

*Annual Report 2006*

**INTERNATIONAL UNION  
OF GEOLOGICAL SCIENCES**



### ***About the Front Cover***

#### **“Dead Pan at the end of the Tsauchab River, Namib Desert, Namibia”**

The Tsauchab River is an ephemeral drainage that rises out of the Naukluft Mountains in the east and cuts westwards across the Namib Desert to end in the terminal pans within the main Namib Sand Sea. In recent geological history, the northward migrating dunes of the main Namib Sand Sea have blocked the middle reaches of the river forming impressive pans. The pans are composed largely of calcareous silts. Gravels characteristic of the catchment are exposed amongst the dunes to the west of the pans, indicating earlier extensions westwards to the Atlantic Ocean. In places, the silts of these former extensions harbour fossilised shells of freshwater gastropods. Run-off down the Tsauchab River is dependent on summer rainfall in the catchment area – an extremely variable factor in this marginal zone east of the Namib Desert. Remnants of former pans, such as Dead Pan can be found to the south, as well as to the west of the present active pan. Dead trees in these former pans gave a radiocarbon date of about 900 years before present, and are proof that water reached these parts during that time (Photo courtesy of Gabi Schneider).

### ***About the IUGS Logo***

The IUGS logo represents a person accepting the burden of responsibility for the Earth.

# INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

## Annual Report 2006

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Please note that a list of acronyms used in the report is given in Appendix 8, at the very end of the document, together with the Internet address of the organizations.

## Foreword

This Annual Report of the International Union of Geological Sciences (IUGS) covers activities in 2006. IUGS grew in membership, in number of affiliated organisations and public outreach initiatives, and improved its' ability to generate financial support for international science projects. As the leading NGO of the world geological community, IUGS unites geologists from different countries and different branches of geology. Among the NGOs, the only way to achieve unanimity is through consultation, and without unity of actions, the major aims of IUGS cannot be achieved. Transparency and democracy are important preconditions to achieve consensus when combined with the division of responsibilities. The work of the current Executive Committee is building on the progress of earlier executive committees, including addressing the Statutes and Bylaws, IUGS-International Geological Congress (IGC), Strategic Plan and the International Year of Planet Earth ([www.yearofplanetearth.org](http://www.yearofplanetearth.org)). The Union continued to unite the global geological community in: (a) Promoting development of the geoscience through the support of broad-based scientific studies relevant to the entire Earth-System; (b) Applying the results of these and other studies towards preserving Earth's natural environment, using all natural resources wisely, and improving the prosperity of nations and the quality of human life; and (c) Strengthening public awareness of geology and promoting geoscience education. The year saw further preparation for the International Year of Planet Earth (2007-2009) and the 33<sup>rd</sup> International Geological Congress in Oslo (2008), as well as a number of other important tasks. IYPE progressed and gained great popularity in the world. A Joint Agreement concerning IYPE was signed between UNESCO and IUGS. IUGS also actively participated in the world GeoPark activities. IUGS supported and attended two important events in Africa, which greatly increased the visibility of the Union in that continent. Another field where the Union continues to serve the world geological community is standardization, database development and management. IUGS seeks ways to make the service available not only at the high end of the technology, but also services easily acceptable for a wide range of geologists, without replicating those services already available.

# IUGS – role, structure, membership

**By Zhang HONGREN**  
**President of IUGS 2004-2008**



## THE ROLE OF IUGS

The International Union of Geological Sciences (IUGS) is a member of the International Council for Science (ICSU; <http://www.icsu.org>) and has represented all geological scientists at the highest international level since its formation in 1961. Both fundamental research and applied aspects of the Earth sciences of an international and interdisciplinary nature are supported by the Union, through a number of Commissions, Task Groups and Initiatives, detailed elsewhere. IUGS collaborates with UNESCO (<http://www.unesco.org>) in supporting the International Geosciences Programme (IGCP), and also works with its Affiliated Organisations and with ICSU on topics of mutual interest. IUGS keeps a non-political, and thus a non-governmental stance and remains a non-profit making organisation.

## STRUCTURE OF IUGS

The Council, which is the highest body of IUGS, meets every four years at the International Geological Congress, where the representatives of the active members vote on the direction the Union shall take in the following four years.

The Executive Committee comprises the ten elected Executive Officers of IUGS: (President, Secretary-General and Treasurer, the Past-President, two Vice-Presidents and four Councillors). The officers play an active role in running the Union, developing new science programmes, representing the interests of the Union at congresses, preparing the electronic-bulletin and acting on both standing and ad-hoc committees. The day-to-day work is carried out by the Bureau, comprising the President, Secretary General and Treasurer; these officers meet regularly throughout the year to discuss the progress of the various matters of concern and interest to the Union.

At the Council meeting in Rio de Janeiro (2000), it was decided that in order to expedite major decisions, the Council could be asked to vote electronically on matters submitted by the Executive Committee. This process was successfully used several times during the term of the last two Executive Committees.

Most of the present Executive Committee (Appendix 1) will serve until the 33<sup>rd</sup> IGC meeting in Oslo, Norway, in August 2008, but, as proposed in the Strategic Planning Committee, the two Councillors appointed in 2002 will remain in office until 2006, thus providing the Executive Committee with much needed continuity.

The Executive Committee is currently involved with the International Year of Planet Earth, which forms a major part of IUGS' plans to make both politicians and the community at large more cognisant of the significant role the Earth sciences can and should have in most large-scale planning decisions.

The Permanent Secretariat (Appendix 1) in Trondheim, which is generously funded by the Norwegian Government and is based at the Norwegian Geological Survey, in Trondheim, is very important for the day-to-day operations of the IUGS, distributing to and collecting/collating documents from the Adhering Organisations and affiliated members. The Permanent Secretariat is also responsible for IUGS' archives.



*The office of the IUGS Secretariat is located above the entrance to the Geological Survey of Norway (top left windows). Photo: NGU*

## IUGS MISSION AND GOALS

The mission of the IUGS is to unite the global geological community in promoting development of the earth sciences through the support of broad-based scientific studies relevant to the entire earth-system and applying the results of these and other studies to preserving Earth's natural environment, using all natural resources wisely, and improving the prosperity of nations and the quality of human life. The goals of the IUGS include the following:

- 1) Serve as an impartial international scientific union addressing global issues that involve the earth sciences.
- 2) Contribute to the advancement of geological research throughout the world, including both fundamental earth science aimed at understanding the global system (a plexus of geological, geophysical, geochemical and biological processes and their myriad interactions), and applied earth science that use the developing understanding of the earth system to address problems of particular relevance to the welfare of humans everywhere.
- 3) Represent the geological sciences in governmental and non-governmental forums to inform, advise and influence public policy and decision makers.
- 4) Encourage, in cooperation with other organizations, more interdisciplinary involvement within the broad spectrum of the geosciences in developing solutions to global problems.
- 5) Foster collaboration between developed and developing countries in earth science research, capacity building and applications.
- 6) Contribute to earth science education and the advancement of public understanding of the earth sciences and their significance in solving societal problems.
- 7) Encourage the career development of young earth scientists.
- 8) Increase the relevance of IUGS publications to issues of truly global earth science and make these publications more widely available.
- 9) Enhance the visibility of the earth sciences and demonstrate their profound influence in planning for rehabilitation and preservation of future planetary environment by seeking greater involvement in public affairs and by publicizing the critical role that only earth sciences can play.

## MEMBERSHIP OF IUGS

The Adhering Organisations of IUGS cover the majority of geoscientists of the world. Affiliated organisations (primarily international professional scientific societies) provide a valuable link to a wide cross-section of the world's earth science community. These organisations range in size from less than 100 to nearly 50,000 members.

Appendix 2, gives a full list of the current Adhering Organisations, together with their membership category and status during 2006. There were a total of 118 adhering organizations, 83 active and 35 inactive this year. One new Category 1 Adhering Organization (National Directorate of Geology of Mozambique) joined in 2006. Cameroon, Congo, Jordan, Lebanon and Mongolia (all Category 1) became active members. Ireland upgraded from Category 2 to 4 and Canada upgraded from Category 5 to 6.

Inactive Adhering Organisations must pay the Membership Fees for the previous two years as well as the current outstanding year in order to regain in active status. The Fees for 2003-2006 are given in Appendix 3. Members are classified as inactive if they have not paid for 3 years. Only those Adhering Organisations with an active status can vote on IUGS matters; inactive Adhering Organisations can participate as observers. Each category of membership has been assigned a number of units that acts as a multiplier of the basic unit of the Membership Fee (Appendix 3). The value of the unit follows the inflation rate based on the US Consumer Price Index CPI.

