
Appendix 7 – Other international scientific activities

Other international science activities that do not fit under ICSU or UN bodies are described below.

Global Biodiversity Information Facility (GBIF)

(www.gbif.org)

The mission of GBIF is to make the world's primary data on biodiversity freely and universally available via the Internet. The GBIF vision is that it will contribute to economic growth, ecological sustainability, social outcomes and scientific research by increasing the utility, availability and completeness of primary scientific biodiversity information available on the Internet. Functionally, GBIF encourages, coordinates and supports the development of worldwide capacity to access the vast amount of biodiversity data held in natural history museum collections, libraries and databanks. Near term GBIF developments will focus on species and specimen-level data. Technically, GBIF is evolving to be an interoperable network of biodiversity databases and information technology tools using web services and Grid technologies. In the near term, GBIF will provide a global metadata registry of the available biodiversity data with open interfaces. Anyone can then use it to construct thematic portals and specialised search facilities. Building on the contents of this registry, GBIF will provide its own central portal that enables simultaneous queries against biodiversity databases held by distributed, worldwide sources. In the long term, molecular, genetic, ecological and ecosystem level databases can be linked to the system. These will facilitate and enable data mining of unprecedented utility and scientific merit. As its work programs progress, GBIF will enable users to navigate and put to use the world's vast quantities of biodiversity information. This information is vital to generating economic, environmental, social and scientific benefits from the sustainable use, conservation and study of biodiversity resources.

Involved countries

There are 25 full member countries and 16 associate member countries.

Australian involvement

Australia is a member via the CSIRO. Several Australian scientists are involved in GBIF committees. The Australian Biodiversity Information Facility (ABIF) is the Australian participant node for GBIF, supported by the government's Department of the Environment and Heritage.

Main programs

GBIF work is organised around six major programs:

- Data Access and Database Interoperability;
- Digitisation of Natural History Collections;
- Electronic Catalogue of Names of Known Organisms;
- Outreach and Capacity Building;
- Digital Biodiversity Literature Resources;
- Species Bank.

Global Forum for Health Research

(www.globalforumhealth.org)

The Global Forum for Health Research is an independent international foundation established in Geneva in 1998 with the objective of helping correct 'the 10/90 gap' in health research. Health research is essential to improve the design of health interventions, policies and service delivery. Every year more than US \$70 billion is spent on health research and development by the public and private sectors. An estimated 10 per cent of this is used for research into 90 per cent of the world's health problems. This is what is called 'the 10/90 gap'. The Global Forum for Health Research's central objective is to help correct the 10/90 gap by focusing research efforts on diseases representing the heaviest burden on the world's health and facilitating collaboration between partners in both the public and private sectors. The Global Forum's main strategies include organising annual meetings; helping develop priority-setting methodologies; and supporting networks in priority health research areas.

Sponsoring countries and organisations

The Global Forum is currently supported by donations from the Rockefeller Foundation, World Bank, World Health Organisation and the governments of Canada, Denmark, Netherlands, Norway, Sweden and Switzerland. In addition, individual networks supported by the Global Forum receive funding from the Bill and Melinda Gates Foundation, the Institute of Medicine of the US Academy of Sciences, the UK Department of International Development and others.

Australian involvement

Australia is not a formal member.

Global Water Research Coalition (GWRC)

(www.globalwaterresearchcoalition.net)

Twelve world leading research organisations have established an international water research alliance – the Global Water Research Coalition (GWRC). GWRC is a non-profit organisation that serves as the collaborative mechanism for water research. The Coalition will focus on water supply and wastewater issues and renewable water resources: the urban water cycle. The GWRC function will be to leverage funding and expertise among the participating research organisations, coordinate research strategies, secure additional funding not available to single country research foundations, and actively manage a centralised approach to global issues. The GWRC was officially formed in April 2002 with the signing of the partnership agreement at the International Water Association 3rd World Water Congress.

The founding members of the GWRC are:

- Awwa Research Foundation (US);
- CRC for Water Quality and Treatment (Australia);
- Kiwa (Netherlands);
- Suez Environmental - CIRSEE (France);
- Stowa - Foundation for Applied Water Research (Netherlands);
- DVGW TZW- Water Technology Center (Germany);
- UK Water Industry Research (UK);
- Anjou Recherche - Veolia Water (France);
- Water Environment Research Foundation (US);

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- Water Research Commission (South Africa);
 - WateReuse Foundation (US);
 - Water Services Association of Australia.

Human Frontier Science Program (HFSP)

www.hfsp.org

HFSP supports novel, innovative and interdisciplinary basic research focused on the complex mechanisms of living organisms; topics range from molecular and cellular approaches to systems and cognitive neuroscience. A clear emphasis is placed on novel collaborations that bring biologists together with scientists from fields such as physics, mathematics, chemistry, computer science and engineering to focus on problems at the frontier of the life sciences.

Involved countries

There are 31 member countries.

Australian involvement

Australia is a member via the National Health and Medical Research Council (NHMRC).

International Group of Funding Agencies for Global Change Research (IGFA)

www.igfagcr.org

The goal of IGFA is to foster global change research. IGFA is a forum through which national agencies that fund research on global change identify issues of mutual interest and ways to address these through national and when appropriate through coordinated international actions. Important issues for consideration in IGFA include:

- information exchange about national global change research programs, as well as about supporting initiatives and facilities;
- approaches to the integration and implementation of global change research in light of available resources;
- optimisation of funding allocations for global change research and its international coordination;
- infrastructural topics of mutual interest, including data accessibility and observation systems;
- ways to improve the interaction between science and policy; and
- possible fields of action for the future in the light of a constantly changing scientific landscape, eg, changing scopes of the international research programs.

