Annual Report 2010

Strengthening international science
for the benefit of society

ICSU
International Council for Science

ICSU's vision

The long-term ICSU strategic 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 has a major role to play in leading the global science community, implementing new scientific initiatives and engaging with policy-makers and other sectors of society to help realize this vision (Strategic Plan 2006-2011).

Introduction

The International Council for Science (ICSU) is a non-governmental organization with a global membership of national scientific bodies (121 members, representing 141 countries)* and international scientific unions (30 members). ICSU mobilises knowledge and resources of the international scientific community to strengthen international science for the benefit of society. Activities focus on three areas:

International Research Collaboration

ICSU works with strategic partners to plan and coordinate international research programmes that address major issues of relevance to both science and society. To this end, a number of Interdisciplinary Bodies have been created, addressing various themes, including: global environmental change; hazards and disasters; ecosystem change; oceans; polar research; space research; and solar-terrestrial physics.

Science for Policy

ICSU works at the intersection of science and policy, to ensure that science is integrated into international policy development and that relevant policies take into account both scientific knowledge and the needs of science. ICSU promotes dialogue and shared understanding between the scientific community, policy makers and society more broadly.

Universality of Science

The Principle of the Universality of Science embodies freedom of movement, association, expression and communication for scientists as well as equitable access to data, information and research materials. The Committee on Freedom and Responsibility in the Conduct of Science (CFRS) serves as the guardian of the Principle, adherence to which is a condition of membership to ICSU.

* Membership as of 31 December 2010

Message from the Executive Director

Year 2010 has been an exciting and intense one for ICSU as we continued implementing the first Strategic Plan 2006–2011. The organization also continued developing the second Strategic Plan 2012–2017, with several major activities – including the reviews of the ICSU Regional Offices, the science education review, the Visioning process and the Foresight exercise – providing substantial input, as well as motivation and inspiration for our future work.

At the upcoming 30th General Assembly in Rome in September 2011, ICSU Members will make important decisions on the implementation of the new strategy. I am looking forward to meeting many of you in Rome to discuss these important issues for ICSU and for global science. Following suggestions from our Members, this General Assembly will have more science in its content and some interesting associated meetings. With the hosts, our National Member in Italy, the Consiglio Nazionale delle Ricerche (CNR), providing excellent assistance and support, I am convinced that we will have an interesting and productive General Assembly, and I urge as many of you as possible to take part and help ICSU chart its future.

In October, the Executive Board accepted the offer from the Royal Society of New Zealand to host the 2014 ICSU General Assembly in Christchurch.

Looking back on the year, we have been able to strengthen our planned activities and to manage ongoing projects while undergoing staff changes at the Secretariat. We also began a number of major new activities, including the Rio+20 project and the design for the ten-year initiative emerging from the Visioning process. These new activities have been possible with the secondment of staff from our Members and additional financial support obtained through fundraising. In particular, we are grateful to the additional financial support from our Member in China: Taipei and to the dedicated contributions from the seconded staff members: Vivien, Emilia, Astrid, Andrew, Roger and Alexander, who have worked for ICSU within and outside the Secretariat.

Deliang Chen
Executive Director

Message from the President

History may choose to judge this year as one of particular importance for ICSU and in particular the evolution of Earth system research. It was during these last twelve months that the ICSU-ISSC Visioning process took hold and, in parallel with what has become to known as the Belmont Challenge, began to define the course and shape of international environmental sciences for the future decades. This process has gathered speed such that ICSU, ISSC, research funding agencies and the operational service providers have come together – for the first time to my knowledge – to co-design a major science initiative. This is both exciting and challenging, yet absolutely necessary if we are to meet the pressing needs for new knowledge and technologies that can help us achieve global sustainability. It was in June 2010 that a major meeting was convened in Paris to identify the Grand Challenges that had been identified by the scientific community through the Visioning exercise. It was concluded there that 'business as usual is not an option'; a step change is needed to promote in a very major way the interdisciplinary and trans-disciplinary research that is required to meet the Grand Challenges.

In these last years ICSU has sought to increase the involvement and participation of the social science communities in the work of its major interdisciplinary programmes and initiatives. We can look back with a certain amount of satisfaction on the results achieved. Our collaboration with the International Social Science Council (ISSC) has steadily increased, and I am pleased to acknowledge the close cooperation that our two organizations are enjoying around new important initiatives such as the Integrated Research on Disaster Risk (IRDR) programme.
As ICSU takes further its commitment to interdisciplinary research on issues relating to sustainable development, I believe we must extend this cooperation into the areas of engineering and technology. New partnerships need to be forged, and the familiar disciplinary silos must be broken down once and for all in the face of challenges and opportunities presented. I remain confident that ICSU can respond to the challenge.

Catherine Bréchignac
President

Strategic Planning

Strategic planning

2010 was a busy year for laying the foundations and setting directions for ICSU activities over the next decade. The current Strategic Plan expires at the end of 2011 and significant progress has been made in developing a new six-year plan beginning in 2012. This has been led by the Committee on Scientific Planning and Review (CSPR) and will incorporate the outcomes of the various scoping and science planning exercises that continued throughout 2010.

Implementation of the new Strategic Plan will see a strengthening of ICSU's science for policy and universality of science activities. A particular focus will be the inclusion of less developed countries, for which the Regional Offices will play a major role. A number of new initiatives will also be proposed in Earth system research, science education, and urban health and wellbeing—all of which are covered elsewhere in this report.

ICSU Officers, CSPR Members, Chairs of Regional Committees, Paris and Regional Office staff members and Foresight experts at a Strategic Planning Workshop

Foresight: International Science in 20 Years

To complement ICSU's shorter-term strategic planning, CSPR decided to engage the ICSU community in a longer-term planning exercise—exploring the future of international science in 20 years. To this end a foresight scenarios exercise began in late 2009 with a broad consultation to identify the key drivers that are likely to have a major influence on science and society over the coming decades. A range of issues from science literacy to geopolitics and global warming were identified and used as a basis for developing four draft potential scenarios of how the world might evolve (see figure). These scenarios are not specific to ICSU and should also be of use to ICSU's Scientific Union and National Members as a way to explore their own longer-term roles in the international arena.

From an ICSU perspective, the next step is to develop a 'desired scenario' for 2031 and extrapolate back to identify feasible steps that ICSU can take to help realize this scenario. Of course, the future cannot be predicted, and this is not the aim of the foresight exercise. However, ICSU and international science can make a significant contribution to shaping the future; exploring where we would like to be two decades from now can help in selecting the best pathways to achieve this vision.

Science Education Review

An ad-hoc Review Panel on Science Education was set up in late 2009 to carry out a strategic review to assess ICSU's past and current science education activities—a critical dimension of capacity building—and make recommendations on a future role, if any, for ICSU in the field. The review panel held extensive discussions throughout 2010 and drafted a report and recommendations, which are due to be presented to CSPR in March 2011, following the incorporation of comments from the ICSU community.