# International Year of Planet Earth

**By Eduardo F. J. de MULDER**  
**Executive Director**  
**International Year of Planet Earth**  
**Corporation**

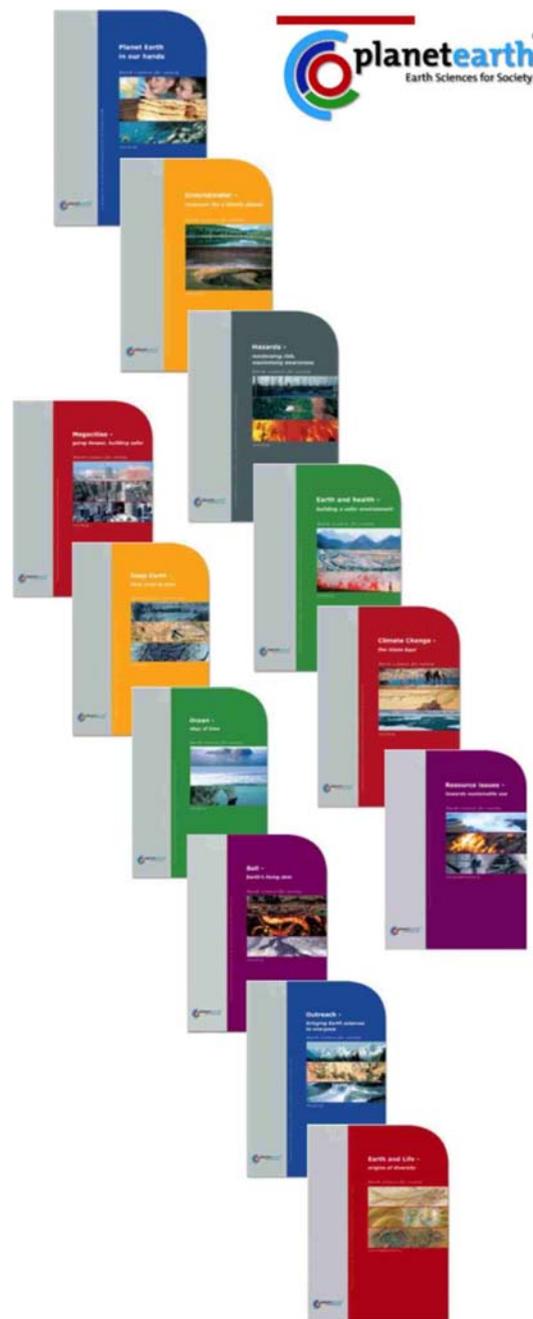


The International Year of Planet Earth (subtitle: Earth Sciences for Society) is an IUGS/UNESCO initiative aiming to demonstrate the great potential of the Earth Sciences in the building of a safer, healthier and wealthier society. The focus of the International Year is both on science and outreach so that society would apply

geoscience knowledge more effectively in the future.

On December 22<sup>nd</sup>, 2005, the United Nations General Assembly proclaimed 2008 as the International Year of Planet Earth, committing all 191 UN member countries to report on implementation of the goals and ambitions of the International Year. The International Year is a three year event (2007-2009) with the UN Year placed in the centre. On 16 March 2006, the International Year of Planet Earth was registered as a not-for-profit organisation under the law of the State of Delaware, USA.

For the first time ever, the Earth Sciences will gain world-wide political attention and support. Through partnerships, the entire international geoscience community support the International Year. It is our joint task to make this Year a complete success. All geoscientists are therefore invited to support the International Year, for example by assisting their national committees, or by developing such committees if they are not yet in place. All publicly available information can be downloaded from [www.yearofplanetearth.org](http://www.yearofplanetearth.org)



# Reports from the Executive Committee

## THE INTERNATIONAL COUNCIL FOR SCIENCE (ICSU)

By **Zhang HONGREN**  
President of IUGS 2004-2008



The International Council for Science (<http://www.icsu.org>), formerly known as the International Council of Scientific Unions (ICSU), was founded in 1931 to be the umbrella organization for the different unions in each scientific discipline. There are now almost 30 of

these, including the seven Earth science related unions (informally called the GeoUnions): the International Union of Geological Sciences (IUGS), the International Union of Geodesy and Geophysics (IUGG), the International Geographical Union (IGU), the International Union of Soil Sciences (IUSS), the International Union for Quaternary Research (INQUA), the International Astronomical Union (IAU) and the International Society for Photogrammetry and Remote Sensing (ISPRS). Much of ICSU's funding comes from its national members that are commonly the National Academy of Sciences for a given country.

ICSU has found a very useful niche in today's post-Cold War period. Together with its unions, it acts as the main representative and facilitator of international science. ICSU serves the scientific world and the general public in several areas:

- 1) Forming standing scientific committees that cross union disciplinary boundaries in order to encourage research and scholarship in those areas that require a multidisciplinary approach.
- 2) Acting as a lighthouse in the enforcement of freedom of access for all scientists to international meetings, workshops, and visits; and listing behavioural standards of scientific ethics.
- 3) Capacity building, especially in developing countries, by working with its unions to ensure that scientists in

developing countries are included in projects, made aware that they can contribute, and are not left out.

- 4) Issuing position statements on topics that are controversial to some, but in which scientists have a firm opinion.
- 5) Conducting a small but useful cross-disciplinary grants programme, funded mainly by UNESCO, in which ICSU's unions and scientific committees can apply for up to US \$100,000. Grants usually involve several unions and/or scientific committees, and the topics chosen are of societal importance.
- 6) ICSU increasingly finds UNESCO as a partner in such activities. These large meetings show the decision-makers and the press the increasing relevance science has to today's problems.

The relationship of IUGS with ICSU is very important. The basis for the international geo-scientific organizations to be affiliated to IUGS is that IUGS can represent them in ICSU. The strength of IUGS as a member of the International Council for Science (ICSU) is its' broad coverage of geoscience fields under one umbrella, and its function as a forum for geoscientists acting to exchange ideas, develop scientific standards, and for the communication of geoscience information. Our links with other ICSU unions complies with the Mid-Term Vision and Strategic Action Plan for the International Union of Geological Sciences (<http://www.iugs.org>). IUGS is uniquely positioned to challenge and prompt and organize the world geological community to address the global research problems that require the collaboration of many disciplines as well as many countries. The challenge is to be prompt and organize the global geoscience community and find socially and scientifically relevant and challenging collaborative projects.

## ACTIVITIES OF IUGS

By Peter Bobrowsky  
(IUGS Secretary General)



Activities related to IUGS in the office of the Secretary General proved challenging during 2006. The IUGS Bureau managed the day-to-day activities of the Union, and met on several occasions. The full team of IUGS is now working smoothly and efficiently as it

moves through another year of cooperation. In 2006, IUGS worked aggressively to keep IGCP alive through issuance of communiqués and special Bureau meetings. The focus of all IGCP-related efforts has been to preserve the program, assist in the transition to a new identity and enhance IUGS presence and contribution towards the new IGCP. Another challenging issue has been the liaison and maintenance of the International Year of Planet Earth via the Management Team. Progress in the Year has been exceptional.

IUGS continues to support the educational importance of the geosciences, for example through activities with IGEO, facilitating cooperation amongst individuals, organizations and groups involved in the promotion and preservation of our geological heritage. IUGS is instrumental in the launching with UNESCO the International Year of Planet Earth (2007-2009), described elsewhere in this Annual Report.

“Corporate accountability” is maintained through the publication of the Annual Report and Minutes of the Executive Committee Meeting. These formal documents create a more professional and structured image to non-geologists and are welcomed by government politicians and bureaucrats, non-geological organizations and societies. In 2006, the Annual Report for 2005 was released as a digital file downloadable on the IUGS homepage.

The distribution of electronic Bulletins to its Adhering Organisations, scientific bodies and Affiliated Organisations has been widely lauded. These short, informal “news bites” briefly convey recent activities and accomplishments within the Union and are meant to keep others abreast of changes and events in the community at large.

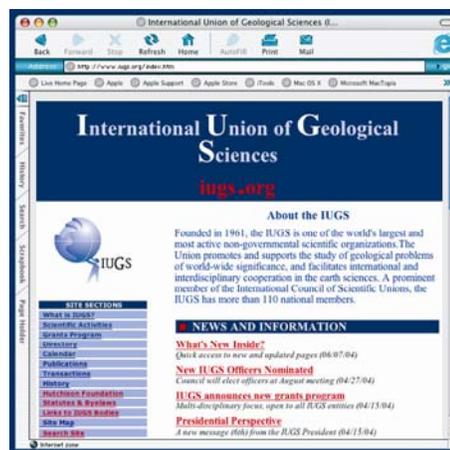
Collectively, the accomplishments and efforts summarized above indicate that the Executive Committee is proactive and striving to meet the demands and needs expressed by the members. Great achievements have been made in the past few years, although much more work and time is required to fully benefit from these changes. We trust that those who have experienced any of the above support our philosophy.



IUGS Visibility: A large full-colour panel display highlights IUGS’ journal, Episodes, and the many activities and Affiliated Organisations in IUGS.

## IUGS Website

The IUGS website (<http://www.iugs.org>) is regularly updated and cross-linked with a number of other important geoscience websites. The website remains IUGS’ most critical modern link to the outside world.

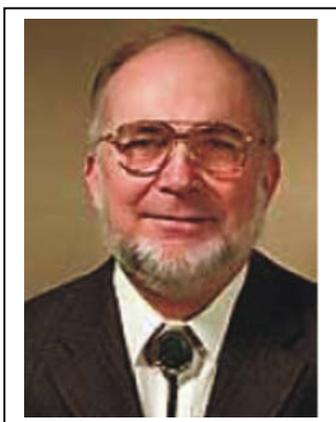


A very considerable amount of information, including contact information, links to the Union’s Committees, Commissions, Task Group, Initiatives and collaborative

projects with UNESCO and ICSU, as well as copies of the minutes of recent Executive Committee and Council meetings, can be obtained from the IUGS homepage. The Union's quarterly journal, Episodes, also publishes much new scientific and general information stemming from IUGS; on-line back issues of the journal on-line are available for downloading at the journal's website (<http://www.episodes.org>).

