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## What is PAGES?

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Ten years ago, the International Geosphere-Biosphere Program (IGBP) initiated a core international program focused on issues of PAST Global changeS (PAGES). The success of the first decade of this program is a testimony to the health of the paleosciences and the vitality of the individuals in the science community interested in climate change on large spatial scales and interhemispheric comparisons across a variety of temporal scales. PAGES even played a key role with NOAA in establishing the WDC-A for Paleoclimatology as the central depository for global paleoclimate data. The International Program Office and mission of IGBP/PAGES is largely supported by commitments from the United States and Switzerland as a joint venture in facilitating international collaboration and communication across the global paleoscience community. On the U.S. side, The National Science Foundation (NSF) and National Oceanic & Atmospheric Administration (NOAA) are the primary federal agencies co-funding the PAGES operations.

The core mission of PAGES is to *facilitate international collaborations and interdisciplinary science*, especially between individuals involved in national programs with overlapping interests. The PAGES scope of interest includes the physical climate system, biogeochemical cycles, ecosystem processes, biodiversity and human dimensions. The emphasis of these interests is on high-resolution studies of global change – such as that stored in ice cores, tree rings, speleothems, corals, lakes, marine records, etc. -- and the use of these data for making sound estimates of future global change. Thus, PAGES activities are not restricted to IGBP, but overlap substantially with IGBP's sister programs WCRP (World Climate Research Program), IHDP (International Human Dimensions Program) and Diversitas (Biodiversity focus). PAGES thus will play role in future developing interproject programs on food systems, carbon and water. Facilitating publicly accessible paleodata access, engaging with the climate modeling community, strengthening the engagement of scientists from developing countries, and interdisciplinary, international community building continue to be the foundation of all PAGES activities.

One of the primary activities of PAGES is the sponsorship of work shops, symposia, and conferences that bring scientists from different countries together to share, compare and synthesize data from different high resolution archives recording climate change; its especially about building up a science community that interacts on an international level. A good example of this is the PEP1 transect led by Vera Markgraf (Colorado). This effort was most effective in gathering groups of scientists from Central and South America and bringing those scientists in contact with the North American scientists. This was done via a series of meetings – planning the collaborative science,

encouraging the research, and participating in synthesis volumes. Young and experienced scientists from emerging countries are especially encouraged to participate. PAGES does not have a focused interest in lower resolution data though it is important; nor does it fund research.

The science steering committee has historically consisted of 16 members from 14 different countries (only the USA and Canada have two members) who represent a broad spectrum of subdisciplines and are tasked to report on international activities related to the outlined focus areas of PAGES. PAGES publishes an international science newsletter that highlights these programs and provides information for any scientist to get involved. The newsletter is free and can be mailed to interested AMQUA members simply by going to the PAGES web site and signing up (<http://www.pages-igbp.org/>). The newsletter can also be downloaded as a pdf file along with numerous workshop reports. Under “products” on the web site, PAGES also offers, as free downloadable files, dozens of prepared overhead transparencies highlighting high-resolution records from all over the world, as well as synthesis products from various meetings and workshops. These are great for teaching purposes and public lectures. PAGES scientists regularly contribute to special issues in the peer reviewed literature. Special issues of *Quaternary Science Reviews* and *Paleo3* directly arising from research facilitated in part by PAGES, and financed by various national funding agencies, appeared in 2000, 2001, 2002 and are forthcoming in 2003.

PAGES will continue operations as a central, synthesizing element within the structure of the second decade of IGBP starting in 2003. Thus, the reorganization associated with the transition to IGBP II will be minor compared to that of most IGBP projects. Nonetheless, PAGES is taking the opportunity associated with this transitional period to reassess and streamline. In this process, three criteria are paramount:

1. Maintaining and building on the interdisciplinary, international community that has grown, over the past decade, to identify with PAGES programs;
2. Remaining a bottom-up organization driven by the insights of individual scientists while bringing together individuals funded by national or disciplinary efforts;
3. Ensuring that PAGES activities lead to clear and tangible benefits for the worldwide paleoscience community.

#### **Five Scientific Foci:**

Beginning with the next phase of IGBP, PAGES will support five foci encompassing various aspects of palaeoresearch. They are:

1. PANASH (Paleo-environments of the Northern and Southern Hemispheres) which comprises the three terrestrial PEP (Pole Equator Pole) transects and their intrahemispheric linkages by focusing on climate processes such as ENSO and the monsoons;
2. IMAGES (International Marine Global Change Study), which with 24 member nations serves as the international paleoceanographic flagship of PAGES;

3. The CLIVAR/PAGES Intersection, in which the recent CLIVAR (Climate Variability and Predictability program) past overlaps with the longer timeframe of PAGES;
4. Polar Programs, which comprises international efforts at very high latitudes in both hemispheres; and
5. Past Ecosystem Processes and Human-Environment Interactions, in which historical climate-society interrelationships are being assessed.

The activities of each Focus are overseen by a chair and a small steering group. These building blocks serve the important task of providing tangible elements on which to build grass roots scientific community association with PAGES programs.

The largest and most important meeting PAGES has held was the first PAGES Open Science Meeting in London in 1998. The meeting consisted of 31 plenary talks and over 400 poster presentations. Participants at this meeting who provided us with feedback uniformly reported this was one of the very best scientific meetings they had ever attended. A second PAGES Open Science Meeting is now being planned for 2004 in Beijing, China, and we hope it will be equally successful. Watch for more information about the OSM as it becomes available at the OSM web page [www.pages2004.org](http://www.pages2004.org)

Should you have any questions about PAGES, please contact us or anyone on the SSC (see web site for list of other SSC members). The first step to getting involved is as simple as signing up on the web page and participating in future workshops.

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