writer provided an easy entry-point to the complex subject matter both for journalists and for general audiences. Insights gained during the Road to Paris project will inform development of the new ICSU website, due to be launched in 2017. The website will be mobile-ready and provide a fit-for-purpose platform for engaging content that is increasingly accessed via social media.

It will also be the final piece in the rollout of the new ICSU visual identity, with the new logo and a new look already used across ICSU's publications.

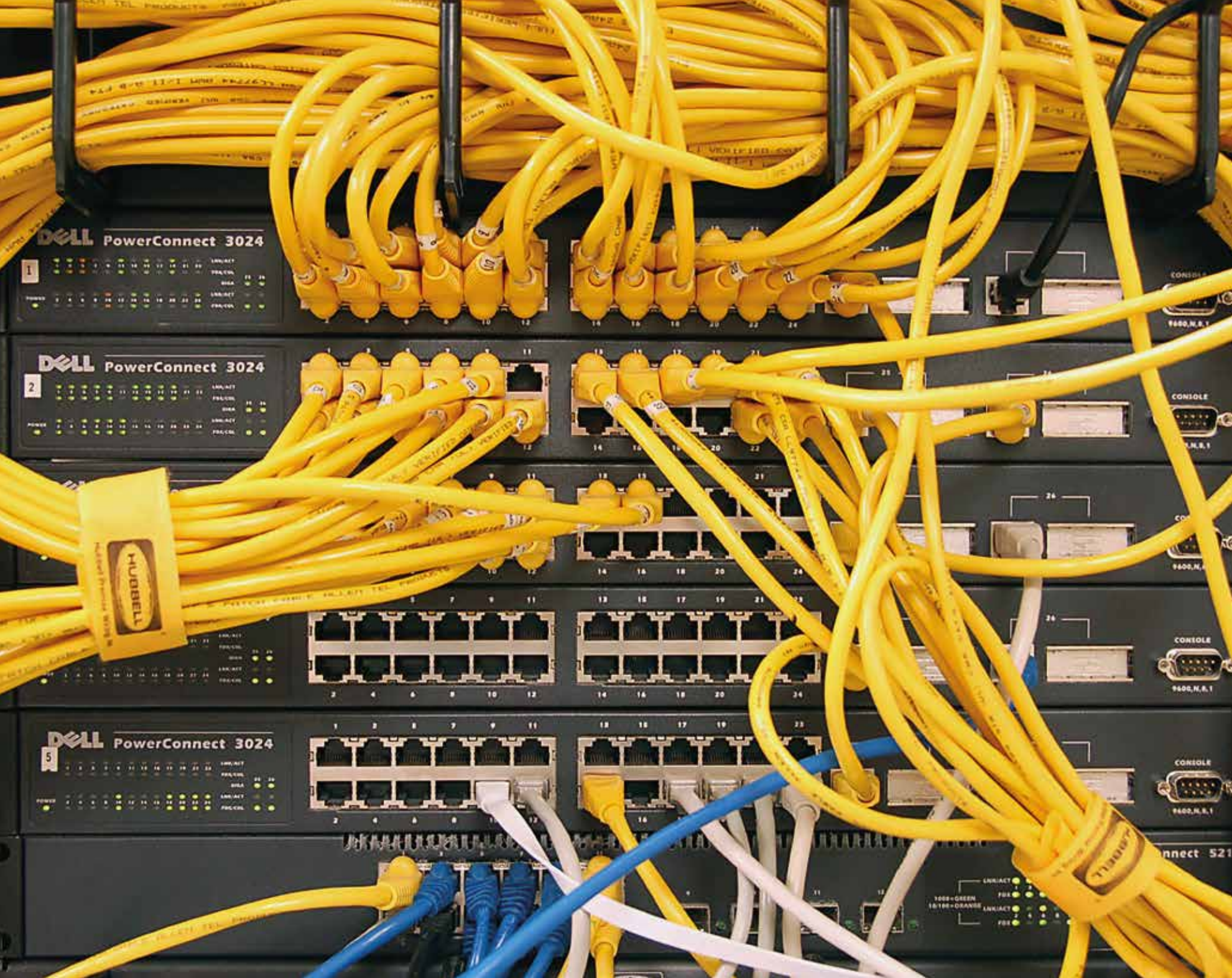
HABITAT X CHANGE

In partnership with Future Earth and the Urban Complexity Lab at the University of Applied Sciences in Potsdam, Germany, ICSU developed a customized space at the Habitat III conference in Quito, Ecuador – Habitat X Change. The space offered events and networking around science, urbanization and data visualization. The three partners together defined a shared purpose, which was translated into a visual identity for a common space, social media channels, activities, events and products. This led to a programme of 17 events focused on science-policy and visualization over the course of six days.