## IUGS / IGC UPDATE – STATUTES AND BYLAWS

**By Eldridge Moores (Vice President)**



Following the recommendations of the IUGS Strategic Planning Committee report in 2000, the IUGS-IGC Councils suggested that the Union and International Geological Congress (IGC) develop a much closer relationship. The IUGS Council and IGC General Assembly were officially

combined in August 2004 at the 32<sup>nd</sup> IGC in Florence, Italy to provide a clear and simple representation of the global geological community through a unified body and a more effective management of both IUGS and IGC.

A special Task Group has been formed to combine and "streamline" the existing statutes and bylaws for IGC and IUGS. The Task Group consists of Eldridge Moores and Alberto Riccardi appointed by the Executive Board of IUGS and Arne Bjørlykke and Jacques Charvet appointed by the IGC Steering Committee; Wolfgang Eder was collectively appointed as Chair since he had no previously held direct position in either IUGS or the IGC.

Steps have been taken by the Task Group to address conflicting passages from the new Definitions, Statutes and Bylaws for IGC and IUGS. Changes to Definitions; Statutes Aims, Objectives and Fiscal Policy; Working Structure of the Union, Council, Nominating Committee and Affiliated Organisations were recommended. In the Bylaws section, slight changes were made to sections on the Executive Council, The Officers, The Nominating Committee and Commissions of the Union. The first draft of the new Definitions, Statutes and Bylaws were critically reviewed by the IUGS and IGC in 2006.

## IGCP UPDATE

**By Sylvi Haldorsen (Vice-President)**



IUGS and UNESCO jointly initiated the International Geological Correlation Programme in 1972 with the aim of providing funding for promoting research in the Earth sciences. The current objectives of IGCP are to increase understanding of the environment, to assist in the improvement of human welfare, to establish better

methods for finding and assessing the natural resources of the world, to further our understanding of geological processes and to improve research methods and techniques in the geosciences.

Under difficult conditions, substantial progress was made in restructuring the IGCP in close cooperation with UNESCO. The cooperation between UNESCO and IUGS is a good example of the cooperation between an important intergovernmental organization and a NGO. Both partners, in addition to the world geological community gain great benefit from such cooperation. A consensus has been achieved on the integration of IUGS and IGC and has been put into the new draft version of the IUGS and IGC Statutes. Effort has also been made to streamline the relationship between IUGS and the local host of IGC. The International Geoscience Program (IGCP) now consists of four Bodies:

- 1) The Bureau is the IGCP's highest authoritative body, responsible for all strategic and administrative matters within IGCP, including the official granting of projects based on prioritization of proposals tabled by the Scientific Board and the IGCP Secretariat.
- 2) The Scientific Board is responsible for evaluating project proposals, for quality assessment of projects that are in progress, as well as for projects in the final year of completion.
- 3) National Committees have an advisory role in the IGCP. They should be composed as broadly as possible of representative national bodies and organizations, while reflecting the mainstreams of national Earth science research, both in basic and of applied sciences.
- 4) The IGCP Secretariat is charged with the overall management of IGCP. This includes liaising with all relevant bodies active in IGCP, such as the National IGCP Committees, IUGS and UNESCO.

Moreover, the IGCP Secretariat handles the project administration, the financial administration, the preparation of the annual meetings, the website, and the outreach activities of IGCP.

IGCP projects are selected and evaluated by IUGS on the basis of their perceived scientific merit and conformance to established criteria for evaluating new project proposals. Mainly, these criteria specify that new IGCP projects should:



- Have a leader and co-leaders of high scientific quality; participants must be qualified to carry out the project.
- Reflect the major objectives of the IGCP and focus on high-quality science relevant to the scientific objectives of the IUGS including new ideas, new techniques, etc.
- Meet a world-wide, continental or regional need of societal relevance.
- Involve applications of various branches of earth science and emphasize interdisciplinary cooperation of societal relevance.
- Constitute international participation including also scientists from developing countries and in particular young, and women scientists, respecting an appropriate number of geographic and scientific discipline distribution of participants.
- Require coordinated action between specialists from different countries.
- Offer long-term benefits and yield tangible short-term practical and societal benefits as results.
- Provide a basis for future studies as well as education and training.
- Promote global geoscience visibility through the publication of scientific results using internationally recognized journals or other media such as congresses, conferences, workshops, etc.
- Have work plans and schedules appropriate and feasible.
- Require appropriate and adequately justified levels of funding.
- Contain an indication on all kinds of support (if any) of the project at the national or regional levels.
- Explicitly acknowledge the sponsorship of IUGS, UNESCO and IGCP.

Recommendations on the basis of the above assessment: clear policy of publication of the scientific results that

may include, along with the professional articles, the textbooks, popular science papers and programs via mass media; providing via Internet free access to the data bases, key results and bibliography related to Project for the international scientific community.

## TREASURER'S REPORT

By Antonio Brambati (Treasurer)



In 2006, IUGS had two current accounts and a short term guaranteed deposit account in Trieste, Italy.

IUGS expenditures often do not reflect real costs (e.g., Episodes production costs are subsidized by the Chinese Ministry of Land and Resources). Meeting

costs are also partly covered by hosting countries and parent organizations. The Norwegian Government also covers the expenditures of the Permanent Secretariat. The IUGS is extremely grateful to the Chinese, Norwegian, Canadian and Italian governments for this generous support that enables the Union to invest significantly more in science development than would otherwise be possible.

The main income is from country members; and the EC functions to serve the member countries. The bulk of the income goes to scientific endeavours (e.g., IYPE, IGCP and IUGS Commissions) and strategic uses; and not to administration. The President, Treasurer and Secretary General all have their travel expenses covered by their own respective countries; the expenses for the rest of the EC are covered by IUGS. Cash flow is a problem and money is clearly lost waiting for members to pay fees to the extent that the Union functions with a net deficit over much of the year. Some 75 % of the budget goes toward scientific endeavours (e.g., IYPE and Episodes) and 25 % to administration (e.g., Annual Report and promotion).

### IUGS Adhering Organizations

In 2006 there were 118 Adhering Organizations (117 in 2005, 116 in 2004, 115 in 2003). This included 83 Active Members (77 in 2005, 79 in 2004, 72 in 2003) and 35 Inactive Members (40 in 2005, 37 in 2004, 43 in 2003). Over the last four years, the total number of the Adhering Organizations increased from 115 to 118; Active membership increased from 72 to 83 and Inactive members decreased from 43 to 35.

During 2006 IUGS had one new Adhering Organization: Mozambique. Five Inactive Adhering Organizations became Active: Cameroon, Congo, Jordan, Lebanon and Mongolia. Ireland and Canada upgraded their Category status.

### **IUGS expenditures**

Often these do not reflect the real costs. Our annual contribution of US \$23, 000 to EPISODES for editing, lay-out, printing and distribution, is relatively small in comparison with the actual costs incurred by the Chinese Ministry of Land and Resources who host the Journal. The same holds true for the costs related to IUGS meetings which are covered, at least in part, by the countries hosting such meetings and for a very substantial part by the parent organisations of the Bureau members (President, Secretary-General and Treasurer

and their supporting staff) which cover salary and all their travel costs. These forms of support save IUGS at least an estimated \$100, 000 per year. A comparable amount is further saved by IUGS having been given the continuous generous contribution of the Norwegian government to fully financially support the IUGS Permanent Secretariat in Trondheim. IUGS is extremely grateful to the Chinese, the Norwegian, the Canadian and the Italian governments for this generous support that enables the Union to invest significantly more in science development than would be otherwise possible.

## Publications from IUGS

**By Godfrey S. Nowlan**  
(Chair, IUGS Publications Committee)



The Publications Committee began 2006 in a depleted state with only a chairman (Godfrey Nowlan, Geological Survey of Canada, Calgary) and one member (Fred Spilhaus, AGU, Washington). A

significant discussion of the role of the Publications Committee in IUGS was conducted at

the Annual Meeting of Executive Committee in Punta Arenas, Chile in January, 2006. As a result of that meeting, the Chair of the Publications Committee was instructed to rebuild the committee and review the plan that had been outlined at the previous meeting of the EC in Vilnius in 2005. Following nominations from several members of the Executive Committee, two individuals were appointed to the Publications Committee in 2006: Susana Damborenea (La Plata Museum, Argentina) and Tim Partridge (University of Witwatersrand, South Africa). The new committee met in Washington, D.C. in November 2006 to map out the future strategy for the committee (see below).



Publications Committee meeting in Washington D.C. in 2006; left to right - Susana Damborenea, Fred Spilhaus, Godfrey Nowlan, John Aaron, Tim Partridge, Zhenyu Yang

During the year, the Chair performed the ongoing duties of the committee including oversight of the publication of *Episodes* and the book publication agreement with the Geological Society of London. He also dealt with several requests for copyright permission and reviewed some of

the publications for the International Year of Planet Earth.

*Episodes* continued to be published under a Memorandum of Understanding with the China Ministry of Land and Resources which is in effect until 2008. Professor Zhenyu Yang, a professor in the earth science department at the University of Nanjing, continued as Editor of the journal. Four issues of volume 29 were published in 2006 that included 20 papers, one classic paper, four forums, four geological maps, 28 conference reports, nine news reports, 12 book reviews and three organizational profiles. One of the striking achievements for 2006 is a dramatic rise in the impact factor of *Episodes* from 1.2 in 2005 to 2.35 in 2006. The editor is to be congratulated for significantly increasing the quality of articles appearing in the journal, resulting in a near-doubling of the impact factor. *Episodes* is now distributed in 145 countries. In some developing countries, the journal is the only earth science periodical regularly received. Almost every main library in the United States has subscribed to the journal.