Science education is of great interest to ICSU Members and Interdisciplinary Bodies, and early in 2010, they provided input to the review via a survey about their priorities and activities in education. Many have undertaken major science education activities and programmes and demonstrated a strong consensus for ICSU to take on a wider role in science education.

The draft report recognizes that while science education is clearly inadequate in many places around the world, there are bright spots where innovative approaches are having some success, and which may form the basis for models that can be emulated elsewhere. In recent times, the various International Years, including the International Polar Year and International Year of Astronomy, have also played valuable educational and outreach roles that could, and should, inspire new initiatives.

Among the proposed recommendations in the draft report, is for ICSU to develop activities in support of science education, particularly interdisciplinary education, as a service to the needs of its Membership, while leveraging the strengths of its individual Members and reflecting its own international character. The report also suggests that ICSU's Regional Offices could play an important role in the mapping of science education initiatives and the sharing and exchanging of experiences at the regional level, as well as in promoting South-South cooperation.

Earth System Research for Global Sustainability

Since 2009, ICSU, in cooperation with the International Social Science Council (ISSC), has been spearheading a visioning process to engage the scientific community to explore options and propose steps to implement a holistic strategy for Earth system research. The research, involving a wide range of sciences and humanities, should address societal needs at global and regional scales, and actively engage young scientists, stakeholders and decision makers.

In the first phase, an extensive consultation led to the identification of the five Grand Challenges for Earth System Science for Global Sustainability—observing, forecasting, confining, responding and innovating—representing a framework for cross-cutting issues on global change. The second phase, beginning with an open forum and a stakeholder meeting in June 2010, explored the institutional framework required to address the Grand Challenges and concluded with the agreement that a new overarching structure is needed.

Designing the new joint ICSU, ISSC and Belmont Forum initiative (see 'Belmont Forum' next page) will take place in 2011, during the final phase of the process. The initiative should mobilize the scientific community, funders, operational service providers and users to address the Grand Challenges. A two-stage launch of the initiative is planned for 2012—at the March 'Planet under Pressure' conference and at the June 'Rio+20' Earth Summit, a unique window of opportunity to reach out to a wide and influential audience of policy and decision makers from across the world.

Planet under Pressure

26 – 29 March 2012, London, UK

The 'Planet Under Pressure: New Knowledge Towards New Solutions' conference will provide a comprehensive update of our knowledge of the Earth system and of the multiple pressures acting on it at an ever increasing pace. Guided by the five Grand Challenges, the conference will discuss solutions, at all scales, to move societies on to a sustainable pathway. It is an excellent opportunity to feed scientific input into the June 2012 'Rio+20' Earth Summit. The conference is sponsored by ICSU, the four global environmental change programmes (Diversitas, IGBP, IHDP and WCRP) and the Earth System Science Partnership (ESSP).

The Belmont Forum

In June 2009, the world's main funders of environmental change research and ICSU established a new, high-level body called the Belmont Forum (ISSC joined the Forum's membership in January 2010). Its aim is to mobilize international resources at a scale that matches the challenge from global environmental change, in order to catalyze delivery of the environmental science-derived solutions that society needs. Members have established the Belmont Challenge: to deliver the knowledge needed for action to mitigate and adapt to detrimental environmental change and extreme hazardous events.

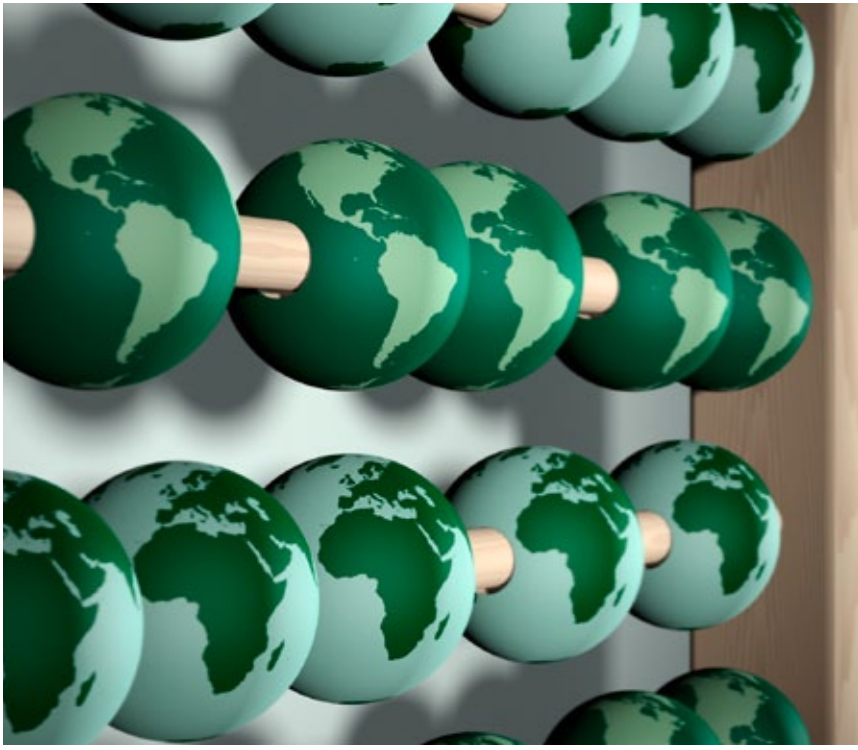
The Belmont Forum members met in October 2010 to discuss the visions emerging from the Belmont and the visioning processes. It was agreed that there were significant opportunities for convergence between the two processes, both in terms of substantive priorities and implementation steps. Together, they will propose an innovative 10-year initiative on Earth System Research for Global Sustainability.

Funding agencies and global change research

The International Group of Funding Agencies for Global Change Research (IGFA) was established in the early 1990s to foster global environmental change research.

IGFA serves as a forum through which national agencies that fund research on global environmental change identify issues of mutual interest and ways to address these through national and, when appropriate, through coordinated international actions.

In 2010, the Belmont Forum—a group of high-level representatives from major funding agencies across the globe, ICSU and ISSC—became the Council of Principals for IGFA, succeeding the Steering Committee. IGFA, led by the Belmont Forum/IGFA Council of Principals, and guided by the charge embodied in the Belmont Challenge, will work proactively and on an action-oriented basis to enhance cooperation and coordination of global environmental change research.



International Research Collaboration

Hazards and Disasters

Polar Science: Securing the Future

Urban Health and Wellbeing

Ecosystem Change and Society

Grants Programme

Supporting Interdisciplinary Science

Building on Disciplinary Strengths

Hazards and Disasters

During 2010, Integrated Research on Disaster Risk (IRDR) began establishing structural and research components that will help the programme meet its research objectives.

Three ad hoc working groups have been established, focusing on key aspects of disaster risk reduction:

- Forensic Investigations (FORIN): aims to uncover the root causes of disasters using in-depth investigations that go beyond the typical reports and case studies conducted after disasters. The working group is developing a framework to guide investigations across regions and hazards, and a standardized but flexible template for conducting such investigations.
- Risk Interpretation and Action (RIA): focuses on how people—both decision makers and ordinary citizens—make decisions, individually and collectively, in the face of risk.
- Disaster Loss Data: aims to study issues related to the collection, storage and dissemination of disaster loss data, and identify gaps, inconsistent overlaps and biases that ultimately affect the quality of research conducted and policies pursued.

