

Appendix 9 – Membership subscription details and mechanisms

ICSU

Name	Academy subscription	Subscription details
The International Council for Science (ICSU)	Yes	Each member shall pay annual dues within a scale determined by the General Assembly. Each member may choose its own category for payment. Australia is category 10. No information was available on how this compares to other countries.

ICSU Unions

Name	Academy subscription	Subscription details
International Astronomical Union (IAU)	Yes	Annual dues are paid as a number of Units of Contribution defined by the Category of Adherence of each country. The amount of the unit of contribution is decided by the IAU General Assembly (CHF 3260, 3355, 3460 and 3580 for the years 2003, 2004, 2005 and 2006). Australia is Category IV = 6 units. Category IV is the same as Belgium, India, Netherlands, and Spain (Canada = category V, Sweden = category III). Total units of subscription = 260, ie Australia contributes 2.3% of the total membership subscriptions. Australia has 217 individual members of IAU (2.39% of total membership).
International Brain Research Organisation (IBRO)	Nil	Australian Neuroscience Society (ANS) pays membership dues. Australia has 2 votes. Most member societies have 1 or 2 votes. China, France = 3 votes, Japan = 5 votes, US = 7 votes.
International Geographical Union (IGU)	Yes	Each country applying for membership of the Union shall specify in which category it wishes to be classed. There are 15 categories. Australia is category IV = 5 units. Unit subscription value is US\$375. Total subscription units = 264, so Australia contributes 1.9% of total membership subscriptions. 46 countries are in lower categories, five are in the same category, nine countries are in higher categories. Netherlands = category III, Canada = VI, Sweden = IV.
International Mathematical Union (IMU)	Yes	The adherence of a country is in one of five categories (I-V) with corresponding voting powers and contributions. A country may change group with the approval of the Union upon recommendation of the Executive Committee. The unit subscription for 2003-06 = 1320 Sw Fr. Australia is category III = 4 units. Total subscription units = 212, so Australia contributes 1.9% of total membership subscriptions. Other countries in category III are Belgium, Brazil, Hungary, India, Poland, and Spain. Canada = category V, Sweden = IV. Twelve countries are in higher categories than Australia.
International Society for Photogrammetry and Remote Sensing (ISPRS)	Nil	Remote Sensing and Photogrammetry Association of Australia pays dues. Australia is category 5 = 1600 Sw Fr. Membership dues are based on the number of active specialists in the country.