Books continued to be produced under an agreement with the Geological Society of London. Eleven titles have resulted from sessions at the 2004 International Geological Congress in Florence. Seven of these were published in 2006 with the balance due out in early 2007. The published titles include: *Tectonics of the Western Mediterranean and North Africa*; *Cool-Water Carbonates: Depositional Systems and Palaeoenvironmental Controls*; *Geomaterials in Cultural Heritage*; *Fractal Analysis for Natural Hazards*; *New Statistical Methods for the Analysis of Geological Data*; *Non-marine Permian Biostratigraphy and Biochronology*; and *Function of Soils for Human Societies and the Environment*. An additional nine books emanating from IUGS commissions and other bodies are also in process under the agreement. The first of these, on *Devonian Events and Correlations* is due out in early 2007. Thus, the agreement is working well for both parties. New titles continue to be added to the series at a steady pace and the outlook for the future of IUGS book publishing is bright.

As noted above, the new Publications Committee met for the first time in Washington in November 2006. The group established a list of the ongoing priorities for the committee as well as an action plan on new directions. The ongoing priorities and responsibilities that must always have the attention of the Publications Committee were identified as:

- Ongoing review of IUGS Publication Policy;
- Response to enquiries about copyright and usage of IUGS material;
- Ongoing review of the effectiveness of the agreement with the Geological Society of London and evaluation of the products;
- Ongoing review of the quality and timeliness of Episodes and assistance with its content;
- Ongoing review of the IUGS web site.

In addition to these ongoing requirements, the committee created a work plan for the coming year with specific actions for their accomplishment:

- Identify new Associate Editors for Episodes;
- Conduct a survey of IUGS-related bodies to see what publications are emanating from the different areas and whether they are using Episodes and/or the GSL agreement;
- Develop and distribute news items on IUGS Publications to affiliates via an e-mail listing;
- Conduct a survey of publications and internet access to publications in developing countries;
- Develop closer relationships with editorial organizations worldwide;
- Complete translation of selected IYPE materials.



**The  
Geological  
Society**

# Scientific Activities of IUGS

The Union is scientifically active through a series of Committees, Commissions, Task Groups and Initiatives. IUGS is also active with UNESCO, through IGCP and in the Geological Applications of Remote Sensing (GARS) and the Mineral Resources Sustainability Project (MRSP) programmes. IUGS also collaborates with ICSU and IUGG in the Scientific Committee for the Lithosphere (SCL), which co-ordinates the International Lithosphere Programme (ILP). In these programmes, IUGS provides both financial support and scientific input. The results of these research activities are not only widely published, but also form a major part of the programme at the quadrennial IGC.

## *IUGS Committees*

### **Ad hoc Review Committee**

Following the recommendation of the Strategic Planning Committee, the Executive Committee has made strenuous attempts to institute reviews of as many of the Committees and scientific bodies run by the Union as possible, during their term of office. In 2006, *Ad hoc* committees reviewed the IUGS commissions on Fossil Fuels, Systematics in Petrology, International Commission on Stratigraphy and the International Geological Congress.

### **Nominating Committee**

Eduardo de Mulder was appointed Chair of the Nominating Committee, by the IUGS Council in Florence. The Nominating Committee is responsible for making nominations for the positions on the Executive Committee. The Committee was not active in 2006: it becomes active if there are changes in the Executive Council, and will certainly be active before the next IGC Congress. Sospeter Muhongo (Tanzania) has replaced Henri Kampuzu, who passed away in 2004. Sospeter Muhongo is the current Chairman of IGCP and has a long-standing positive reputation in the IUGS family.

### **Publications Committee**

At its meeting in Punta Arenas, Chile in January 2006, the IUGS Executive Committee authorized the recruitment of two replacement members for those whose terms were ended following the Vilnius meeting in 2005. Recommendations were sought from IUGS-EC members and a number of CVs were reviewed. The two new recruits to the committee are Susana Damborenea from Argentina and Tim Partridge from South Africa. They

joined the committee over the summer and attended the meeting of the committee in Washington, D.C. in November. The committee now consists of the following members:

Susana Damborenea (Museo de La Plata in La Plata, Argentina)  
 Godfrey Nowlan (Chair, Geological Survey of Canada, Calgary, Alberta, Canada)  
 Tim Partridge (University of the Witwatersrand, Johannesburg, South Africa)  
 Fred Spilhaus (Executive Director AGU, Washington, D.C.)

*Ex officio members:*

Zhenyu Yang (Editor, Episodes, Nanjing, China)  
 John Aaron (IUGS Web Master, Washington, D.C.)

The Committee also keeps in close contact with John Aaron, Webmaster of the IUGS homepage. All geoscientists are advised to check the website regularly and to contribute to the Calendar of Forthcoming Events whenever the opportunity arises.

## *IUGS Commissions*

Commissions undertake the main scientific work of the IUGS. Normally, a Commission lasts for two to three terms of the Executive Committee, after which it either regroups as a new Commission or is terminated.

### **Commission on Fossil Fuels (CFF)**

This Commission evolved from the Task Group on Fossil Fuels and helps developing countries to see how the region's fossil fuel deposits and the potential future supply are of vital importance for good resource management and sustainable economic growth. Natural resources can contribute to a region's economic growth and development but sadly can also lead to political strife, conflict and war.

### **Commission for Geological Education, Training and Technology Transfer (COGE)**

Spurred by the Executive Council's decision to develop a Commission on Education, Training and Technology Transfer, the Executive Committee spent much effort in developing such a body. COGE began assisting the International Geoscience Education Organization (IGEO) in undertaking a worldwide survey of the state of earth science education in schools and outreach education.

### **Commission for Geoscience in Environmental Management (GEM)**

GEM aims to provide guidance to geoscientists on how best to integrate geoscience into environmental policy and to communicate the concepts to potential interest groups such as policy makers, politicians, environmental organisations, scientists from other disciplines, and the general public. GEM builds on the excellent work of the former Commission on Geological Sciences for Environmental Planning (COGEOENVIRONMENT) that completed its full term. GEM has developed its Terms of Reference, and has attained precise objectives reached through Working Groups. Of special interest is the working group on International Borders-Geoenvironmental Concerns. Trans-boundary problems being a field in which international organisations are highly necessary.

### **Commission on the Management and Application of Geoscience Information (CGI)**

The aims of this Commission are to provide the means for exchanging knowledge on geoscience information and systems, to support the dissemination of best practices in geoscience information applications, to encourage the development of geoscience standards, to keep IUGS informed on geoscience information matters and to help bring interested bodies and persons together. CGI have well defined objectives and action plans, the leadership and council are dynamic and representative, outreach is excellent (flyers, website, etc.), and working groups are active. The Commission maintains an updated and informative website:

[http://www.bgs.ac.uk/cgi\\_web/welcome.html](http://www.bgs.ac.uk/cgi_web/welcome.html)

### **Commission on Solid Earth Chemistry and Evolution (SECE)**

SECE is a new commission comprising mostly younger researchers that aims to promote petrologic and geochemical investigation of the Earth's crust and mantle through organizing symposia, publishing proceedings of sponsored conferences; and supporting participation of young geologists in international conferences, symposia and workshops.

### **Commission on Systematics in Petrology (CSP)**

This Commission (<http://www.dmp.unipd.it/IUGS-CSP/IUGS-CSPindex.htm>) seeks to provide a unified and standardised system of nomenclature for igneous, metamorphic and sedimentary rocks, in order to ease communication between geoscientists. A Sub-

commission has been established for each of these three main branches of petrology. Close links are kept with other, related bodies, such as the Commission on the Management and Application of Geoscience Information (CGI), the Commission on New Mineral Names (part of IMA) and several IGCP Projects. The Commission aims to provide a unified and standardised system of nomenclature for igneous, metamorphic and sedimentary rocks in order to ease communication between geoscientists. A Sub-commission has been established for each of these three main branches of petrology. Two Sub-commissions were active in 2006 (igneous and metamorphic) and work on a Website continued.

### **International Commission on the History of Geological Sciences (INHIGEO)**

INHIGEO, a commission of both IUGS and the International Union on the History and Philosophy of Science (IUHPS), has 166 members in 40 countries, and 9 Honorary Senior Members. The overall objectives to study the history of geological sciences and publication of works on this subject fit within the stated objectives of IUGS. The Commission attempts to be involved with other international projects such as the IUHPS. INHIGEO meets usually once each year to conduct a major symposium on the history of geology, produce an annual Newsletter and work with various publishing houses and journals, including EPISODES.

### **International Commission on Stratigraphy (ICS)**

This Commission (<http://www.stratigraphy.org>) is charged with the important and complex task of establishing global stratotype sections and points (GSSPs) for the complete Earth's history. The ICS promotes and coordinates long-term international cooperation in a number of other related stratigraphic topics, is the largest and oldest body within IUGS. It comprises fourteen Sub-commissions on Stratigraphy that determine where to fix the GSSPs defining the base of the Systems, Series and Stages (and thus the boundaries between) in the geological time-scale that comprise the stratigraphic column.

Nearly all Sub-commissions of ICS publish regular newsletters or circulars of a high scientific calibre. ICS receives very little financial support from sources other than IUGS. ICS is internationally well linked and also very active concerning PR (e.g., launch of the Ediacaran and website). ICS has the mandate to have all GSSPs in place by the end of 2008, but the progress is not sufficient to date to meet this deadline. There is also the potential pitfall of doing things hastily, as for example

appeared to have been done with the Ediacaran and Quaternary, where some researchers, particularly from Russia, Europe and North America, are not in agreement.