The IRDR International Programme Office was established in 2010 at the Center for Earth Observation and Digital Earth (CEODE) of the Chinese Academy of Sciences in Beijing, with generous support provided by the Chinese Association for Science and Technology (CAST). The founding Executive Director of IRDR, Dr Jane Rovins, took office on 1 June 2010.

IRDR is encouraging the creation of National and Regional Committees, which will support and supplement IRDR's research initiatives and help develop crucial links between national disaster risk reduction programmes and activities within an international framework. The committees will help foster the interdisciplinary approach to disaster risk reduction within national scientific and policy making communities, and can serve as national focal points between disciplinary scientific unions and associations.

International Centres of Excellence (ICoE) are being established to provide regional and research foci for IRDR. The research programme of each centre will embody an integrated approach to disaster risk reduction that directly contributes to the IRDR Science Plan and its objectives. The first ICoE has been established in Taipei, funded by the Academy of Sciences located in Taipei.

IRDR
Integrated Research on Disaster Risk

Polar Science: Securing the Future

The International Polar Year 2007–2008 (IPY), the largest polar research and education venture ever undertaken, formally came to a close at a ceremony on the final day of the IPY Oslo Science Conference in June. The major task now is to secure the legacy of this important initiative. ICSU and the World Meteorological Organization (WMO), the sponsors of the IPY, have passed the baton to those who will play an important role in this task—including the Scientific Committee on Antarctic Research (SCAR), the International Arctic Science Committee (IASC) and the WMO Executive Council Panel on Polar Observations, Research and Services.

Several key initiatives are already working towards securing the IPY legacy:

- Planning is well underway for the 2012 Conference From Knowledge to Action in Montreal, Canada—the final event of the IPY. The aim is to find ways to translate the research findings into policy that will guide activities in and enhance stewardship of the polar regions.
- The IPY success story is being captured in a summary report from the ICSU-WMO Joint Committee, which oversaw the implementation of the IPY. The report, due for publication in early 2011, tells the IPY story from the earliest planning almost a decade ago to the current challenge of ensuring a robust IPY legacy.
- The Polar Information Commons (PIC), launched in June, will address some of the data challenges arising from the IPY, particularly the long-term stewardship of data and information. It is a shared, open, rapid-access, virtual resource for vital scientific data and information.
- The Association of Polar Early Career Scientists (APECS), a group that originated and flourished during the IPY, continues to grow and will carry the momentum of polar research, education and outreach in the years to come.
- Scientific findings from the IPY will also feed into the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and the proposed initiative emerging from the visioning process.

Urban Health and Wellbeing

The planning for a new interdisciplinary initiative on urban health and wellbeing was completed in 2010. The science plan, which focuses on using systems analysis to provide useful information for urban policy and decision makers, will be presented to the General Assembly for approval in September 2011. In the meantime, the Regional Office for Asia and the Pacific has begun using the plan as a basis for developing focused regional efforts— bringing together scientists from the region to address urban challenges specific to the Asia and Pacific region. This highlights the potential of the Regional Offices to develop and link with regional networks, and should expand the reach and impact of ICSU activities in a way that is relevant at the regional and local level.

Ecosystem Change and Society

The Programme on Ecosystem Change and Society (PECS) will aim to generate scientific and policy relevant knowledge of social-ecological dynamics and transformations to enable stewardship towards sustainable development, including mitigation of poverty. At the core of PECS research will be a transdisciplinary, comparative, place-based approach that is international in scope. The research will focus on:

- multi-scale dynamics of social-ecological systems (seascapes and landscapes);
- stewardship of ecosystems and the ecosystem services they generate; and
- the relationship between ecosystem services and human wellbeing, wealth and poverty.

The second meeting of the PECS Scientific Committee, in January 2010, included productive discussions with the ICSU-sponsored global environmental change programmes (Diversitas, IGBP, IHDP and WCRP), identifying areas of synergy and potential collaboration. A timetable for the work-plan has been approved and will begin with the establishment of the International Programme Office (IPO). In April, the ICSU Executive Board accepted the offer made by the Stockholm Resilience Centre, Stockholm University, in collaboration with the Centre for Global Sustainability, Universiti Sains Malaysia, to host the programme office.

Grants Programme

The ICSU Grants Programme provides seed funding to new interdisciplinary projects that are relevant to both science and society. It is a competitive, peer-reviewed programme for ICSU's Scientific Unions and Interdisciplinary Bodies, in collaboration with other ICSU bodies. In 2010, priority was given to innovative proposals that:

- promote the involvement of young scientists, women scientists, and scientists from developing countries;
- address the strategic priorities of ICSU and its Regional Offices; and/or
- forge new partnerships between organizations that do not routinely collaborate.

A total of 280,000€ was available in 2010, with a maximum award of 30,000€ per project. The Committee on Scientific Planning and Review awarded funding to seven projects (see table), with five in collaboration with the Regional Offices.

Applicants (lead applicants in bold)	ICSU Regional Office	Project title
IGU, Australia*		Strengthening the Bonds between Scientific Literacy & Human Understanding: Local Area Networks to help build cross-border solutions for Disaster Management
IUGG, IGU, IUGS, ISPRS, IUTAM, IRDR, GOOS	Asia & the Pacific, Africa and Latin America & the Caribbean	Extreme Natural Hazards & Societal Implications (ENHANS)
IUGS, IUGG, IASC, SCAR	Africa	MicroPerm An International Workshop to Initiate the Circumpolar Integration of Permafrost Microbiological Studies
IUMS	Asia & the Pacific	Antimicrobial Resistance in Bacteria, Fungi and Viruses Course
IUPAB	Africa, and Latin America & the Caribbean	Capacity Building in Biophysics: Training African Graduate Students in Latin America
IUTOX	Latin America & the Caribbean	Capacity Building in Chemical Risk Assessment in Latin America
SCAR, IASC		Education and Outreach Lessons from the International Polar Year (IPY)

* refers to the ICSU National Member in that country

Supporting Interdisciplinary Science

The Interdisciplinary Bodies of ICSU bring together different scientific disciplines to address scientific issues of international relevance that are of interest to ICSU Members. Some of these bodies are co-sponsored with other organizations. Three of these bodies held their major scientific conferences in 2010.