International Union of Anthropological and Ethnological Sciences (IUAES)	Nil	Dues = 50c per member. Five Australian delegates are on the permanent council (reflects membership level), so an Australian organisation must be paying dues, but that information was not provided on website, and correspondence with the Union was unsuccessful.
International Union of Biochemistry and Molecular Biology (IUBMB)	Yes	Subscription level is based on the category to which the member is assigned (determined by the Union), with each category having a corresponding number of units of subscription. The unit value is determined every 3 years at the general assembly. In 2000 the unit subscription was US\$500. No info was available regarding Australia's Category, or the current value of unit subscription. Academy records show a subscription payment that looks like 10 units = category IID. The IUBMB budget for 2000-2002 was for total membership subscriptions of US\$576,400. Australia contributes about 1.0% of this total.
International Union of Biological Sciences (IUBS)	Yes	The General Assembly determines the amount of a unit contribution for members. Australia is category 5A. In 2003, the AAS requested that its dues be halved, and IUBS accepted. So the Academy is still listed as category 5A but is paying at half the required level. Total annual contributions average around 351 616 Euros per year. Australia contributes about 1.8% of this total (it would be 3.3% of the total if Australia paid at category 5A).
International Union of Crystallography (IUCr)	Yes	Membership Category is based on the number of Australian Crystallographers registered with IUCr. Australia is Category III = 6 units. Category III is the same as Brazil, Canada, Italy, and Spain. Seven countries are in higher categories. Netherlands, Sweden are category II. The subscription unit is CHF 1,000 for 1999-2005. The total IUCr budget for 2002-2004 is for total membership subs of \$150,000 CHF per annum. Australia contributes about 4% of this total.
International Union of Food Science and Technol (IUFoST)	Nil	Australian Institute of Food Science and Technology pays membership dues. There are 5 categories of membership, with corresponding voting rights of 1-5 delegates, and dues of US\$330, 1320, 2640, 3960, and 6600.
International Union of Geodesy and Geophysics (IUGG)	Yes	Australia is Category 5 = 7 units. A country shall specify the category in which it proposes to adhere. Its application for admission may be refused if the category proposed is considered inadequate. Category 5 is the same as India and Spain; Canada = Category 6, Sweden = Category 4; Netherlands = Category 4; 9 countries are in a higher category than Australia. The IUGG budget for 2004 is for 250 units, ie Australia pays 2.8% of this total.
International Union of Geological Sciences (IUGS)	Yes	The organisation shall specify in which category it proposes to adhere. The category may be changed upon agreement between the organisation and the Union. The unit of contribution is US\$450 in 2003, US\$460 in 2004. Australia is Category 5 = 12 units. This is the same category as Canada and India. Netherlands = 4, Sweden = 3; There are eight countries in higher categories – China, France, Germany, Italy, Japan, Russia, UK, USA. Total membership dues for 2003 were US\$192,857. Australia contributes about 2.8% of this total. Australia's membership has been upgraded to Category 6 = 20 units in 2005.
International Union of History and Philosophy of Science (IUHPS)	Yes	Dues for the Division of History and Science (DHS) – Australia's fee for 2003 was the same as Belgium, Canada, China, India, Netherlands, and Sweden. Seven countries pay more. Dues for the Division of Logic, Methodology, and Philosophy of Science (DLMPS) – Australia is category C.

International Union of Immunological Societies (IUIS)	Yes	Members shall pay annual dues at a rate set by the Council. The Australasian Society for Immunology is listed as Australia's formal member to IUIS. Payment of dues is split 50/50 between the Academy and the Australasian Society for Immunology. No information was available regarding Australia's dues category, or any other country's dues.
International Union of Microbiological Societies (IUMS)	Yes	Dues are based on the number of microbiologists registered with the national society (approximately US\$1 per member). The Australian Society of Microbiology has a membership of around 3,200. Total annual dues to IUMS are around US\$70,000. Australia contributes about 2.7% of that total.
International Union of Nutritional Sciences (IUNS)	Yes	Dues structure changed in 2001. New categories loosely based on the formula population x GNP x "Nutrition Strength". Nutrition strength is a rating of nutrition professionals and nutrition publications. Australia should be Category 4 (same as Canada and India; Netherlands = 3, Sweden = 3; seven countries are in higher categories - Italy, UK, France, Germany, China, Japan, USA). Member nations having difficulty meeting the new dues structure were given leeway not to have to meet new dues category until 2004, so Australia is still paying at the previous level (about half the level it should be paying). Total membership dues = US\$74,400 pa. Australia should contribute 4.0% of total (but is currently contributing 2%).
International Union for Pure and Applied Biophysics (IUPAB)	Yes	There are three categories of membership for adhering bodies, with corresponding rights to send one, two, or three delegates to the General Assembly. The amount of the corresponding subscriptions is set by the General Assembly. Australia is category 3 . No information was available regarding other country's categories or subscription levels for the categories. Total subscriptions from member countries are around US\$70,000 pa. Australia contributes about 1.5% of that total.
International Union of Pure and Applied Chemistry (IUPAC)	Yes	Subscriptions are based on the average of the recent five years of chemical turnover data. No information was available regarding Australia's or any country's dues. Total subscriptions from member countries in 2003 were US\$717,735. Australia contributes about 1.9% of that total.
International Union of Pure and Applied Physics (IUPAP)	Yes	A member joins the Union with a number of shares negotiated by the Council and approved by the General Assembly. Member dues per share are 1750, 1800 and 1850 Euros for the years 2003, 2004, and 2005 respectively. Australia pays 4 units (same as comparable countries). Total subscriptions from member countries in 2003 were US\$278,000 (should be US\$321,500 if all members paid). Australia pays about 3.2% of that total (should be 2.75% of total if all members paid up).
International Union for Physical and Engineering Sciences in Medicine (IUPESM)	Nil	Membership is via IFMBE and IOMP. Australian Federation for Medical and Biological Engineering pays dues to IFMBE. Annual subscriptions from Members are based on the number of individual members in their organisation. The Australasian College of Physical Scientists and Engineers in Medicine pays dues to IOMP.
International Union of Pharmacology (IUPHAR)	Yes	A Full Member shall pay proportional annual dues according to the number individuals constituting its Membership. The Council will determine at each General Assembly the value of the dues. There shall be one Delegate to council for every 300 pharmacological scientists or fraction thereof. The Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists is listed as having 548 members. No details were available regarding Australia's or any country's dues.