## *IUGS Initiatives*

### **GeoHeritage**

IUGS supports the concept of GeoHeritage and in 2006 was involved in a number of GeoHeritage related issues. The GeoHeritage Secretariat is located in Beijing, China (the old GEOSEE office); Peter Bobrowsky is primarily responsible for all GeoHeritage issues for the Union, except for Antonio Brambati who represents IUGS in the European GeoParks Network (EGN).

The 2006 Geoparks Symposium in Jiaozuo, China raised global public awareness of the significance and importance of geology for geoscientists and the general public. The importance of conserving geological heritage for its own sake was acknowledged because it does have economic, environmental and cultural value. All symposium attendees were encouraged to “spread the word” about the Geopark Network, both within and outside the geosciences. This success cannot be left to the geoscientists alone; there is clearly a need for site interpreters, media involvement and closer links to initiatives from the Division of Ecological and Earth Sciences (DEESc) of UNESCO and to the International Year of Planet Earth in 2008.

Geoparks have a role to play in counteracting the decline in interest in geosciences for students. Geopark management must acknowledge and cater for the different users of the parks, to ensure that there is appropriate access to geological sites for professional and practicing geologists as well as for visitors. Their needs are significantly different. Geopark interpretive materials (maps, signs, trails, brochures, etc) need to be improved to include geological information in an engaging way as well as good pictures and diagrams to facilitate the learning process for non-geoscientists. The development, sustainable and appropriate management of Geoparks should form part of a larger global move towards environmental and cultural awareness and sensitivity to the whole of society’s role in the planet earth. There is a real sense that the time is right for Geoparks, and delegates were encouraged to use the Geopark Network guidelines for the development of existing and proposed Geoparks.

IUGS has also signed a MoU with IUCN to evaluate new GeoHeritage proposals that relate to UNESCO World Heritage site status. IUCN provides a list of sites that have geological components and IUGS has to provide a

technical report. IUGS readers are only one group of 10 sets of reviewers.

### **State of the Art of Geoscience**

Since the 56<sup>th</sup> EC meeting in Punta Arenas in January 2006, a large number of reports have been compiled by the Geological Survey of Canada and efforts are now directed to summarizing a Strategic Vision on Geoscience. Together with a similar State-of-the Art report by the Academy of Science in Australia, it is hoped the document might increase awareness of geoscience at national and international levels.

## *IUGS Task Groups*

### **Task Group on Global Geochemical Baselines (TGGGB)**

The principal aim of this Task Group (<http://www.bgs.ac.uk/iugs/home.html>) is to prepare a global geochemical database, and its representation in map form, to document the concentration and distribution of chemical elements and species in the Earth’s near-surface environment. The database and accompanying maps can then be used to create a geochemical baseline against which future human-induced or natural changes to the chemistry of the land surface may be recognised and measured. The Task Group is organised with a Steering Committee and an Analytical Committee. The nine people involved represent five countries; all of them are from North America or Western Europe.

### **Task Group on Isotopes and Geochronology (TGIG)**

The goal of this Task Group is to formulate new, specific recommendations for isotopic decay constants, isotopic abundances, and uncertainties. The decay constants that have been in use in the geological community for the last 22 years were endorsed and recommended by IUGS. However, recent analytical improvements have exposed potential problems with the 1977 recommendations. Critical to the success of the work of the Task Group is that its members were viewed by the entire scientific community as accomplished, recognized practitioners, rather than consumers, of radioisotope geochemistry and geochronology. The initial stage of the work during 2006-2008 will focus on nine nuclides ( $^{40}\text{K}$ ,  $^{87}\text{Rb}$ ,  $^{138}\text{La}$ ,  $^{147}\text{Sm}$ ,  $^{176}\text{Lu}$ ,  $^{187}\text{Re}$ ,  $^{232}\text{Th}$ ,  $^{235}\text{U}$ ,  $^{238}\text{U}$ ).

## **Task Group on Tectonics and Structural Geology (TECTASK)**

The group encourages innovative research and continued education in Tectonics and Structural Geology, the growth of intellectual capital and hence the impact of our science on the wealth of the global society. The group was accepted in October 2004, but has already established a network of contacts through the USA (various NSF funded programmes) and Europe. Its Vice President is a member of the European advisory council for Africa Array, a new African based initiative to promote geophysics research and training in Africa. TecTask was formed as successor of the dissolved COMTEC committee. The group first identified initial topics and goals for short-term developments and implemented a web portal ([www.tectask.org](http://www.tectask.org)) as the major platform for the group's activities. Cees Passchier (TecTask chair) hosted a meeting of TecTask officers at the Department of Earth Sciences at University of Mainz to discuss prospective and future activities of the task group

## *IUGS Collaborative projects*

### **Geological Applications of Remote Sensing (GARS)**



GARS is a joint operation of IUGS and UNESCO and now involves 40 institutes and individuals from 28 countries, most from the developing world. The GARS programme contributes to the advancement of geological research throughout the world and the development of the understanding of the Earth system, in order to address problems of particular relevance to the welfare of the

Earth's population. Currently, under IGOS, GARS is focussing on three of the five strategic issues identified by IUGS: Reducing the vulnerability of communities at risk to natural hazards (IGOS Geohazards Theme): Managing resources in a sustainable and environmentally sound way (Groundwater Initiative) and Contributing to understanding of global environmental changes. Chief Products in 2006 included a: 1) new GARS Website and GARS Brochure; 2) report on GARS-IGWCO-ESA-UNESCO Groundwater Workshop held in Paris, France, March 2006; 3) report on IGOS Geohazard Regional Workshop held in Kuala Lumpur, Malaysia, in summer 2006; 4) Geohaz Update: the 2<sup>nd</sup> IGOS Geohazard Theme Newsletter was published in summer 2006; 5) GeoHazData: a new metadata system for hazard maps and related information was established by the IGOS Geohazards Executive Bureau for the collection of a GEO geohazard map inventory; and 6) GeoHazNet: a new network for the geohazards community was established by the IGOS Geohazard Executive Bureau, extending its networking beyond the IGOS community through the mechanism of the GEO Communities of Practice concept.

### **International Lithosphere Programme (ILP)**

This programme (<http://www.sclilp.org>), formerly the Scientific Committee on the Lithosphere (SCL), is a joint venture of IUGS, IUGG and ICSU. It seeks to elucidate the nature, dynamics, origin and evolution of the lithosphere, through international, interdisciplinary collaboration. The Programme involves several hundred scientists from over 60 countries. A number of challenges face ILP, including the need to strengthen the connection between solid-earth and non-solid-earth aspects relevant to the lithosphere and vice-versa; bolster the profile and impact of lithosphere research and topics of societal relevance (i.e., energy and environment); attract young researchers by choosing topics and adopting integrated approaches; promote training of young researchers on lithosphere studies; and to initiate dedicated programmes that address world-class problems.

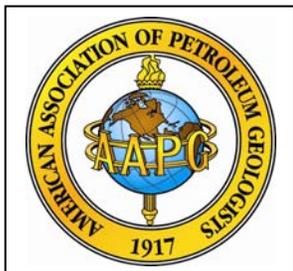
## Organisations Affiliated with IUGS

Through its expanding number of Affiliated Organisations, IUGS maintains contact with the broadest possible range of Earth scientists. The Affiliated Organisations not only provide important expertise for the Union, but also disseminate information coming from IUGS to their members. As the time approaches for the start of the International Year of Planet Earth, IUGS and UNESCO will be relying on the Affiliated Organisations to take an active role in promoting the aims of the Year and encouraging their members to participate in the activities.

# Organisations Affiliated with IUGS

## American Association of Petroleum Geologists (AAPG)

AAPG aims to foster scientific research, to advance the science of geology, to promote technology, and to inspire high professional conduct, aims that still guide the Association today. It is currently one of the world's largest professional geological societies with a membership of over 32,000, over 4,000 of which are students; over 30% of the membership works in the international arena. AAPG, together with sister organisations, is setting up branch offices around the world to better serve these members. AAPG provides publications, conferences, and educational opportunities to geoscientists and disseminates the most current geological information available to the general public. AAPG's GIS Upstream Digital Reference Information Library (GIS-UDRIL) is now one of AAPG's most sought after products. AAPG is also a major player in the Geoscience World; and the publications aggregate now investigating the feasibility of publishing all key geoscience journals electronically. AAPG supports a code of ethics for professional geologists to assure employers and clients of the integrity of its members. Officers guide the Association and a House of Delegates is elected annually. The organization's programs are administered by an Executive Director and staff which are located in Tulsa, Oklahoma. Visit the Website at: <http://www.aapg.org>



The number of members in 2006 had risen in comparison with 2005, although the % increase is not quantified. Meetings included the highest attendances at the Annual Meeting (Houston) in the last 20 years and the International Convention (Perth). In 2006 there were 10 Special Publications. Milestones included the 5-year Business Plan for Committees, Regions and Sections; AAPG opened the European London Office; and new products and services (digital archives) were started. The AAPG is a founding member of IYPE.