In the ICSU track Cities and Science, the Urban Health and Wellbeing programme coordinated an event on healthy cities. The two other events were on the science–policy–practice nexus, including one developed in partnership with the C40 Cities Climate Leadership Group.

Habitat X Change also featured an installation built by the University of Applied Sciences, Potsdam which showcased several data visualizations on three different cities: Cape Town, Bogota and Singapore, allowing visitors to discover the different ways these cities are developing.

ICSU co-organized two press conferences at Habitat III and provided overall communications support to many of the partner events, in wparticular Future Earth's launch of the Anthropocene magazine in Habitat X Change and at a side event in partnership with the Guardian and Citiscope.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CONSOLE

ADMINISTRATION AND GOVERNANCE

FINANCIAL SUMMARY

STATEMENT OF INCOME AND EXPENDITURE

International Council for Science (ICSU) for the period 1 January to 31 December 2016

Income	Euros
Membership dues	
Members	2.354.406
Scientific Unions	170.742
Scientific Associates	11.500
Provision Arrears	-36.507
NSF support for WCRP	71.427
Grants from NSF	629.746
Grant from NSF for Future earth activities	300.853
NSF dedicated funds at the end of year	-275.743
France	500.000
TAIPEI grant for ICOE	955.471
Taipei dedicated funds at the end of year	-660.057
SIDA Grant for LIRA activities	1.142.417
SIDA dedicated funds at the end of year	-839.984
Other income	21.019
Cancellation other provision	20.547
Investment income	14.070
Total income	4.379.907

Expenditure	Euros
Governance meetings	162.965
Policy committees	146.491
International Programme & Interdisciplinary Bodies	800.554
Policy Activities & Fora	34.315
Capacity Development & Early Career Science activities	244.187
International Events	38.326
Other Review response actions & New Initiatives	61.603
Membership	33.166
Regional Offices	247.078
Outreach	158.200
Human resources	2.301.714
Administration / Overheads	172.379
Contingency/Provision	3.786
Loss on arrears	2.591
Loss on exchange	5.270
Investment charges & losses*	33.042
Total expenditure	4.445.667
Excess of expenditure over income	-65.759

*Including provision for unrealized losses on Portfolio for a total amount of 20,5K €

BALANCE SHEET

International Council for Science (ICSU) for the period 1 January to 31 December 2016

Assets	Euros
Bank & cash balances	3.222.644
Marketable securities	2.197.190
NSF & UNESCO, funds for IRDR & RIO+20	289.165
Others assets	29.595
Fixed assets	10.314
Total assets	**5.748.908**

Liabilities	Euros
External funds allocated	1.775.783
Sundry creditors & accruals	553.394
Provision / Retirement	273.263
Total liabilities	**2.602.440**

Reserves	Euros
Mandatory reserve	1.500.000
General fund / Retained earnings	1.712.227
Total reserves	**3.212.227**
Net Result	**287.462**

EXECUTIVE BOARD 2014–2017

Gordon McBean
President

David Black
Secretary-General

Yuan-Tseh Lee
Past-President

Jinghai Li Vice-President for Scientific Planning and Review

Michael Clegg Vice-President for External Relations

Barbara Erazmus
Treasurer

Daya Reddy
President-Elect

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Orhan Altan

John Buckeridge

Manuel de Léon

Cheryl de la Rey

FROM NATIONAL MEMBERS:

John Ball
(United Kingdom)

Raghavendra Gadagkar
(India)

Nicole Moreau
(France)

Kazuyuki Tatsumi
(Japan)

SECRETARIAT

MANAGEMENT

Heide Hackmann Executive Director
Charles Erkelens (from 10/03/2016) Operations Director
Tish Bahmani Fard (to 30/06/2016) Assistant Executive Director
Lucilla Spini Head of Science Programmes
Clare Thirlway Head of Human Resources
Denise Young Head of Communications

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

Nora Papp Administrative Officer
Katsia Paulavets Science Officer
Rohini Rao Administrative Officer
Anne-Sophie Stevance Science Officer

