

International Council for Science

In the first of a two-part interview with International Innovation, **Professor Deliang Chen**, Executive Director of ICSU, outlines the fascinating history of the Council and explains the scope of their ambition to realise a society underpinned by scientific excellence

Could you begin with an insight into the motivating factors behind the establishment of ICSU in 1931, and the key scientific bodies and unions behind it?

ICSU was established in 1931 as the successor to the International Research Council (IRC), which had been set up in 1919 with only national delegates. At that time, no union representation had come into effect. The founding fathers of the IRC had anticipated that the new body was for a limited time only, and that it was destined to be succeeded by an organisation that would better respond to the needs of the day. In the years that followed, it became increasingly clear that discipline-based international associations of scientists could, and should, play a major role in the organisation of international science, and in several areas, such as astronomy, geodesy and geophysics, chemistry and physics international, unions were created. These unions became members of the IRC and acquired independent scientific strength allowing the Council to succeed in one thing: it provided a forum in which scientists from different unions (or disciplines) could meet to identify common problems and aspirations. However, IRC remained a body with national members with full voting powers, plus a handful of associated unions.

The creation of ICSU marked a sea-change in how things were organised. ICSU had a founding membership of 40 national adherents and eight unions, all with voting powers. The changes made were radical ones. The ICSU structure went further than the IRC could go in doing away with exclusivity and in recognising the autonomy of the unions. Union

subservience changed to equality with the national members. Those early unions were IAU, IUGG, IUPAC, URSI, IUPAP, IGU and IUBS (the eighth, IMU withdrew shortly after the foundation of ICSU and wasn't to return to the family until 1945). The name of the new organisation – the International Council of Scientific Unions – recognised the new reality of the situation.

Sustainable development is a laudable ambition for nations the world over to address. How does ICSU assist policy makers and NGOs alike in the pursuit of such an ambitious goal; do you believe it to be realistic, or idealistic?

ICSU's long-term 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. ICSU promotes dialogue and shared understanding between the scientific community, policy makers and society more broadly. It follows from this that ICSU is committed to the pursuit of sustainable development, and indeed over the last twenty years it has served as the leading champion of science and the application of sound scientific information and knowledge in decision-making at all levels – especially at the governmental level. Simply put, our conviction is that good governance needs good science.

ICSU and its Interdisciplinary Bodies have played an important role in providing scientific input to international conventions pertinent to environmental protection and sustainable development, such as the UN Conventions on Climate Change, Biological Diversity and Combating Desertification. As your readers may know, the UN Commission on



Sustainable Development (CSD) is a ministerial forum established by the UN General Assembly to ensure effective follow-up of the Rio de Janeiro 'Earth Summit' of 1992, and is responsible for monitoring the implementation of Agenda 21 (adopted at the Summit) and the Johannesburg Plan of Implementation (adopted at the World Summit on Sustainable Development in 2002). The WSSD adopted numerous recommendations in support of science and technology for sustainable development; including the need for increased scientific input into the work of the CSD. Consequently, the UN invited ICSU to participate in the CSD as a 'co-organising partner', together with the World Federation of Engineering Organizations (WFEO), representing the Scientific and Technological Community as one of nine so-called Major Groups sectors. We have done so ever since.

ICSU will also represent the global scientific community at the upcoming United Nations Conference on Sustainable Development (Rio+20) conference to take place on 4-6 June 2012 in Brazil, and we are busy organising a series of activities related to Rio+20, to facilitate scientific input into the intergovernmental process. Once again, ICSU is co-organising partner for the S&T Major Group, in company with the WFEO. Among our objectives will be to emphasise that strengthening science and technology will be essential for accelerating the implementation of sustainable development, to ensure that the needs of the international and national research community are recognised, and that support is given to research, training and monitoring programmes that address sustainable development. ICSU believes that sustainable development is not only a laudable objective, but a vital one.

Can you outline the strategies you employ to mobilise the knowledge and resources of the international science community and facilitate interaction amongst scientists across all disciplines and countries?

ICSU today can boast 121 National Scientific Members (many of these Academies of Sciences) covering 141 countries, 30 International Scientific Union Members and 21 International Scientific Associates. It is this rich mix of the nationally organised with the disciplinary-based that is our greatest strength – and a unique set-up. This rich matrix of talents enables ICSU to encourage and foster international cooperation and sharing of experience, knowledge and know-how across the entire scientific spectrum. Through our joint initiatives we are able to develop new research programmes and encourage our members to share their talents and experiences. Our International Unions have a wealth of experience within their respective disciplines, and ICSU's role is to identify and help address issues and challenges that require a broader approach. This means building on, and sharing, those individual strengths.

Could you summarise ICSU's Strategic Plan 2006-2011, developed to help achieve your long-term vision?

The Strategic Plan for 2006-2011 brought together scientific advances and societal needs, and identified priority areas where ICSU is uniquely equipped to make a significant contribution. The first of three major domains in which our work is concentrated can be described as '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 or committees have been created, and these share one characteristic, whether they be long-term research programmes on global change or committees focussed on a specific subject such as scientific data management – they address issues that cross individual disciplines, and call for skills and knowledge drawn from all quarters.

'Science for Policy' is the second of the three major domains of action. The interface between science and society is a major concern to policy-makers and scientists alike. 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. I have already mentioned ICSU's role in the pursuit of sustainable development, and all I can add is that we seek to promote dialogue and shared understanding between the scientific community, policy makers and society more broadly.

Ever since its inception, ICSU has worked to ensure freedom in the conduct of science and the third strand to our present Strategic Plan concerns the 'Universality of Science'. Within this area, ICSU works in a cross-cutting way, across disciplines, on the freedom and responsibilities of science and scientists, availability of scientific publications, the ethical dimensions of information, data and communication etc. ICSU has achieved much through its programmatic and dedicated activities in ensuring the inclusion of scientists from all countries in the international research endeavour.



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