Space Research

The 38th Scientific Assembly of the Committee on Space Research (COSPAR) (Bremen, Germany) boasted record attendance with 3003 scientists, including an all-time high of 586 students. Capacity building workshops took place in India (gamma-ray astronomy) and Brazil (water cycle). COSPAR organized an outreach event at UNESCO to close the International Year of Astronomy that highlighted the contribution of space science to this discipline. This event and a public conference in Bremen, attended by approximately 1,000 people, have spurred COSPAR to organize future outreach events.

http://cospar.cnes.fr

Antarctic Research

The Scientific Committee on Antarctic Research (SCAR) finalized its new Strategic Plan 2011-2016 Antarctic Science and Policy Advice in a Changing World. Led by SCAR and the Scientific Committee on Oceanic Research (SCOR), in partnership with others, implementation of a Southern Ocean Observing System became a reality with a secretariat being supported in Australia. A new Scientific Research Programme, Astronomy and Astrophysics from Antarctica, officially started. Several other programmes are in the planning stages, reflecting SCAR's commitment to maintaining a portfolio of science activities that reflect the major science issues of the day.

www.scar.org

Data for Science and Technology

In 2010, the Committee on Data for Science and Technology (CODATA) launched the Polar Information Commons, which will address some of the data challenges and legacies arising from the International Polar Year 2007-2008. The 22nd CODATA International Conference on Scientific Data for Sustainable Development was held in Cape Town, with strong participation from the African data community. CODATA, as co-chair of the Data Sharing Task Force of the Group on Earth Observations (GEO), is providing scientific and technical support to the GEO Data Sharing Action Plan. The plan was approved at the GEO-VII Plenary and Ministerial Summit in Beijing in November.

www.codata.org/Highlights 2010.pdf

Building on Disciplinary Strengths

The 30 international Scientific Union Members provide the disciplinary foundation for ICSU's activities. 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. This section provides brief reports from Unions that held their major scientific conferences or General Assemblies in 2010.

Food Science and Technology

The International Union of Food Science and Technology (IUFoST) has three main priorities: food safety, food security and education. The IUFoST General Assembly unanimously endorsed the Cape Town Declaration, introducing the outline work plan for the global food science and technology community. The IUFoST expert panel on food safety was invited to Beijing by the Chinese Ministry of Health and a definitive textbook on food science and technology was produced.
www.iufost.org

Forest research

The 23rd World Congress of the International Union of Forest Research Organizations (IUFRO), Forests for the Future: Sustaining Society and the Environment, was held in Seoul, Republic of Korea, in August. It provided a unique forum for presentation and discussion of results of current global research related to forests and trees, and drew almost 2,700 participants from 92 countries.
www.iufro.org

Immunology

The International Union of Immunological Societies (IUIS) represents 65 national societies and four regional federations worldwide. The 2010 triennial International Congress of Immunology saw incoming President Stefan Kaufmann, convene Council with seven committees overseeing issues from standardization to training in developing countries. In 2010, *Frontiers in Immunology* became the official IUIS journal, publishing top research and allied news.
www.iuisonline.org

Mathematics

The International Mathematical Union (IMU) held its 16th General Assembly in Bangalore and the International Congress of Mathematicians (ICM) in Hyderabad, India, in August. The most important decisions arising from the GA were to install a permanent secretariat in Berlin, starting in 2011, and to hold the next ICM in Seoul, Republic of Korea in 2014.
www.mathunion.org

Pharmacology

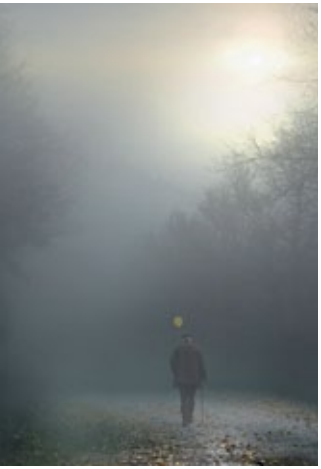
2010 saw IUPHAR with a new name, International Union of Basic and Clinical Pharmacology, which led to the successful WorldPharma 2010, integrating basic and clinical science. IUPHAR has: renewed emphases on paediatric and adult clinical pharmacology; incorporated clinical pharmacology into IUPHAR Sections; consolidated interactions with the World Health Organization; and expanded drug utilization information in the Receptor Nomenclature Database (NC-IUPHAR).

www.iuphar.org

Theoretical and Applied Mechanics

At the General Assembly of the International Union of Theoretical and Applied Mechanics (IUTAM) in July 2010, it was announced that there were 16 successful IUTAM Symposia and three Summer Schools during 2008–09.Looking to the future, there will be 15 Symposia and two Summer Schools in 2010–11, and 17 and 2 respectively in 2012–13. Future symposia proceedings will be published electronically with Elsevier as *Procedia IUTAM*.

www.iutam.org



Psychological Science

The International Union of Psychological Science (IUPsyS) developed a new programme of awards for both young and established scientists and ran a range of capacity-building events, including events for national bodies in South-East Asia as well as a new workshop on bereavement for the Caucasus region. IUPsyS supported development of young scientists from low-income countries through the successful Advanced Research and Training Seminars programme.

www.iupsys.net

Toxicology

The International Union of Toxicology (IUTOX) is an international organization committed to improving human health through the practice of toxicology worldwide. IUTOX promotes scientific cooperation among toxicologists through capacity building activities, including risk assessment training and encouraging the development of new toxicology societies in developing countries. The 8th Congress of Toxicology in Developing Countries will take place in Bangkok in 2012, and the 13th International Congress of Toxicology, will be held in Seoul, Republic of Korea in 2013.

www.iutox.org

Science for Policy

Sustainable Development
IPCC IPBES
GEO

Sustainable Development

The Commission on Sustainable Development (CSD) is the global intergovernmental body overseeing the implementation of the outcomes of the 1992 Rio Earth Summit and the 2002 World Summit on Sustainable Development (WSSD) held in Johannesburg.

ICSU, together with the World Federation of Engineering Organizations (WFEO), is co-organizing partner for the Scientific and Technological Community (STC)—one of nine Major Groups participating in the work of CSD. In 2010, ICSU and WFEO, with input from the International Social Science Council (ISSC), prepared a discussion paper as formal input from the STC to the 18th session of CSD—which focused on the state of implementation of goals and targets for transport, chemicals, waste management, mining and the proposed 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns. The paper presents the progress and obstacles in implementing sustainability policies in the five areas, and outlines major challenges and opportunities in harnessing science and technology for a more sustainable development path in the future.

In 2009 the UN General Assembly decided to organize the United Nations Conference on Sustainable Development (Rio+20), which will be held in Rio de Janeiro in 2012—20 years after the first Earth Summit. ICSU accepted the invitation to be co-organizing partner for the STC Major Group for Rio+20 and is participating in the Preparatory Meetings for this important event. Contributing to Rio+20 is a high priority for ICSU with a range of activities planned for 2011 and 2012, including:

- four regional science and technology workshops in 2011 (Africa, Asia and the Pacific, Latin America and the Caribbean, and the Arab States); and
- a four-day forum on Science and Technology for Sustainable Development that will be held in parallel with the Rio+20 conference in 2012

Intergovernmental Panel on Climate Change

ICSU followed closely the controversy around the 4th IPCC Assessment, which attracted considerable media attention at the start of the year. In February, ICSU issued a statement on the controversy and called for a review of the IPCC procedures to reduce the chance of errors being introduced in the first place, and optimize the mechanisms for identifying and correcting errors that do inadvertently remain in the final IPCC reports.

