

To the Executive Director, SCAR

Re: APPLICATION OF THE INTERNATIONAL UNION FOR QUATERNARY RESEARCH
(INQUA) FOR UNION MEMBERSHIP OF THE SCIENTIFIC COMMITTEE ON ANTARCTIC
RESEARCH (SCAR)

INQUA is the most prominent international scientific organization with a specific focus on the most recent period of Earth history (the Quaternary) and on the interplay between humans and the contemporary Earth system. It was founded in 1928 as the International Association for the Study of

the European Quaternary and expanded in 1932 to cover the world. For information about INQUA, please see our web site at <http://www.inqua.tcd.ie/>

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The primary objectives of INQUA are: (1) to encourage the interdisciplinary study of all aspects of the Quaternary Period (the last 2.6 million years), and (2) to facilitate and coordinate international cooperation for this study through the organization of international congresses and the research activities of its commissions and other bodies. The Quaternary is a unique period in Earth history. The genus *Homo* appeared at the beginning of the Quaternary, and human evolution was driven by frequent large changes in global climate that led to a succession of glacial and interglacial ages with environmental conditions very different from those of today. These climatic fluctuations led to major global reorganization of terrestrial geography, ocean circulation, and biotic communities. To gain a full understanding of these complex changes, scientists from many different fields of enquiry collaborate in research on the recent evolution of the surface of our planet and on how climate and physical and biotic environments have fluctuated on short time scales. Quaternary scientists are able to reconstruct environmental change at decadal and even annual resolution, which is generally not possible for older geological periods. They also study modern glaciers and permafrost to understand past glaciations, climate change, and the important feedback role of snow and ice cover in the global climate system. Quaternary studies are an important and integral component of international and national global change programs, for they provide the baseline needed to understand how natural environments have changed through time and how human activity has affected them. By nature of their research, Quaternary scientists, represented by INQUA, are making important contributions to forecasting the likely impacts and consequences of human activity on Earth's future environment. It is noteworthy that INQUA has expertise in nine of the ten

broad themes of the IUGS/UNESCO project International Year of Planet Earth (IYPE): groundwater, hazards, earth and health, climate, resources, megacities, ocean, soil, and earth and life. INQUA recently became a Founding Partner in IYPE in order to fully contribute to this important initiative. A measure of INQUA's stature is that its officers and members are senior editors of many international scientific journals that address these themes, including all of the leading Quaternary journals (*Quaternary Science Reviews*, *Journal of Quaternary Science*, *Quaternary Research*, *Boreas*, *Géographie Physique et Quaternaire*, *The Holocene*, and *Quaternary International*), as well as many journals that do not have a Quaternary focus.

It seems self-evident that much of the Quaternary science that SCAR scientists do in Antarctica and the Southern Ocean would be of interest to INQUA, and that SCAR might well benefit from the advice of INQUA in the development and operation of SCAR's Quaternary science research programmes, such as ACE (Antarctic Climate Evolution). INQUA would therefore like to attend the SCAR Science Week from July 8-14, 2006, in Hobart, and the XXIX SCAR Delegates' meeting from July 17-20, in the capacity of Observer. It would be useful for our INQUA representative to attend that SCAR Geosciences workshop in Hobart between July 8 and 11, and at the SCAR Open Science Conference from July 12-14.

Bearing in mind that the Union members of ICSU are eligible also to be Union members of ICSU's Scientific Committee on Antarctic Research (SCAR), and that INQUA became a Union Member of ICSU in 2005, INQUA would also like to apply to be a Union Member of SCAR, and would greatly appreciate it if its application could be considered as part of the business of the Delegates' meeting in Hobart.

INQUA has substantial interests in Antarctic research, having sponsored research activities there through a number of avenues. The link between scientists involved in INQUA projects and the Antarctic are too numerous to list but an example of such liaisons (presented at our last Congress in Reno in 2003) can be seen at http://gsa.confex.com/gsa/inqu/finalprogram/session_9877.htm

On behalf of INQUA may I say how much we look forward to working closely with SCAR in the future, to take Quaternary science forward in the Antarctic context.

Yours Sincerely,



Prof. Peter Coxon
Secretary-General INQUA