## American Geological Institute (AGI)



The American Geological Institute is a non-profit federation of 42 geoscientific and professional associations representing over 100,000 members. It aims to voice the shared interests of the geological profession. In addition, it plays a major role in strengthening geoscience education and societal awareness. AGI's geoscience database GeoRef has reached 2.8 million references to become the world's largest and most comprehensive on geoscience. AGI also participates in GeoScience World (GSW), an integrated system of dozens of journals and GeoRef. The fifth edition of the Glossary of Geology (40,000 terms) is available online, including Spanish equivalents for many terms. AGI participates as a member of the IUGS CGI Working Group for the Multilingual Thesaurus of Geosciences. AGI also organized the ninth annual Earth Science Week, together with the USGS, NASA, NOAA, IRIS, the AAPG Foundation, and the National Park Service.

## American Geophysical Union (AGU)



AGU helps to promote the development of Earth science worldwide and seeks to assure that the increasing understanding of the Earth is taken into account in formulating public policy. AGU is self-supporting although some grants, primarily from U.S. government agencies, to support special limited-term projects are also obtained. AGU is formally related with ICSU activities through the START Secretariat, an ICSU/IGBP activity that operates under AGU's umbrella in Washington, DC. AGU also interacts with IUGG. All AGU journals are now fully electronic and their publication is faster than at any time in the past 15 years even as more pages are being published. A portion of a new AGU publication, Space Weather, is available on the web free at: <http://www.agu.org>. It is an active Union with over 30,000 members ranging from geologists to astrophysicists.

## Arab Geologists Association (AGA)

AGA has a significant role in the organisation of geology in Arabian countries, which helps in promoting IUGS visibility in this area. AGA has cooperated with the University of the United Arab Emirates for the organization of the Sixth Conference on the Geology of the Middle East, held in Abu Dhabi March 2006. Unfortunately, there are major political complications surrounding this group.

## Association of Applied Geochemists (AAG)



The Association of Applied Geochemists (formerly the Association of Exploration Geochemists - AEG) specializes in advancing the science of exploration and environmental geochemistry and furthering the interests of both geochemists and

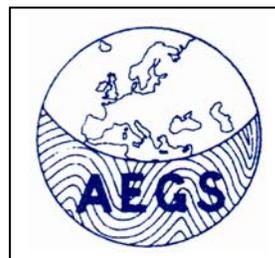
geochemistry by encouraging research and development and the distribution of scientific information. The new name better reflects its scope and its membership. It has an active membership about 600. In May 2006, AAG convened a workshop on recent advances in exploration geochemistry at the SEG biennial conference held in Keystone, Colorado. AAG also sponsored an annual Distinguished Lecturer Series. Visit the Website at: <http://www.appliedgeochemists.org/>

## Association Pour l'Etude des Argile (AIPEA)



AIPEA is an old, well-established association, which has a well-defined scientific focus. The association has played an important role in promoting clay mineral research worldwide. It serves a small scientific field, which today is of considerable practical importance (with for instance increased application in environmental science). The aim of AIPEA is the worldwide promotion of clay research and technology and to foster international cooperation in these fields. These aims are fulfilled by sponsoring international conferences, stimulating young clay mineralogists and by stimulating communications between clay researchers and clay technologists. The group, which has a large number of affiliated clay societies, runs two committees, on Nomenclature and on Teaching. The society offers an award to assist scientists attending the International Clay Conference.

## Association of European Geological Societies (AEGS)



The Association currently has 30 members from 29 countries. Membership to AEGS is open to all non-governmental societies, institutions and organisations in Europe active on a country wide scale in the geological or earth sciences. Since

1975, AEGS has helped in the organization of the biannual meetings: MAEGS (Meeting of the Association of European Geological Societies). In this way the association serves as a “clamp” for European geological sciences, especially on the level of the national geological societies. Visit the Website at:

<http://www.aegs.org/aegs.html>

## Association of Geoscientists for International Development (AGID)

The Association encourages communication between individuals, societies, agencies and corporations with interest in the application of geosciences to sustainable development and further encourages and promotes activities in geoscientific fields that are related to the needs of developing countries. At the last AGID General Assembly it was decided that reform and continuation was preferred to closure. The headquarters were relocated to Bangladesh. In recent years, there has been a fall in membership in the ‘developed’ world; however, the activities of AGID in the Indian sub-continent demonstrate that a decentralised AGID can continue to function successfully as a regional network. The volunteer services of AGID officers keep the expenditures of the organizations low. UNESCO provides modest support to a regularly published regional geoscience Newsletter. AGID continued to distribute its journal Geoscience and Development in 2006. Copies of the S and W Asia edition of the Geoscience Newsletter were distributed worldwide. Plans are to make these publications available on-line at ([http://www.bgs.ac.uk/agid/AGID\\_Index.html](http://www.bgs.ac.uk/agid/AGID_Index.html)), hosted by the British Geological Survey. AGID interfaces with several international projects bringing to them their experience with developing countries; for example, IYPE, the Geological Society of London, IAH and IGCP.

## Carpathian Balkan Geological Association (CBGA)



The objective of this group is to promote and encourage joint fundamental and applied geological research, as well as training and specialization, in the Carpathian-Balkan realm. This concerns virtually all

branches of the geological sciences (including geophysics), their environmental implications, and related disciplines. CBGA interfaces internationally with IGCP, and partly with the Central European Initiative (CEI). In 2006, the XVIII Congress was held in September in Belgrade (Serbia) and was attended by 152 participants.

## Centre Internationale pour la Formation et les Echanges Géologiques (CIFEG)

The main goal of CIFEG is to facilitate multilateral exchange of geoscientific knowledge between the North and South. Projects and accomplishments in 2006 include: 1) SIGA-Afrique: In 2006, CIFEG organised the evaluation of the project by external consultants; 2) PANGIS (Pan African Network Geological Information System) Training for Sierra Leone; 3) SANGIS (southeast Asian network for a geological information system); 4) a bibliographic exchange with more than 40,000 records; 5) AMI (Asian Multilingual Thesaurus) – a thesaurus of 6,000 words (9 Asian languages, French and English); 6) MAWARI (Sustainable Management of Water Resources in the Rift System); 7) annual researchers meetings, including the Consultative Scientific Committee and Steering meeting (Djibouti); 8) "Bibliography of African Cainozoic Continental Macropalaeontology" compiled by Martin Pickford from the National Museum of Natural Sciences, Paris (PANGIS); and 9) AMTG-Asian Multilingual Thesaurus of Geosciences.

## Commission for the Geological Map of the World (CGMW)

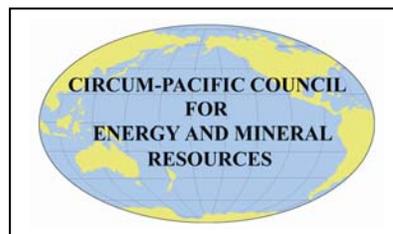


CGMW aims to promote, coordinate, publish and disseminate Earth Science maps at small scale of continental and/or oceanic areas of the World. Geological Surveys or organizations responsible for national geological mapping

of all countries and territories of the World are statutory

members, whereas others interested groups are allowed to join as Associated Members. Accomplishments and products in 2006 include: 1) an active marketing policy focusing on products designed for the general public; 2) translation of the "Face of the Earth" into Arabic, text is now ready to print and a sponsor is being looked for; 3) design and printing of "Plate Tectonics from Space"; 4) printing of a 1:10M International Geological Map of Europe; 5) publication of a CD-ROM edition of "Giant Deposits of the World" by the Vernadsky Museum, Moscow; and 6) participation in several conferences.

## Circum-Pacific Council for Energy and Mineral Resources (CPC)



The Council develops and promotes research and cooperation among industry, government and academia for the sustainable

utilization of earth resources in the Pacific Region. Its "Crowding the Rim Project" has created tools to promote cross-sector international discussion to mitigate regional catastrophes. These tools included: 1) HazPac, short for hazards of the Pacific, is a compilation of digital data on natural hazards, population and infrastructure. See <http://www.hazpac.org>; 2) RimSim, short for PacificRim Simulation is a conflict negotiation simulation that provides an opportunity to address risk in an increasingly interconnected global community; 3) The CTR Educational Module, a set of secondary-level classroom curricula, was developed to educate young people and others about risk in the context of the Pacific Rim. Visit the Website at: <http://www.circum-pacificcouncil.org/>

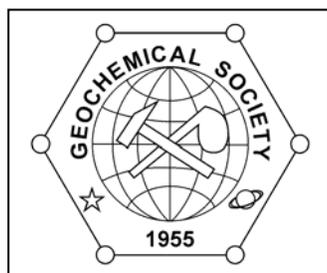
## European Association of Science Editors (EASE)

EASE (<http://www.ease.org.uk/>) is a non-governmental and not-for-profit organization operated exclusively for the advancement of science editing and educational purposes. Since 2000, it has been a Company Limited by Guarantee in the UK. Membership at the end of the year was just under 900, with the number countries represented being 55; the breakdown of membership remains virtually unchanged at about 14% of members from countries outside Europe. EASE is an international non-governmental organization in Category C relationship with UNESCO and Category A liaison with Technical Committee 46 of ISO (Information and Documentation Subcommittee 9; Presentation, identification and description of documents).