In March, the InterAcademy Council (IAC) was invited to conduct a review of IPCC working procedures and processes. Its report was published in August and the recommendations were discussed in detail at the 32nd Session of the IPCC (in which ICSU participated) in Republic of Korea in October. The IPCC agreed to establish four Task Groups that will address specific recommendations and will report back to the IPCC at its 33rd Session in 2011.

The 5th Assessment Report is currently underway, with many scientists involved in ICSU's interdisciplinary research programmes contributing to it. The IPCC is also preparing a Special Report on 'Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation' to be completed in late 2011. Members of the Integrated Research on Disaster Risk (IRDR) Scientific Committee and Working Groups are key authors of this report.

Biodiversity and Ecosystem Services: A new Policy Platform

ICSU, has been a strong advocate for the establishment of an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). Diversitas, and more recently the International Human Dimensions Programme on Global Environmental Change (IHDP), have taken a leadership role in informing the scientific community and mobilizing them to support IPBES.

Governments participating in the 3rd ad hoc stakeholder meeting, held in South Korea in June, agreed to establish the new mechanism, which is likely to significantly change the way in which biodiversity information is provided to, and considered by, the international policy community. Diversitas organized a side event, 'IPBES: Status, Next Steps and Implications for the Biodiversity Community', at the 10th session of the UN Convention of Biological Diversity (CBD) Conference of the Parties in Nagoya, Japan, in October. The event considered some of the possible implications for the scientific and policy communities addressing biodiversity and ecosystem services in the context of the CBD and beyond.

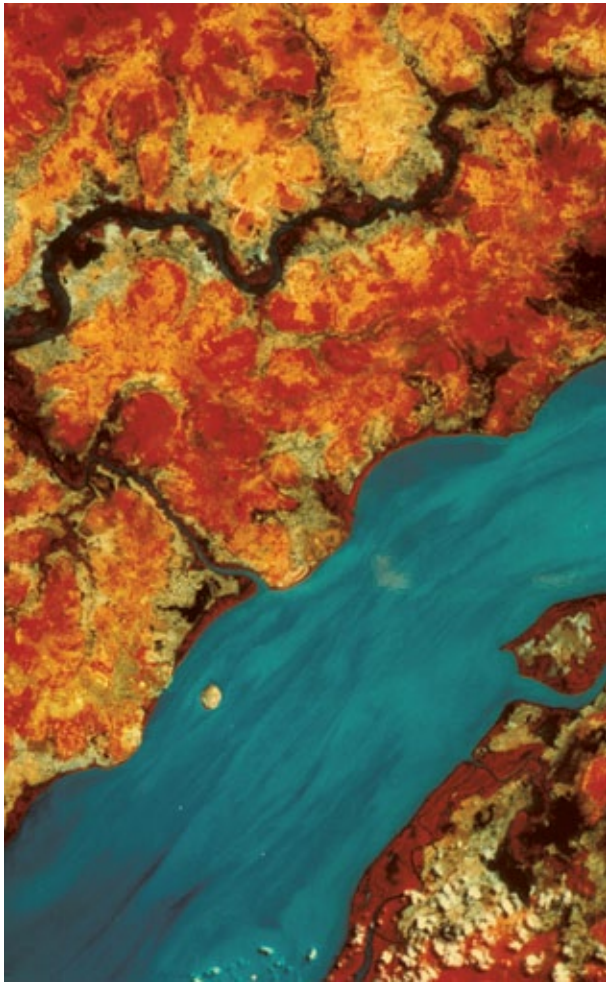
Earth Observation Systems

During 2010, ICSU continued to support the Group on Earth Observations (GEO) in implementing the Global Earth Observing Systems of Systems (GEOSS). ICSU is a GEO Participating Organization and contributed to the work of the GEO Science and Technology Committee, as well as the Architecture and Data Committee with the dual goal of strengthening the role of science in GEO and GEOSS and ensuring that scientific research benefits from the 'system of systems'.

ICSU Interdisciplinary Bodies also continued their active involvement in GEO, including:

- the three global observing systems—climate (GCOS), oceans (GOOS) and terrestrial (GTOS), covering important components of GEOSS;
- Diversitas, through the development of the GEO Biodiversity Observation Network (GEO BON);
- the World Climate Research Programme (WCRP), which together with GCOS, is playing a leading role in some of the GEO Climate Tasks;
- the World Data System (WDS), which aims to provide long-term stewardship of quality-assessed data and services for GEO/GEOSS; and
- the Committee on Data for Science and Technology (CODATA), which continued to provide scientific and technical support for the development of the action plan for implementing the GEO Data Sharing Principles, calling for free and open exchange of data.

ICSU participated in the 7th GEO Plenary Session and Ministerial Summit in Beijing in November, which included a statement at the Summit by the ICSU Executive Director. ICSU also organized a joint exhibition booth with seven of its Interdisciplinary Bodies. The booth showcased the contributions of the programmes to GEO/GEOSS and demonstrated how ICSU provides links between research, observations, assessments, data and policy-making in the context of GEO/GEOSS.



Universality of Science

- Freedom and Responsibility
- ICSU in the Regions
- Data and Information
- Communication and outreach

Freedom and Responsibility

Hardly a month goes by without a report of scientists either being prevented from travelling to or working in foreign countries or persecuted for their convictions as scientists. At the same time, the number of high profile cases of scientific misconduct and/or irresponsible behaviour and communication by scientists appears to be increasing. During 2010, 'Climate-gate' and the criticisms of the IPCC report served to illustrate how rapidly scientists can become the focus of media and public attention and how difficult it can be to maintain public trust and confidence in science in the light of such attention. These inter-related issues of the freedom and responsibilities of science, trust in science and the science-society interface are the focus of the ICSU Committee on Freedom and Responsibility in the conduct of Science (CFRS). This committee was involved in organizing two major events during 2010 that provide reference points for addressing some of these issues.

The 2nd World Conference on Research Integrity, held in Singapore in July, brought together over 200 scientists and science-policy and decision-makers from across the world. It was co-organized by the US Office of Research Integrity, the European Science Foundation and the local hosts. ICSU, through CFRS, was a one of several co-sponsors. CFRS members made a substantial contribution to both the organization and implementation of the conference, particularly the Singapore Statement—a consensus document agreed at the conference, which lays out key principles and responsibilities for research integrity. This statement has attracted considerable attention in the science and mainstream media.

In November, CFRS, working with the Colombian Academy of Sciences and the local hosts, held a workshop on science communication at the National University of Colombia in Bogota. This two-day event was attended by about 500 students, academics and journalists and resulted in an advisory note on science communication that lays out 10 key guidelines and responsibilities for scientists.

Statements and advisory notes from CFRS are available in the publications section of the ICSU website.

A new Secretariat for CFRS

A new secretariat for CFRS was established in October at the Swiss Academy of Sciences in Berne. Roger Pfister was recruited to a 50% position as Executive Secretary to the committee and will be able to benefit from all the support services of the Academy, which is active in the area of science ethics and human rights. This support will enable the committee to strengthen its impact and visibility in the future.