SCIENTIFIC PLANNING AND SPECIAL PROJECTS

Maureen Brennan Administrative Officer
Charles Ebikeme Science Officer

COMMUNICATION AND INFORMATION TECHNOLOGY

Yun-Kang Ahn IT Officer
Johannes Mengel Online Editor/Communications Officer

ADMINISTRATIVE STAFF

Alexandra Guennec Payroll and HR Administration Officer
Eric Leparmentier General Services
Natacha de Marchi Accountant
Arno de Marchi Accounts/Administrative Assistant

COMMITTEE ON FREEDOM AND RESPONSIBILITY IN THE CONDUCT OF SCIENCE

Roger Pfister (to 01/07/2016) Executive Secretary CFRS 50% time based at the Swiss Academy of Sciences
Roger Ridley (from 01/07/2016) Executive Secretary CFRS (on secondment by, and based at, the Royal Society of New Zealand)

REGIONAL OFFICE FOR AFRICA

Edith Madela-Mntla (to 17/06/2016) Director
Daniel Nyanganyura (from 20/06/2016) Acting Director / Programme Specialist in Physics, Mathematics and Engineering Sciences
Richard Glover Programme Specialist in Biological Sciences
Bongani Mahlalela Communications Officer
Lerato P. Mmatloa (from 01/10/2016) Administrative Assistant
Hazael Naidoo (to 30/06/2016) Administrative Assistant

REGIONAL OFFICE FOR ASIA AND THE PACIFIC

Mohd Nordin Hasan (to 31/12/2016) Director
Tengku Sharizad Tengku Dahlan Senior Science Officer
Mohd Hizamddin Jaafar Administrative Officer

REGIONAL OFFICE FOR LATIN AMERICA AND THE CARIBBEAN

Manuel Limonta Director
Camilo García (to 30/09/2016) Administrative Officer
Karla Rodriguez Administrative Officer (from 07/10/2016)
Claudia Marroquín (from 07/10/2016) Liaison Officer
Oscar Reyes (from 07/10/2016) Communications Officer

NATIONAL MEMBERS

ICSU has 123 National Members covering 143 countries. These 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 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)*
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
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)
El Salvador Vice Ministry of Science and Technology
Estonia Estonian Academy of Sciences
Ethiopia Ethiopian Science and Technology Agency**
Finland Delegation of the Finnish Academies of Science and Letters
France Académie des Sciences
Georgia Georgian Academy of Sciences*
Germany Deutsche Forschungsgemeinschaft (DFG)
Ghana Ghana Academy of Arts & Sciences**
Greece Academy of Athens
Guatemala Academia de Ciencias Médicas Fisicas y Naturales de Guatemala*
Honduras National Academy of Sciences of Honduras
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 People's Democratic Republic 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 Republic 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, Principality of 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
Oman, Sultanate of Research Council of Oman
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 Innovación
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, United Republic of 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.

IAU 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
IUFoST International Union of Food Science and Technology
IUFRO International Union of Forest Research Organizations
IUGG International Union of Geodesy and Geophysics
IUGS International Union of Geological Sciences
IUHPST International Union of 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

*Scientific Union Observer

INTERDISCIPLINARY BODIES

THEMATIC BODIES

COSPAR Committee on Space Research
IRDR Integrated Research on Disaster Risk
SCAR Scientific Committee on Antarctic Research
SCOR Scientific Committee on Oceanic Research
SCOSTEP Scientific Committee on Solar-Terrestrial Physics
URBAN HEALTH

GLOBAL ENVIRONMENTAL CHANGE PROGRAMMES

Future Earth: Research for Global Sustainability
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

AAS African Academy of Sciences
AASSA Association of Academies and Societies of Sciences in Asia
CIE Commission Internationale de l'Eclairage
IASC International Arctic Science Committee
IAHR International Association of Hydraulic Engineering and Research
ICA International Commission for Acoustics
ICO International Commission for Optics
ICIAM International Council for Industrial and Applied Mathematics
ICLAS International Council for Laboratory Animal Science
ICSTI International Council for Scientific and Technical Information
IFIP International Federation for Information Processing
IFLA International Federation of Library Associations and Institutions
IFSM International Federation of Societies for Microscopy
FIG International Federation of Surveyors
IFS International Foundation for Science
IIASA International Institute for Applied Systems Analysis
ISDE International Society for Digital Earth
IUVSTA International Union for Vacuum Science, Technique and Applications
IWA International Water Association
PSA Pacific Science Association
4S Society for Social Studies of Science
TWAS The World Academy of Sciences
UIS Union Internationale de Spéléologie

A cliffside Peruvian Booby colony on Isla Chañaral, Chile

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