## European Mineralogical Union (EMU)

EMU members are national scientific societies from European countries, including Russia, with only one member per country allowed. It is dedicated to furthering European cooperation in the mineralogical sciences (mineralogy, petrology and geochemistry) and supports conferences within Europe of a high scientific standing and of an international character. In particular, it supports the Experimental Mineralogy, Petrology and Geochemistry (EMPG) and the European Union of Geosciences (EUG) meetings. In September 2006, EMU organised its annual Council meeting during the Symposium on 'Experimental Mineralogy, Petrology and Geochemistry (EMPG-XI)' in Bristol, UK. EMU also organised the 8<sup>th</sup> School the Eötvös L. University in Budapest, Hungary; and it prepared for the 9<sup>th</sup> and 10<sup>th</sup> School. EMU is an active organization with an excellent track record in organising Schools, co-sponsoring International Conferences, widely spread over Europe and annually awarding medals for Research Excellence in Mineralogy, Petrology and Geochemistry.

## Geochemical Society (GS)



The Geochemical Society encourages the application of chemistry to the solution of geological and cosmological problems. Its membership (around 2000) is international and diverse in

background, encompassing such fields as biogeochemistry, organic geochemistry, high and low-temperature geochemistry, petrology, meteoritics, fluid-rock interaction, and isotope geochemistry. The Geochemical Society sponsors (jointly with the European Association of Geochemistry) the V. M. Goldschmidt Conference: a broad-scope conference covering all aspects of geochemistry and cosmochemistry. The Geochemical Society sponsors (jointly with the Meteoritical Society) the professional research journal "*Geochimica et Cosmochimica Acta*," as well as a quarterly newsletter "The Geochemical News," a quarterly newsletter which distributed to all members. In addition, the society publishes two book series, the Special Publications Series and, jointly with the Mineralogical Society of America, the Reviews in Mineralogy and Geochemistry Series. The Geochemical Society sponsors (jointly with the European Association of Geochemistry) the V. M. Goldschmidt Conference, a broad-scope conference covering all aspects of geochemistry and cosmochemistry.

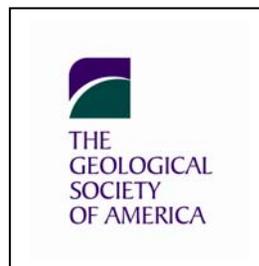
## Geological Society of Africa (GSaf)



This Society aims to promote the advancement of the geological sciences throughout the African continent by encouraging and supporting education, training, research, the establishment of national societies and local groups and the organisation of

conferences and other meetings. The Society does not directly implement scientific projects but continues to encourage members to take the initiative and become involved in international collaborative research. It aims for the solid African representative in the IUGS International Year of Planet Earth initiative. The Society continued to maintain its homepage with the valued assistance of Elsevier Science and the production and dissemination of its newsletter AfricaGeonews. 2006 was an active year, culminating in the "21<sup>st</sup> Colloquium on African Geology" held in Maputo, Mozambique from 2 July to 11 July. The IUGS EC was very visible in this meeting.

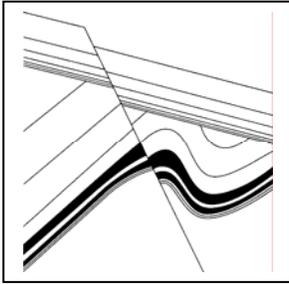
## Geological Society of America (GSA)



The GSA is a broad, unifying scientific society, which aims to foster the human quest for understanding the Earth, planets, and life, catalyzing new scientific ways of thinking about natural systems and applying geoscience knowledge and insight to

human needs and aspirations and stewardship of the Earth. GSA's 2006 Annual Meeting in Philadelphia and its Sectional Meetings have done well. Joint international conferences have included "Earth Systems Processes 2" with the Geological Association of Canada; "Backbone of the Americas—Patagonia to Alaska, with the Asociación Geológica Argentina; and the "5th International Conference on the Tibetan Plateau" with the Chinese Academy of Sciences. Future annual meetings are now planned through 2011 (2007 – Denver; 2008 – Chicago; 2009 – Portland, Oregon, 2010 – Denver, and 2011 – Minneapolis). Visit the Website at <http://www.geosociety.org/>

## Geologische Vereinigung (GV)



Geologische Vereinigung has 2200 members in 64 countries; but its Executive Committee is almost entirely Germanic. GV promotes the Earth sciences within the framework of modern society; fostering understanding between individuals, organisations

and institutions is regarded as being an important part of its role, which it undertakes through promoting Annual Meetings, short courses and excursions. In 2005, the ranking of the International Journal of Earth Sciences (Geologische Rundschau) improved as reflected by journals citation index. Since 1996, all articles have been available on-line. Subscriptions continued to decline, but compensated for by the distribution in on-line packages to libraries. The society communicates with its members by GMit (Geowissenschaftliche Mitteilungen), a quarterly jointly edited with the other earth-science societies of Germany, and its website. GV spends about 12 % of its budget for public relations. The GV has started a new series of publications by Springer Verlag, entitled Frontiers in Earth Sciences. The first book was issued in 2006, entitled: The Andes – Active Subduction Orogeny by Oncken, O., Chong, G., Franz, G. et al. (Eds.). Visit the Website at <http://www.g-v.de/>

## International Association for Engineering Geology and the Environment (IAEG)

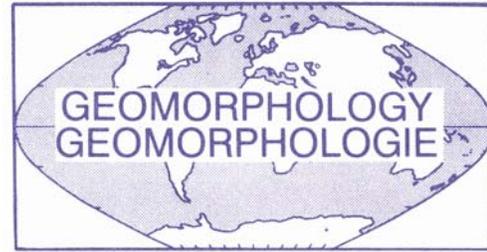


The IAEG is devoted to the investigation, study and solution of engineering and environmental problems, which may arise as the result of the interaction

between geology and the works and activities of man as well as to the prediction and the development of measures for prevention or remediation of geological hazards. IAEG is a worldwide scientific society with more than 5500 members in 66 National Groups and in individual memberships. The Association cooperates with a number of other international bodies (IAH, ISRM, ISSMGE and GEMS) expects to cooperate with these groups on several topics including education and training, professional practice, sustainable use of underground space, ancient monuments, soft rocks and indurated soils. The Association publishes The Bulletin of Engineering Geology and the Environment, distributes a newsletter and runs nine Commissions. An IAEG international congress is held every four years, and its

10th in Nottingham in 2006 was entitled "Engineering for tomorrow's cities." Every two years a medal and a prize are awarded: The Hans Cloos Medal (senior award) and the Richard Wolters Prize, the latter specially recognizes meritorious achievement by a younger member of the engineering geology profession. Visit the Website at <http://www.iaeg.info/>

## International Association of Geomorphologists (IAG)



IAG (<http://www.geomorph.org/>) was founded to promote and develop collaboration in geomorphology between nations; affiliation is via National Scientific Members. It is an extremely active scientific association with 58 national members. IAG runs a number of working groups and task forces, such as those on Arid Regions, Geoaerchaeology, Large Rivers and Volcanoes. The Association also sponsors conferences and publishes scientific material. IAG's income is derived from annual fees paid by affiliated National Scientific Members. Changes in the IAG constitution now give member organizations from severely low income countries exemption from fees provided they submit annual report of their activities. IAG is very active in publishing, and they have a very positive approach to cooperation with other scientific bodies. There are now fifteen Working Groups, many with no financial support from IAG. There is some income from membership fees, but considerable income from book royalties (e.g. Encyclopedia of Geomorphology) and their website ([www.geomorph.org](http://www.geomorph.org)) is extremely popular. IAG are actively seeking new members and will continue to promote geomorphology to young students. Publication with Wiley will continue. IAG are quite self sufficient and could be a major force on behalf of IYPE. They have a long history of being very successful. IUGS is fortunate to have IAG as an Affiliated Organization.

## International Association on Geochemistry and Cosmogeochimistry (IAGC)

The IAGC is a pre-eminent international geochemical organisation whose prime objective is to foster co-operation in, and advancement of, geochemistry in its broadest sense. They sponsor meetings and publications

organised by Working Groups to study problems that benefit from international co-operation.

### International Association on the Genesis of Ore Deposits (IAGOD)

The Association's principal objective is to foster cooperation in, and advancement of, geochemistry and cosmochemistry in their broadest sense by working with any interested group in planning symposia and other types of meetings related to geochemistry, by sponsoring publications on topics not normally covered by existing organizations; and by the appointment of Working Groups to study problems that require, or would profit from, international cooperation. IAGOD plays a vital role in ore deposit research, together with other bodies (SGA, SEG, IGCP), with whom they cooperate. It is noteworthy, how much is achieved by IAGOD with small financial contributions by its membership. IAGOD is an Associate Partner in the International Year of Planet Earth.

### International Association of Hydrogeologists (IAH)



IAH (<http://www.iah.org/>) aims to advance public education and promote research in hydrogeological sciences. IAH is an organisation of more than 3700 individual members from over 140 countries. In parallel with the preparation

for the World Water Forum IAH continues in international partnership projects with UNESCO. The most significant are WHYMAP (Hydrogeological Map of the World) that reached a significant benchmark in its development with the publication and presentation of a special edition of the world map at the IGC in Florence. The Hydrogeology Journal, published 12 times a year by Springer, received approximately 200 manuscripts for review. IAH also continue to publish an annual Spanish/Portuguese journal in cooperation with IGME (Spain) and UNESCO. IAH is an Associate Partner in the International Year of Planet Earth.