ICSU in the regions

The ICSU Regional Offices were created following a decision at the 27th General Assembly in Rio de Janeiro in 2002. Three Regional Offices have been established —Africa (2005), Asia and the Pacific (2006), and Latin America and the Caribbean (2007).

Since their creation the Regional Offices have increased the visibility of ICSU in the regions (particularly with governments and institutions), increased ICSU's National Membership from developing countries, and developed strategic, collaborative partnerships with key national and regional institutions. The offices also assist ICSU Members and Interdisciplinary Bodies in planning and implementing their regional activities, and, through the ICSU Grants programme, provide support to the ICSU Scientific Unions in their capacity building activities.

The Regional Offices have been successful in identifying strategic priorities and preparing Science Plans for those priorities. This has involved some of the most prestigious scientists in the respective regions—promoting the participation of regional scientists in ICSU activities and developing collaborative partnerships—and has also led to the publication of several books and policy briefs. For example, in 2010 the Regional Office for Africa published the book *Science, Technology, and Innovation for Socioeconomic Development: Success stories from Africa*, emphasizing the importance of STI for the socio-economic development of Africa and highlighting the continent's contribution to the development of science and technology in the world.

2010 was a very important year for the Regional Offices as they underwent reviews. The reviews were stipulated in the agreements with the host institutions and were carried out by independent review panels, which were jointly appointed by ICSU and the respective host institution. The three review panels concurred that the Regional Offices have played an important role in their respective regions and recommended to ICSU and the hosts to continue the office programmes and activities following the current institutional support arrangements. The reviews also identified a number of general issues for all three offices that would be most effectively addressed with a common approach and/or policies.

To investigate these issues, the Committee on Scientific Planning and Review (CSPR) established a sub-group which will conduct an integrated analysis of the three reviews. The group will deliver a report to CSPR and the Executive Board in 2011.

Highlights from the regions		
	Regional Office	**Activity**
Publications	ROAP	Annual Report 2009
	ROLAC	Annual Report 2009
	ROA	Annual Report 2009-10
	ROAP	Sustainable Energy in Asia & the Pacific: Emerging technologies & Research Priorities (book)
	ROLAC	Biodiversity and human well-being in Latin America and the Caribbean A multi-sectoral contribution to the science-policy interface (policy brief in English, Spanish and Portuguese)
Events	ROA	Knowledge on the Move: African Perspectives Pretoria, South Africa, March 2010. (seminar)
	ROLAC	The 3rd Latin America Risk Assessment Workshop. Águas de São Pedro, Brazil, April. (IUTOX)
	ROAP	Antimicrobial Resistance in Bacteria, Fungi and Viruses Course. Singapore, June. (IUMS outreach programme)
	ROAP	2nd World Conference on Research Integrity. Singapore, July
	ROLAC	Natural Hazards and Disaster Risk in Latin America and the Caribbean: From Risk to Opportunity by Partnership of Science and Society. Iguassu, Brazil, August. (IUGG ENHANS project symposium)
	ROLAC	Facilitating the dialogue among national, regional and international data bases on biodiversity. Buenos Aires, Argentina, August. (Regional workshop)
	ROA, ROLAC	Capacity Building in Biophysics: Training African Graduate Students in Latin America. Rio de Janeiro, Brazil, August–September. (IUPAB)
Working with strategic partners	ROAP	UNEP Major Group Facilitating Committee Meeting; UNEP Major Groups and Stakeholder Forum; UNEP Governing Council/Global Ministerial Environmental Forum. Bali, Indonesia, February
	ROLAC	ICSU-OAS General Agreement of Cooperation signed, April
	ROAP	Preparatory Meeting on the International Partnership for the Satoyama Initiative: Working together for promoting socio-ecological production landscapes Yamanashi Institute of Environmental Science, Fujiyoshida, Yamanashi, Japan, August
	ROAP	30th FAO Regional Conference for Asia and the Pacific, Gyeongju, Republic of Korea, September–October

ROA = Regional for Africa, ROAP = Regional Office for Asia and the Pacific, ROLAC = Regional Office for Latin America and the Caribbean

ICSU World Data System

In 2010 there was significant progress in the implementation of the ICSU World Data System:

- The draft constitution was finalized and approved by the ICSU Executive Board.
- A WDS data policy—derived from the GEO data sharing principles—was adopted as a common framework for all WDS Members.
- The criteria for membership and the certification procedure were approved allowing the WDS Scientific Committee to invite institutions to apply for membership in early 2011.

An International Programme Office is being established to support the work of the Scientific Committee, to facilitate the implementation of WDS and to promote its activities. A call to host the office was sent to ICSU Members and partners. The ICSU Executive Board accepted the generous offer from the Japanese National Institute of Information and Communications Technology (NICT) to host and financially support the programme office for five years.

In order to strengthen the links with the ICSU Committee on Data for Science and Technology (CODATA), the October meeting of the WDS Scientific Committee was held in Stellenbosch, South Africa, co-located with the CODATA international conference. It was the perfect occasion to hold an informal WDS panel discussion to exchange information and respond to questions from interested parties, and to convene a high-level session on data publishing in the context of the ICSU World Data System. It was also decided at the October meeting that the first ICSU WDS conference 'Global Data for Global Science' will be held in Kyoto, Japan, 3–6 September 2011.

ICSU WDS has also strengthened its links with the Group on Earth Observations (GEO) and has committed—through an ICSU statement at the GEO Ministerial Summit (see p. 21)—to support the long-term framework of the Global Earth Observation System of Systems (GEOSS) by contributing its long-term stewardship of quality-assessed data and services as a key service to GEOSS.

More information on WDS, including news and activities is now available on the new WDS website: www.icsu-wds.org

Coordinating information and data activities

The ICSU Strategic Coordinating Committee for Information and Data (SCCID) was established in 2008 and provides a valuable forum for coordinating interactions and activities of ICSU data bodies and partners, including CODATA, the International Network for the Availability of Scientific Publications (INASP) and the International Council for Scientific and Technical Information (ICSTI). It also provides strategic advice for the implementation of WDS and the activities of CODATA.

SCCID met twice in 2010, with the Executive Director of CODATA joining the committee as *ex officio* following a decision by the Executive Board. The committee has begun drafting its interim report which will be finalized after the final SCCID meeting in March 2011. The report will make a series of recommendations to improve universal and equitable access to data and information for science and also provide mechanisms for ICSU to maintain a strategic focus on data and information issues.

Communication and outreach

The new ICSU website has been developed during the course of 2010 and is due to be launched early next year. The interactive website was designed and built from the ground up. It has streamlined navigation, new functions, better tools and a new visual design—making it easier to find information. The three Regional Office websites have also been redeveloped and are now located within the global site—providing a single, integrated web presence for the organization. This enables greater links between ICSU's global and regional activities, while allowing the Regional Offices to maintain their own web presence.

The new website is part of the overall move to be more strategic in communicating with Members and the wider scientific community. The 'Insight' newsletter has been revamped and is being integrated into the website, enabling subscribers to keep up to date with ICSU's global and regional activities, latest publications and events from ICSU's Members.

