



Mission and Activities of the International Union for Quaternary Science

INQUA's basic goal is to promote improved communication and international collaboration in experimental and applied aspects of Quaternary research, in order to contribute in practical ways to an evaluation of the scale and rates of global environmental changes during the recent geological past.

INQUA considers that a deep knowledge of global developments during the past 2.58 million years (the Quaternary geological period) provides the essential template for assessing the significance of current and predicted global environmental shifts. The Quaternary period witnessed the evolution of modern humans against a back-drop of recurrent advance and retreat of glaciers and continental ice sheets, major oscillations in global sea level, abrupt reorganizations of global meteorological and oceanographic circulation patterns, and a range of other physical and biological adjustments to climate change. The spectrum of environmental changes reflected in Quaternary geological records is likely to encompass the conditions the world may experience in the foreseeable future. Quaternary records therefore offer important base-line data for evaluating a number of the issues at the forefront of today's environmental concerns, such as quantifying future ice sheet decline and sea-level rise, ocean warming and acidification, increasing climatic instability, extinction of plants and animals, groundwater recharge rates, volcanic and tectonic unrest, rates of adaptation (e.g. evolutionary) to abrupt environmental change, and so on. Each of these needs to be evaluated in the longer term, not just in the instrumental period, to be properly understood.

INQUA promotes greater understanding of the importance of Quaternary environmental and archaeological records in two ways, *by engaging with international dialogue and activities* concerned with modern global environmental problems, and *by funding activities* that clarify the background context to these problems, within the Quaternary timescale.

International Engagement

INQUA is an independent member scientific union of International Council for Science; as such it not only adds critical mass to the Geo-Unions sub-cluster of International Council for Science with which it is associated, but can provide independent advice and influence on matters best assessed within a Quaternary time-frame.

INQUA is engaged in the planning and evolution of a number of emerging global initiatives, such as

Future Earth, mainly through the regional offices for Latin America and Africa, and in initiatives being proposed by IUGS, such as *Resourcing Future Generations*, which includes a focus on groundwater resources, and which may in turn link in to the *Future Earth* programme.

INQUA funds a number of specific international projects and *Focus Groups* (see below) which are advancing knowledge in key environmental areas, such as climate modelling, biodiversity, hazard assessment, human origins and environmental impacts, and species extinction rates.

INQUA provides a liaison and advisory body for IUGS on matters concerned with Quaternary stratigraphic subdivision, nomenclature and good practice. This feeds through the Subcommission for Quaternary Stratigraphy (SQS), which reports to the International Commission on Stratigraphy (ICS) of the IUGS.

INQUA informs the wider scientific community of important advances in the study of geological, environmental and archaeological events through its official journal, *Quaternary International*, published by Elsevier. The journal was inaugurated in 1989 and in early 2014 published its 323rd volume.

INQUA is run by an elected *Executive Committee* which reports to an *International Council* comprised of one national representative for each of the 53 national or regional Members of INQUA, though only the representatives of fee-paying members hold voting rights. The International Council oversees the actions and decisions of the Executive Committee, and approves INQUA's statutes which govern all INQUA's structure and activities.

INQUA holds an *International Congress* once every four years, which is open to participation by all interested scientists, and which show-cases recent developments in the field. The location of the congress is decided in advance by the International Council, which meets on three occasions during each congress. There is a high participation in the congress by scientists from developing countries and by Early Career Researchers, for which funding support is supplied from INQUA resources.

INQUA-funded initiatives

INQUA provides funds (ca. 130,000 Euros *per annum*) to support the work of projects and focus groups, selected by competition, that are considered to address important facets of the contemporary environmental agenda. These are orchestrated through five INQUA Commissions, the Presidents of which monitor developments and ensure adhesion to INQUA's key themes. The five commissions are:

Coastal and Marine Processes (CMP)

Humans & Biosphere (HABCOM)

Palaeoclimate (PALCOM)

Stratigraphy & Chronology (SACCOM)

Terrestrial Processes, Deposits & History (TERPRO)

Funded activities must submit annual reports, which are reviewed by the INQUA executive, and publicise their activities and results through the INQUA web-based newsletter, *Quaternary Proceedings*.

INQUA provides funds to catalyse capacity building, skills transfer and enhancement, and knowledge transfer in developing countries, and to enable researchers from developing countries (DCRs) to attend meetings and the international congress.

INQUA has developed a policy of favouring the funding of the participation of DCRs and ECRs (Early Career Researchers) in INQUA-funded projects and focus groups; funding is provided for Senior Scientists where their involvement is key for arranging meetings which cater for active participation of DCRs and ECRs, or who provide the necessary skills training and/or knowledge transfer.

INQUA has recently inaugurated an ECR web page and is committed to holding an Early Career Researcher International Conference, once every four years and to alternate with the International Congress. The first of these was held in Australia in December 2013, and attracted ECR participants from around the world.