International Union of Physiological Sciences (IUPS)	Yes	Each Adhering Body shall pay annual dues to the Union at a rate determined by the General Assembly upon recommendation by Council. Australia is category 3 = 4 units. No details were available about how this compares to other nations.
International Union of Psychological Science (IUPsyS)	Yes	Each National Member chooses the category to which it wishes to belong, subject to approval by the Executive Committee. Australia is category G = 30 units = 2 delegates (the highest category = M =100 units = USA; Canada, France = G; Italy = F; Netherlands = D; Sweden=H). The annual unit subscription is US\$125, effective 1 January 1997 (this may have increased).
International Union of Soil Sciences (IUSS)	Nil	The Australian Society of Soil Science is Australia's member organisation. Countries are classified as Group I (High-income country), Group II (Middle Income country), or Group III (Low Income Country) depending on a combination of their Gross National Product (GNP) per capita and their Gross Domestic Product (GDP) per capita. The annual subscription is equal to $S \times N \times R$, where S is one of the three groups, N is the number of members, and R is the General Rate. Through 2006, R = US \$1 and the R*S rates for Full Members are US 5\$, \$3, and 1\$ for Group I, II, and III members, respectively. No information was available on the Australian Society of Soil Science subscription level.
International Union of Theoretical and Applied Mechanics (IUTAM)	Yes	The amount of the annual subscription to be paid by an adhering organisation will be regulated according to one of 5 categories, as proposed by the adhering organisation and after approval of the General Assembly of the Union. Australia is category 2 = 3 units (same as Denmark, Finland, Israel, and Poland. Canada = 8; Netherlands = 5; Sweden = 5. 13 countries pay more units). The 2002 GA decided that the unit subscription should be US\$656 in 2003 and 2004, and US\$670 in 2005. Total IUTAM membership is 143 units, ie Australia contributes about 2.1% of total.
International Union of Toxicology (IUTOX)	Yes	Member Societies shall be asked to pay annual dues in the ratio of 1, 2.5, 5, 7.5, or 10 units, according to the number of delegates (1 to 5) to the Council. The Council determines the value of the dues unit at each General Assembly. Total IUTOX membership dues for 2003 were around US\$40,000. Australia contributes about 1.75% of this total.
International Union of Radio Science (URSI)	Yes	Each Member Committee is free to choose the Category (7 categories) in which it will adhere to the Union. The number of units of contribution and the number of votes allocated are determined by the Category chosen. Australia is category 4 = 8 units, 8 votes. The total dues for 2002 were 185,106 Euros. Australia contributes about 3.8% of this total.

ICSU Associates

Name	Academy subscription	Subscription details
Academia de Ciencias de América Latina (ACAL)	nil	Australia is not a member.
Federation of Asian Scientific Academies and Societies (FASAS)	Yes	The Academy pays membership subscriptions.