An 'Online community' is being established which will allow community members to keep up to date with what ICSU is doing. It will also allow ICSU to contact community members, for example to invite comments on particular content or documents. Members will use a discrete part of the online community part of the website.

Over the coming months the website will keep evolving, with more features and resources being added.

Administration & Governance

Financial Summary

Statement of income and expenditure

International Council for Science (ICSU) for the period 1 January 2010 to 31 December 2010

Income	Euros
Membership dues	
National Members	2 210 490
Scientific Unions	157 251
Scientific Associates	10 500
Provision Arrears	- 21 831
NSF support for WCRP	----
Grants from NSF	606 038
UNESCO Framework Agreement	10 266
France	500 000
Other grants	53 102
Other income	75 445
Cancellation other provision	18 431
Investment income	28 722
Total income	**3 648 414**

Expenditure	Euros
Policy committees	477 643
Joint initiatives	238 069
ICSU Regional Offices	252 082
Grant Programme	200 000
New initiatives	458 542
Governance meetings	371 504
Policy & administrative support	1 270 082
Contingency/Provision	45 227
Other expenses	
Investment charges & losses*	29 437
Total expenditure	**3 342 586**
Net (income less expenditure)	**305 828**

* Including provision for unrealized losses on Portfolio for a total of 18 000 €

Balance Sheet

International Council for Science (ICSU) for the period 1 January 2010 to 31 December 2010

Assets	Euros
Bank & cash balances	1 836 195
Marketable securities	1 442 677
NSF & UNESCO grants and funds for IRDR & Rio+20	646 697
Others assets	245 445
Fixed assets	138 059
Total assets	**4 309 073**

Liabilities	Euros
External funds allocated	1 049 087
Sundry creditors & accruals	593 106
Provision/Retirement	511 822
Total liabilities	**2 154 015**

Reserves	Euros
Mandatory reserve	1 500 000
General fund/Retained earnings	349 230
Total reserves	**1 849 230**
Net Result	**305 828**

ICSU's principal source of 'core' income is dues from Members and a subvention from the host country France. The other major sources of income are grants from various organizations and foundations. The General Assembly approves draft budgets for the next triennium upon proposals received from the Executive Board, which is charged with finalizing the annual budgets. After consideration by the Committee on Finance and the Executive Board, the audited annual accounts are sent to all Members for approval. The ICSU Regional Offices are mainly supported by their host countries, with some funding from ICSU and other sources.

Executive Board

Officers

Catherine Bréchignac
President

Yuan Tseh Lee
President-Elect

Goverdhan Mehta
Past-President

Kari Raivio
Vice-President for Scientific Planning and Review

Reiko Kuroda
Vice-President for External Relations

Maurice Tchuente
Secretary-General

Hans Rudolf Ott
Treasurer

Ordinary Members

From Union Members

Bryan Henry
IUPAC

Dov Jaron
IUPESM

Bruce Overmier
IUPsyS

Uri Shamir
IUGG

From National Members

Fu Congbin
China: CAST

Maurizio Iaccarino
Italy

Sergio Pastrana
Cuba

Abdul Hamid Zakri
Malaysia

Secretariat

Executive

Deliang Chen
Executive Director

Carthage Smith
Deputy Executive Director

Tish Bahmani Fard
Assistant Executive Director

Environment and Sustainable Development

Gisbert Glaser
Senior Advisor

Leah Goldfarb
Science Officer

Howard Moore
Senior Advisor

Rohini Rao
Administrative Officer

Scientific Planning and Special Projects

Maureen Brennan
Administrative Officer

Paul Cutler
Science Officer (to Aug 2010)

Patricia Ocampo-Thomason
Science Officer and Regional Offices Liaison

Communication and Information Technology

Jacinta Legg
Science Communications Officer

Mustapha Mokrane
Science and Information Technology Officer

Committee on Freedom and Responsibility in the conduct of Science

Roger Pfister*
Executive Secretary CFRS
(Oct 2010–)

Administrative Staff

Frederica Kostadinoff
Administrative Officer

Eric Leparmentier
General Services

Natacha de Marchi
Accountant

Clare Thirlway
Personal Assistant to the Executive Director

Seconded Staff#

Astrid Auraldsson
Sweden (May 2010–Febr 2011)

Alexander Hansen
Science Officer (jointly with ISSC), Germany
(Oct 2010–)

Emilia Koivisto
Assistant Science Officer, Finland
(May–Sept 2010)

Hwey-Ying (Vivien) Lee
Assistant Science Officer, China: Taipei (Apr 2010–)

Andrew Yang
China: Taipei

Regional Office for Africa

Sospeter Muhongo
Director (to Feb 2010)

Rocky Skeef
Acting Director (Mar–Dec 2010)

Andrew Achuo Enow
Programme Specialist in Biological Sciences

Bongani Mahlalela
Liaison Officer

Daniel Nyanganyura
Programme Specialist in Physical Sciences

Kathy Potgieter
Personal Assistant: Office of Regional Director (to May 2010)

Amanda Songelwa
Personal Assistant: Office of Regional Director (Jul–Nov 2010)

Ursula Weideman
Personal Assistant: Office of Regional Director (Dec 2010–)

Regional Office for Asia and the Pacific

Mohd Nordin Hasan
Director

Nor Zaneedarwaty Norman
Science Officer

Mohd Hizamddin Jaafar
Administrative Officer

Regional Office for Latin America and the Caribbean

Alice Abreu
Director (to Dec 2010)

Patrick de Melo
Intern (to Oct 2010)

Eliane Sobral
Administrative Officer (to Oct 2010)

Alicia Vargas
Intern (to Jul 2010)

* Located at the Swiss Academy of Sciences in Berne and working 50% time on CFRS

\# Seconded, from the National Member indicated, to work on ICSU projects

National Members

ICSU has 121 National Members covering 141 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. National Members as at 31 December 2010 :