Note that IGFA is NOT a funding agency and does NOT fund research projects.

Involved countries

There are 23 member countries.

Australian involvement

Australia is not a member.

International Federation for the Promotion of Mechanism and Machine Science (IFTOMM)

[\(www.robots.neu.edu/iftomm/\)](http://www.robots.neu.edu/iftomm/)

The mission of IFTOMM is the promotion of mechanism and machine science. Its aims are:

- to promote research and development in the field of machines and mechanisms by theoretical and experimental methods, along with their practical application;
- to broaden contacts among persons and organisations of different countries engaged in scientific or engineering work in the field of machines and mechanisms, or related sciences;
- to organise the World Congress on machine and mechanism science; to sponsor national, or regional conferences and symposia with international participation;
- to promote the exchange of scientific and engineering information and experts; to assist in the publication of the proceedings of the international congresses and symposia of the Federation, and other special publications;
- to encourage the visits of experts and students between the countries, either as individuals or as teams;
- to assist the developing countries in their work in mechanism and machine science by sponsoring the visits of experts, organising special courses, and other undertakings;
- to honour eminent scientists, engineers and organisations in the field of mechanism and machine science;
- to establish the necessary relationships with other international organisations and unions whose activities are of interest to the Federation.

Involved countries

There are 45 national member organisations (as of 1999).

Australian involvement

The Australian Academy of Science pays formal membership subscriptions. James Trevelyan of UWA is on the executive council.

Integrated Ocean Drilling Program (IODP)

www.iodp.org

IODP is an international research program that explores the history and structure of the Earth as recorded in seafloor sediments and rocks. IODP builds upon the earlier successes of the Deep Sea Drilling Project (DSDP) and the Ocean Drilling Program (ODP), which revolutionised our view of Earth history and global processes through ocean basin exploration. IODP greatly expands the reach of these previous programs by using multiple drilling vessels, including riser, riserless, and mission-specific platforms, to achieve its scientific goals. IODP is perhaps the largest Earth Sciences program internationally.

Sponsoring countries and organisations

Membership consists of scientific institutions involved in deep sea drilling. Currently it has thirty-three members, 15 from the US, eight from Japan, and 14 from Europe.

The program costs \$90 million per year, over half funded by the US. IODP is funded by four entities acting as international partners - The US National Science Foundation and Japan's Ministry of Education, Culture, Sports, Science and Technology are Lead Agencies. The ECORD Managing Agency is a Contributing Member. The People's Republic of China Ministry of Science and Technology is an Associate Member. The Ocean Drilling Program office at NSF (part of the Marine Geosciences section of the Division of Ocean Sciences, within the Directorate for Geosciences) is responsible for administering commingled funds directed towards the science operating costs of all IODP operations. These commingled funds come from the international partners as part of their membership fees used for the conduct of IODP science. Platform operating costs are the responsibility of the agency supplying the platform capability.

Australian involvement

Australia is not currently a formal member of IODP. Australia was involved in the predecessor to IODP (the ODP) via a 1/3 membership (with Taiwan and Canada) of \$1.5 million contributed by 14 Australian universities, CSIRO, AGSO, and the ARC. Australia was a part player in first phase of ODP, because membership costs were beyond our available funds. Dr Patrick Dedekker of ANU is the Australian contact for IODP. For more information on Australia's efforts to become a member of IODP, see <http://ems.anu.edu.au/margo/html/IODP.htm>

International Union Against Cancer (UICC)

(www.uicc.ch)

UICC is the only international non-governmental organisation that is dedicated exclusively to the global control of cancer. Its vision is of a world where cancer is eliminated as a major life-threatening disease for future generations. Its mission is to build and lead the global cancer control community engaged in:

- sharing and exchanging cancer control knowledge and competence equitably;
- transferring scientific findings to clinical settings;
- systematically reducing and eventually eliminating disparities in prevention, early detection, treatment and care of cancers;
- delivering the best possible care to all cancer patients.

As the largest independent, non-profit, non-governmental association of 280 cancer-fighting organisations in over 80 countries, UICC is a global resource for action and voice for change. UICC brings together individuals in the global campaign against cancer from a wide range of organisations including advocacy groups, patient and survivor support networks, voluntary cancer societies, public health authorities, and research and treatment centres.

Involved countries and organisations

UICC has involvement from 280 cancer-fighting organisations in over 80 countries.

Australian involvement

Several national and state cancer organisations are members. Several Australian scientists are involved with UICC committees, including the governing council.

World Conservation Union (IUCN)

(www.iucn.org)

The mission of IUCN is 'to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable'. Its members include 77 States, 114 government agencies, and 800-plus NGOs from some 140 countries. More than 10,000 internationally-recognised scientists and experts volunteer their services to its six global commissions. Its 1000 staff members in offices around the world are working on some 500 projects. A priority of the IUCN program (2001–2004) is to build recognition of the many ways that the livelihoods of the poor depend on the sustainable management of natural resources. Through its projects IUCN works to apply sound ecosystem management to demonstrate the way to sustainable livelihoods for those directly dependent on natural resources. Since 1948 IUCN's databases, assessments, guidelines and case studies prepared by its global membership, commissions and secretariat have become frequently cited sources of information and reference on the environment. IUCN has launched an electronic network to create a 'Green Web' of conservation knowledge and to take advantage of the opportunities of information technology. The aim is to bring this resource within everyone's reach, facilitating access to IUCN policy and management advice.

Involved countries

Organisations from 145 countries are involved in IUCN.

Australian involvement

31 Australian organisations are members, including 22 NGO's, nine state government environment departments, and the Commonwealth government's Department of the Environment and Heritage.