

The Earth Sciences have made truly remarkable progress in the past decade. Through observations from space and ocean and continental drilling, among other techniques, we now have a much better understanding of how the plates plunge into the mantle, and how this controls seismicity and volcanic activity at and near the Earth's surface.

For example, at some locations we know so much about the subsurface that, with the newly found 'transparency' provided by techniques including GIS, our engineers can construct cheaper but more solid foundations for our highways. With astonishing precision we also know how fast climatic changes can occur, and we can describe the composition of the atmosphere for any period of time over the past 400,000 years. This knowledge provides excellent reference records for predicting future climatic change.

The eventual exhaustion of the Earth's natural resources has been common knowledge since the 1970s following the work of scientists and policy makers in "the Club of Rome". Then, ten years ago, the United Nations Framework Convention on Climate Change pointed out that such a situation places great responsibility on the Earth's human population. Questions on our use and misuse of the planet have been topical ever since. In 2002, the World Summit on Sustainable Development in Johannesburg stressed the urgent

need for positive action to conserve and sustain Earth's varied environments because the continents and their energy, mineral and water resources, the oceans and the climate are intimately related and finely tuned within a single "Earth System".

Many people may not realise how fundamental is the relationship between the earth sciences (or geosciences) and the future of planet Earth. The fact that motor vehicles, being made of many metallic raw materials, run on finite supplies of fossil fuels, add pollutants to the air we breathe and run on roads made of rocks and minerals shows how dependent we are upon geoscientific knowledge, even though this may not be our first thought when we use a car, bus or truck!

Raising awareness of the fragility and vulnerability of our planet requires much more than basic research in the geosciences; it also needs improved dialogue between scientists, citizens, decision makers and educationists. The International Year of Planet Earth, to be announced in 2004 and culminating in 2007, will open up such a wide-ranging dialogue about our Earth's System. It will be informative, exciting – and frequently controversial.



## INTRODUCTION

The International Union of Geological Sciences (IUGS), representing about one million geoscientists in 115 countries constitutes, in living form, *the largest database of information about the PAST and PRESENT status of planet Earth*. Within this Union and its affiliated organisations, specialists in many disciplines come together to share results of their research on rocks, fossils, glaciers and sediments in order to (1) interpret both the past history of the Earth, and to (2) use that knowledge as a basis for increasingly accurate predictions of future events.

In several of its publications, IUGS has drawn attention to the low level of awareness of the extent to which modern life and society are dependent upon the geosciences. The magnitude of this dependence imposes a public duty upon geoscientists to engage communities at international, national and local levels in discussions of the manifold ways in which Earth's systems impinge on people's daily lives and, in turn, how humanity's social and economic activities are increasingly interfering with those delicately balanced systems.



As a means of engaging in this global debate, the IUGS has taken the initiative to proclaim an **INTERNATIONAL YEAR of PLANET EARTH** through the United Nations system, a proposal already adopted by the UNESCO Division of Earth Sciences as one of its core activities.

The AIM of the International Year of Planet Earth is two-fold, namely

- To demonstrate the fundamental contribution being made by the Earth Sciences to knowledge of the Earth upon which we are dependent, and to wiser use of Earth's environments and resources; and
- To formulate and refine strategies that will ensure a safer and more prosperous Planet in the future.

The achievement of these aims will be supported by two major programmes

- An Outreach Programme, including educational ventures at all levels, and
- A major Science Programme, concentrating on the "big issues" concerning the complex interaction within the Earth system, and its long-term sustainability.

The initiative will seek to raise the awareness of the contribution to, and role of the geosciences in society in the minds of **politicians, decision makers, the media and the general public**. Governments will be urged to pay greater attention to the geosciences as affecting many aspects of the everyday lives of their citizens, with particular reference to applications in **educational systems, governmental legislation and civil regulations**, so as to take full advantage of this extensive source of expertise and experience.

Preparations for implementing this initiative are now fully in hand, the organisational structure of the project including a Management Team for overall direction and monitoring of progress, an Outreach Programme Committee and a Science Programme Committee.

## IUGS INITIATIVE

# planetearth



This IUGS project consists of three phases, the first (the Feasibility Phase) having been completed by February 2002. The second (Preparatory) phase is now in train, and the expectation is that the final (Implementation) phase will be initiated in August 2003. A rigorous evaluation procedure follows each phase, with continuation dependent upon performance. The Feasibility Phase was positively evaluated, international support was encouraging, and the Preparatory Phase is running to schedule.

A similar initiative was undertaken at the national level by the German Ministry of Education and Research in 2002. This "Jahr der Geowissenschaften" was a great success. Subsequent discussions with German colleagues involved in that event have proved valuable in developing the strategy for the International Year. The logo used in the national event in 2002 will form the basis of the logo for the International Year, by kind permission of the German Ministry.

In the USA the American Geological Institute (AGI) has organised an annual Earth Science Week since 1998, and AGI is now a supporter of the International Year.

Milestones indicating progress so far include the following.

- China, as a member-country of IUGS, has taken the lead in proposing to the UN System that an International Year of Planet Earth be proclaimed, and several other countries have agreed to second this proposal.
- The International Year will be formally announced during the Opening Ceremony of the 32nd International Geological Congress in Florence, Italy, in August 2004, with plans to sustain it with increasing momentum until 2007 (the 50th Anniversary of the International Geophysical Year).
- A strategy designed to attract external finance has been developed and, beginning in 2003, sponsorship will be sought from industries, consultancies, institutions, organisations etc., concerning a broad range of activities linked to, or based upon the geosciences and their applications.

The IUGS Executive Committee and the International Year Management Team are distributing this "flyer" in order to inform all National IUGS Committees, the geoscience organisations affiliated to IUGS and other geoscience bodies of this initiative and, by way of the National Committees, to draw the attention of National UNESCO bodies to this forthcoming global programme.

It need hardly be said that provision of information alone is not enough to guarantee the success of such an ambitious programme. For this reason, it is important to establish close contact with, and interaction between the National Committees and geoscience organisations and the International Year Management Team as a means of soliciting a stream of reactions, comments and advice that will both keep the Management Team alert and responsive and will stimulate all these organisations to create national projects and programmes as an integral and vital part of this global IUGS venture.

**The contribution of the global geoscientific community is clearly vital, with regional cooperation being an important constituent of success.**

In due course, a website will be established to provide a flexible and rapid means of informing all participants of the progress of the International Year, for exchange of information concerning programme inputs and for inter-communication at all levels. This website will have links to the sites of the IUGS, UNESCO and many other geoscientific organisations.

Your reactions, comments and advice will be welcomed by the IUGS Secretariat and will receive the careful attention of the Management Team.

We hope to hear from you soon,

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**International Union of Geological Sciences**  
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