Albania	Academy of Sciences
Angola	Foundation of Science and Development
Argentina	National Scientific and Technological Research Council
Armenia	National Academy of Sciences of the Republic of Armenia
Australia	Australian Academy of Science
Austria	Die Osterreichische Akademie der Wissenschaften
Azerbaijan**	Azerbaijan National Academy of Sciences
Bangladesh	Bangladesh Academy of Sciences
Belarus**	National Academy of Sciences
Belgium	Royal Academies for Science and the Arts of Belgium
Bolivia**	Academia Nacional de Ciencias de Bolivia
Bosnia & Herzegovina	ANUBiH: Academy of Sciences and Arts of Bosnia and Herzegovina
	ANURS: Academy of Sciences and Arts of the Republic of Srpska
Botswana	Ministry of Communications, Science and Technology
Brazil	Academia Brasileira de Ciências
Bulgaria	Bulgarian Academy of Sciences
Burkina Faso	Centre National de la Recherche Scientifique et Technologique
Cameroon	Cameroon Academy of Sciences
Canada	National Research Council of Canada
Caribbean*[1]	Caribbean Academy of Sciences
Chile	Academia Chilena de Ciencias
China: CAST	China Association for Science and Technology
China: Taipei	The 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
Croatia	Croatian Academy of Sciences and Arts
Cuba	Academia de Ciencias de Cuba
Czech Republic	Academy of Sciences of the Czech Republic
Denmark	The Royal Danish Academy of Sciences and Letters
Dominican Republic	Academy of Sciences of the Dominican Republic
Egypt	Academy of Scientific Research and Technology
Estonia	Estonian Academy of Sciences
Ethiopia	Ethiopian Science and Technology Agency
Finland	Delegation of the Finnish Academies of Science and Letters
France	Académie des Sciences
Georgia*	Georgian Academy of Sciences
Germany	Deutsche Forschungsgemeinschaft
Ghana**	Ghana Academy of Arts and 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
Iran	University of Tehran
Iraq	Ministry of Science and Technology
Ireland	Royal Irish Academy
Israel	Israel Academy of Sciences and Humanities
Italy	Consiglio Nazionale delle Ricerche
Jamaica	Scientific Research Council
Japan	Science Council of Japan
Jordan*	Royal Scientific Society
Kazakhstan*	National Academy of Sciences of the Republic of Kazakhstan
Kenya	Kenya National Academy of Sciences
Korea, DPR**	State Academy of Sciences
Korea, Republic of	National Academy of Sciences of the Republic of Korea
Lao PDR	Lao National Science Council
Latvia	Latvian Academy of Sciences
Lebanon	National Council for Scientific Research

Lesotho	Department of Science and Technology
Lithuania	Lithuanian Academy of Sciences
Luxembourg	Fonds National de la Recherche
Macedonia, Rep of.	Macedonian Academy of Sciences and Arts
Madagascar*	Ministère de l'Enseignement Supérieur et de la Recherche Scientifique
Malawi	National Research Council of Malawi
Malaysia	Academy of Sciences Malaysia
Mauritius	Mauritius Research Council
Mexico	Academia Mexicana de Ciencias
Moldova**	Academy of Sciences of Moldova
Monaco	Centre Scientifique de Monaco
Mongolia	Mongolian Academy of Sciences
Montenegro	Montenegrin Academy of Sciences and Arts
Morocco	Centre National de la Recherche Scientifique et Technique
Mozambique	Scientific Research Association of Mozambique
Namibia	Ministry of Education: Directorate of Research, Science and Technology
Nepal	Royal Nepal Academy of Science and Technology
Netherlands	Koninklijke Nederlandse Akademie van Wetenschappen
New Zealand	Royal Society of New Zealand
Nigeria	Nigerian Academy of Science
Norway	Norwegian Academy of Sciences and Letters
Pakistan	Pakistan Association for the Advancement of Science
Panama	Universidad de Panama
Peru	Academia Nacional de Ciencias
Philippines	National Research Council
Poland	Polish Academy of Sciences
Portugal	Academia das Ciencias de Lisboa
Romania	Academia Româna
Russian Federation	Russian Academy of Sciences
Rwanda**	Kigali Institute of Science and Technology
Saudi Arabia	King Abdulaziz City for Science and Technology
Senegal	Association des Chercheurs Sénégalais
Serbia	Serbian Academy of Sciences and Arts
Seychelles	Seychelles Centre for Marine Research and Technology
Singapore	Singapore National Academy of Science
Slovak Republic	Slovak Academy of Sciences
Slovenia*	Slovenian Academy of Sciences and Arts
South Africa	National Research Foundation (NRF)
South Pacific[2]	University of the South Pacific
Spain	Ministerio de Ciencia y Innovacion
Sri Lanka	National Science Foundation
Sudan**	National Centre for Research
Swaziland	National Research Council
Sweden	Royal Swedish Academy of Sciences
Switzerland	Swiss Academy of Sciences
Tajikistan**	Academy of Sciences of the Republic of the Republiv 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
Ukraine	National Academy of Sciences
United Kingdom	Royal Society
United States	National Academy of Sciences
Uruguay**	Comisión Consejo Nacional de Innovacion Ciencia y Tecnologia
Uzbekistan**	Uzbekistan Academy of Sciences
Vatican City State**	Pontificia Academia Scientiarum
Venezuela**	Fondo Nacional de Ciencia, Tecnología e Innovación
Viet Nam**	Vietnam Union of Science and Technology Associations
Zambia	Zambia Academy of Sciences
Zimbabwe	Research Council of Zimbabwe

*National Associates
**National Observers

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

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

Scientific Unions

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

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

Interdisciplinary Bodies

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

Thematic Bodies

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

Global Environmental Change Programmes

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

Monitoring/Observation Bodies

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

Data and Information Bodies

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

Scientific Associates

Scientific Associates as at 31 December 2010:

Academy of Sciences for the Developing World (TWAS)

Academia de Ciencias de America Latina (ACAL)

Engineering Committee on Oceanic Resources (ECOR)

Federation of Asian Scientific Academies and Societies (FASAS)

International Arctic Science Committee (IASC)

International Association of Hydraulic Engineering and Research (IAHR)

International Cartographic Association (ICA)

International Commission for Acoustics (ICA)

International Commission for Optics (ICO)

International Council for Laboratory Animal Science (ICLAS)

International Council for Scientific and Technical Information (ICSTI)

International Federation for Information Processing (IFIP)

International Federation of Library Associations and Institutions (IFLA)

International Federation of Societies for Microscopy (IFSM)

International Federation of Surveyors (FIG)

International Foundation for Science (IFS)

International Institute for Applied Systems Analysis (IIASA)

International Union for Vacuum Science, Technique and Applications (IUVSTA)

International Water Association (IWA)

Pacific Science Association (PSA)

Society for Social Studies of Science (4S)

Union Internationale Spéléologie (UIS)

Design: *Communiquer and Carmela Garipoli*

Layout: *Carmela Garipoli*

Printing: *Caractère (France) using 100% PEFC certified Paper*

Photos:

Cover : *IRD/Patrick Blanchon ; Gilles Graber ; IRD/Justine Montmarche, Olivier Dangles et François Nowicki; Istockphoto.*

Back Cover : *Gilles Graber*

Mosaic p. 1 : *IRD/Patrick Blanchon, Olivier Dangles et François Nowicki , Bernard Pouyaud, Jean-Pierre Montoroi, Sylvain Bonvalot ; Fotolia/Petrovod ; Gilles Graber ; Flickr, Licence Créative Commons/ Marufish, Peter Grima.*

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ISBN 978-0-930357-84-9

The Principle of Universality of Science (ICSU Statute 5)

The Principle of the Universality of Science is fundamental to scientific progress. This Principle embodies freedom of movement, association, expression and communication for scientists as well as equitable access to data, information and research materials. In pursuing its objectives in respect of the rights and responsibilities of scientists, the International Council for Science (ICSU) actively upholds this principle, and, in so doing, opposes any discrimination on the basis of such factors as ethnic origin, religion, citizenship, language, political stance, gender, sex or age. ICSU shall not accept disruption of its own activities by statements or actions that intentionally or otherwise prevent the application of this principle.

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International Council for Science

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