Federation Internationale des Geometres (International Federation of Surveyors) (FIG)	nil	Institution of Surveyors, Australia pays membership dues.
International Association of Hydraulic Engineering and Research (IAHR)	nil	Five Australian organisations are corporate members: SunWater Technical Services, Hargrave-Andrew Library Monash, University of Queensland Central Library, Snowy Mountains Engineering Corporation, and the University of Adelaide Acquisitions Department. Individual Australian scientists are also members.
International Cartographic Association (ICA)	nil	Mapping Sciences Institute, Australia pays membership dues.
International Council for Laboratory Animal Science (ICLAS)	nil	The Australian and New Zealand Society for Laboratory Animal Science pays membership dues.
International Cell Research Organisation (ICRO)	nil	Membership from individual scientists only.
International Council for Scientific and Technical Information (ICSTI)	nil	CSIRO pays membership dues.
International Federation of Information Processing (IFIP)	nil	Australian Computer Society (ACS) pays membership dues.
Federation of Library Associations and Institutions (IFLA)	nil	Australian Library and Information Association pays membership dues. A number of Australian libraries are Institutional members.
International Foundation for Science (IFS)	Yes	The Academy pays membership subscriptions.
International Federation of Societies for Microscopy (IFSM)	nil	Australian Microscopy and Microanalysis Society pays membership dues.
International Institute for Applied System Analysis (IIASA)	nil	Australia is not a formal member country.
International Union for Quaternary Research (INQUA)	Yes	Members adhering to the Union are divided into six categories, with corresponding units of subscription. The Academy pays Australia's membership subscriptions. No information was available regarding Australia or any other country's category, or the unit subscription amount.
International Radiation Protection Association (IRPA)	nil	Australian Radiation Protection Society pays membership dues.
International Society of Endocrinology (ISE)	nil	Endocrine Society of Australia pays membership dues.

International Union of Forest Research Organisations (IUFRO)	nil	24 Australian orgs are members, including government agencies (such as the Bureau of Rural Sciences), CSIRO Divisions, Universities and Cooperative Research Centres.
International Union for Vacuum Science Techniques and Applications (IUVSTA)	nil	Vacuum Society of Australia pays membership dues.
International Water Association (IWA)	nil	Australian Water Association is member.
Pacific Science Association (PSA)	nil	National Academies Forum is Australia's member organisation.
Third World Academy of Sciences (TWAS)	nil	Membership consists of elected individuals only. Scientists from Developed countries can only be associate members.

ICSU Joint Initiatives and Interdisciplinary Bodies

Name	Academy subscription	Subscription details
Committee on Disaster Reduction (CDR)	nil	Funded by ICSU.
Committee on Data for Science and Technology (CODATA)	nil	Each National Member will pay annual dues in accordance with the category of membership approved by the General Assembly. The AAS paid subscriptions up until 1999/2000, but no longer pays.
Committee on Space and Research (COSPAR)	Yes	Australia is Category 2 = 3 units. No information was available on how this compares to other nations.
An Integrated Programme of Biodiversity (DIVERSITAS)	nil	Australia does not provide direct contributions. Australia is indirectly involved via Academy subscriptions to DIVERSITAS sponsoring organisations (ICSU, IUBS and IUMS).
Astronomical and Geophysical Data Analysis Services (FAGS)	nil	FAGS is funded by IAU, IUGG and URSI. Australia is a member of all these organisations via Academy subscriptions.
Global Climate Observing System (GCOS)	nil	Funded by WMO, IOC of UNESCO, UNEP and ICSU. Australia is a member of all these organisations.
Global Ocean Observing System (GOOS)	nil	Sponsored by the IOC, WMO, UNEP and ICSU. Australia is a member of all these organisations.
Global Terrestrial Observing System (GTOS)	nil	Sponsored by the FAO, UNEP, UNESCO and WMO. Australia is a member of all these organisations.
International Geosphere-Biosphere Programme (IGBP)	Yes	IGBP's central budget is approximately US\$2.1M per annum, of which US\$1.5M comes from national contributions from about 50 countries around the world. Australia is the 11th highest contributor (in 2003), contributing about 2.3% of the total.

The Integrated Global Observing Strategy (IGOS)	nil	Sponsored by GCOS, GOOS, GTOS, FAO, ICSU, IOC, UNEP, UNESCO, WMO, CEOS, IGFA, WCRP and IGBP. Australia is a member of most of these organisations.
International Human Dimensions Programme on Global Environmental Change (IHDP)	nil	Sponsored by ICSU and ISSC and a number of supporting countries. In 2001, IHDP was supported by grants from Germany, USA, Netherlands, Sweden, Norway, Switzerland, Austria, Spain, NZ and Finland. Australia does not provide any direct contributions.
International Network for the Availability of Scientific Publications (INASP)	nil	The Australian Centre for International Agricultural Research (ACIAR) contributes funds.
Committee on Allocation of Radio Frequency (IUCAF)	nil	IUCAF is funded by IAU, URSI and COSPAR. Australia is a member of all these organisations via Academy subscriptions.
Millennium Ecosystem Assessment (MA)	nil	Australia does not provide any formal membership contributions.
Scientific Committee on Antarctic Research (SCAR)	Yes	Members pay an annual contribution at a category determined by a country's own assessment of the scale of their national scientific activity in the Antarctic. Payment of Australia's dues is split 50/50 between the Academy and the Australian Antarctic Division. Australia is Category B (same as Argentina, France, Japan, UK, Germany, India, and Italy. Only Russia and USA are in the higher category A). Total membership subscriptions in 2004 were US\$322,000. Australia contributes about 4.3% of this total.
Scientific Committee on the Lithosphere (SCL)	nil	Joint program of ICSU, IUGG and IUGS. Australia is a member of all these organisations via Academy subscriptions.
Scientific Committee on Problems of the Environment (SCOPE)	nil	The Academy paid membership subscriptions up until 2001/2002, but no longer pays. The Academy is still listed as a member on the SCOPE website.
Scientific Committee on Oceanic Research (SCOR)	Yes	A nation's membership category is roughly based on the gross domestic product of the nation, as well as the nation's level of activity in ocean sciences. Australia is Category II . Same category as Belgium, Chile, China (Beijing), China (Taipei), Denmark, Finland, India, Netherlands, and Norway. Ten countries are in higher categories. Canada = IV, Sweden = III. Total membership subscriptions in 2001 were US\$238,939. Australia contributes about 2.0% of this total.
Scientific Committee on Solar Terrestrial Physics (SCOSTEP)	Yes	A scale of annual subscriptions for Adherents shall be determined by the Council. Each Adherent shall select the level at which it wishes to subscribe. Australia category IV = 10 units . Total membership subscriptions in 2004 were US\$76,000. Australia contributes about 5.3% of this total.
World Climate Research Programme (WCRP)	Yes	The Academy pays membership subscriptions. No information was available regarding membership subscription levels or mechanisms.
Panel on World Data Centres (WDC)	nil	Australia hosts the WDC for Solar-Terrestrial Science in Sydney, via IPS Radio and Space Services.

Discipline	Australia's contribution to World publications 1995-99 ¹
Mathematical Sciences	2.6%
Physical Sciences (excluding Astronomy)	1.7%
Astronomical Sciences	3.9%
Chemical Sciences	1.7%
Earth Sciences	5.1%
Biological Sciences - Biochemistry and Cell Biology, Genetics	2.6%
Biological Sciences - Biotechnology, Botany, Ecology and Evolution, Zoology, Other	4.2%
Information, Computing and Communication Sciences	2.5%
Engineering and Technology	2.0%
Agricultural, Veterinary and Environmental Sciences	4.9%
Medical and Health Sciences	2.8%
Behavioural and Cognitive Sciences	3.2%
All Science	2.7%

¹ Butler, L., Australian Academy of Science, 2001, *Monitoring Australia's Scientific Research: Partial Indicators of Australia's Research Performance*.