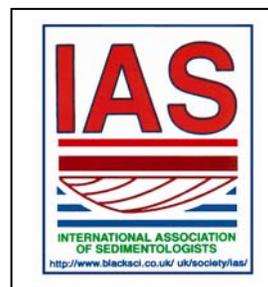
### International Association for Mathematical Geology (IAMG)



This specialised Association aims to promote international cooperation in the application and use of mathematics in geological research and technology. This is done through the organization of meetings, field excursions and visits

to centres of research and technology, through publications and through cooperation with other professional organisations. A Student Grants Programme supports graduate student research in broad areas of mathematical geology for the purposes of advancing the development and application of quantitative methods in the geosciences. The Association publishes Computers & Geosciences (now on-line), Mathematical Geology and Natural Resources Research. Visit the Website at [www.iamg.org/](http://www.iamg.org/)

### International Association of Sedimentologists (IAS)



IAS (<http://www.iasnet.org/>) promotes the study of sedimentology by publications, discussion and comparison of research results, by encouraging the interchange of research through international collaboration and by favouring integration with

other disciplines. The IAS Homepage (<http://www.iasnet.org>) is regularly updated. The 17<sup>th</sup> International Sedimentological Congress was held in Fukuoka, Japan mid August to early September, 2006. The IAS published 6 issues of its journal with some 1500 pages.

## International Centre for Training and Exchange in the Geosciences (CIFEG)



Centre International pour la Formation et les Echanges en Géosciences promotes the exchange of geosciences between northern and southern hemisphere countries through supporting training and research programmes; essentially

it aims to promote bilateral knowledge sharing. The group runs two main projects; PANGIS – Pan-African Network for a Geological Information System and SANGIS – South East Asian Network for a Geological Information System. Visit the Website at <http://www.cifeg.org>

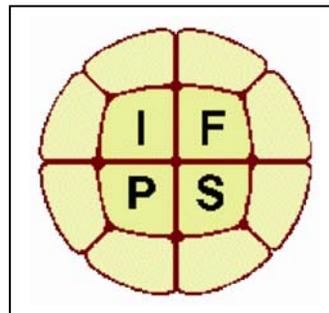
## International Consortium on Landslides (ICL)



ICL (<http://icl.dpri.kyoto-u.ac.jp/>) is involved with international co-ordination, exchange of information and dissemination of research activities and capacity building through various meetings, dispatching experts, developing a landslide database, and publishing its journal

“Landslides”. ICL’s central activity is the International Programme on Landslides (IPL). The construction of the headquarter building of UNITWIN (university twinning and networking) was jointly conducted by ICL, UNESCO and Kyoto University. ICL has strong links to UNESCO and WMO: and is well supported by these UN organizations. Although it only has about 40 members, ICL has a broad international membership with a strong bias in favour of Japan. There is considerable scientific focus, but minor attention to the public or education of young scientists.

## International Federation of Palynological Societies (IFPS)



Currently, 22 societies are members of IFPS (<http://www.geo.arizona.edu/palynology/ifps.html>) and the number of affiliated palynological societies and members increased in 2006. Bonn, Germany is the site of the next, IPC-XII in August 2008. A third

edition of the World Directory of Palynologists contains the list and contacts for about 3000 palynologists in all parts of the world.

## International Geological Education Organisation (IGEO)

This organisation promotes education in the geosciences at all levels, works for the



enhancement of quality in the international provision of geoscience education and encourages all developments that raise public awareness of the geosciences, in particular amongst younger people. The Geological Survey of Canada organized their 2006 meeting in Calgary, Alberta. A Syllabus Commission, chaired by Professor Nir Orion from Israel, will decide the scope/content of the written and practical tests for the Olympiad scheduled for mid 2007. IGEO worked closely with COGE.

## International Medical Geology Association (IMGA)

The International Medical Geology Association (IMGA) was officially launched in 2006 after leaving IUGS as an Initiative. Achievements include a monthly electronic newsletter and paper bulletin annually, several short courses per year, very popular website (e.g., in 2004 annual Google hits would result in 300 and now in 2006 some 40,000). It has participated in numerous conferences, developed university credit courses, and published a very popular Academic Press volume that has won several awards. The new Division for Medical Geology in the GSA also started in 2006. Medical Geology remains active as a theme for IYPE. IUGS is very fortunate to have this new organization as an

affiliate and a very positive relationship for our Union to maintain. IMGA is contributing to the next IGC. IMGA has a good working relationship with IYPE.

### International Mineralogical Association (IMA)

IMA comprises 38 mineralogical societies or groups (one per country) with a limited number of individual memberships. The Association promotes exchanges among mineralogists of all nations by organising events or publishing relevant literature. The General Meeting of the IMA was held in Kobe, Japan July 2006, where a project for a strategic vision of IMA was discussed. Activities of the Commission of Gem Materials focus on preparing an illustrated glossary of minerals. The new Working Group on Environmental Mineralogy (WGEM) is looking at “mineralogy and health”. A working group of the Committee on Internet and Computer Applications (CICA) hopes to establish a worldwide standard in the development of an interchange file format for the various mineralogical databases. IMA is a very important organisation and IUGS promotes the more intensive use of its expertise by other IUGS bodies and projects.

### International Palaeontological Association (IPA)



IPA's 1200 members and nineteen corporate member organisations

aim to promote and coordinate international cooperation in palaeontology and to encourage the integration and synthesis of all palaeontological knowledge (<http://ipa.geo.ku.edu/index3.html>). The new homepage contains a link to fossil collections of the world, to a very popular directory of palaeontologists and to a PalaeoLink database. The IPA General Assembly was held at the Second International Palaeontological Congress, hosted in Beijing, 2006. During this meeting, elections were held for a new slate of IPA officers for the term 2006-2010. Three electronic databases are now part of the IPA site: the Directory of Paleontologists of the World, The Directory of Fossil Collections of the World and The PaleoLink Database. Two more electronic databases are under development: the Directory of Globally Important Palaeontological Sites and the Directory of Paleontological Societies and Associations. In 2006 IPA accepted the invitation to join the ProGEO, European Association for the Conservation of the Geological Heritage, also affiliated to IUGS. The IPA also intends to

seek Associate Partner status in sponsorship of the International Year of Planet Earth (2007-2009).

### International Permafrost Association (IPA)



The objectives of IPA (<http://www.geo.uio.no/IPA/>) include the dissemination of knowledge concerning permafrost and the promotion of cooperation between persons and organisations engaged in

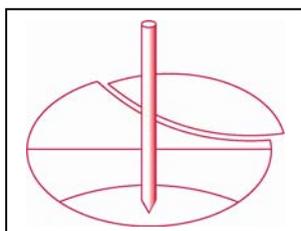
scientific investigations and engineering work on permafrost. Some 23 national/multinational organisations form the basis of the membership, although individual membership is possible if no national body exists. Ten working and three task groups covering a range of topics undertake scientific work for the Association; many of these are involved in collaborative work with a very wide range of international bodies, including IUSS, IPA, IGU, the International Commission on Snow and Ice, and with bodies within IGOS (GCOS/GTOS). The Association publishes *Frozen Ground* and contributed special issues to several other journals. The group has continued developing “Thermal State of Permafrost” (TSP) which proposes to obtain a “snapshot” of permafrost temperatures throughout Planet Earth during the period 2007–2008. The post-IPY and Planet Earth “Legacy” goal for the TSP project is to establish a permanent International Network of Permafrost Observatories (INPO). Several relevant working groups are considering ways to input to the themes of the International Year of Planet Earth (including soils, hazards and climate). IPA is an Associate Partner in the International Year of Planet Earth. A major project is: “Thermal State of Permafrost” (TSP), which together with WMO Global Terrestrial Network for Permafrost (GTN-P) will support IUGS Geoinformatics Initiative, and will result in the establishment of a permanent International Network of Permafrost Observatories (INPO). IPA is also an affiliated member of the IGU. Co-operation in different programmes sponsored by ICSU (IGBP, SCAR, SCOPE), WMO, IGU, IUGG, INQUA, ICO, IASC, IUSS, IUBS, IUMS, places IPA at the crossroads of important scientific research projects on climate related subjects.

### International Society for Rock Mechanics (ISRM)

The ISRM (<http://www.isrm.net/>) operates in the field of physical and mechanical behaviour of rocks and rock masses and the applications of this knowledge for the better understanding of geological processes and in the

fields of Engineering. The IRSM website provides information about the association, its national groups, commissions and meetings. The group continues close co-operation with the Sister Societies IAEG and ISSMGE. The Society envisages planning and undertaking certain scientific activities with IUGS, such as the study of geological problems. ISRM was active in 2006, holding four international symposia in Europe and Asia. The Association published News Journal and developed a web site. However, the increase of publication costs is becoming a serious issue. The ISRM is seeking to form a federation with the IAEG and ISSMGE.

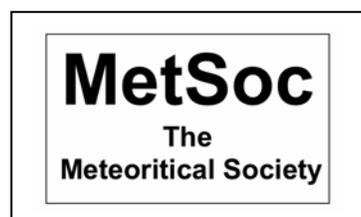
### International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)



The aim of the Society (<http://www.issmge.org/home/>) is to promote international co-operation amongst engineers and scientists for the advancement and dissemination of

knowledge in the field of geotechnics, and its engineering and environmental applications. The ISSMGE is composed of 75 national societies and has over 17,000 individual members. The Society was active in 2006, holding a regular scientific conferences and the Young GE Conference in Croatia. The Society has 23 technical committees, which are asked to produce reports by 2009. A Newsletter of interest to the younger members will be re-launched soon.

### Meteoritical Society (MS)



The Society, founded in 1933, promotes research and education in planetary sciences, with an emphasis on studies of meteorites and

other extraterrestrial materials that further the understanding of the origin of the solar system. The society has around 950 members in 37 countries. The Society publishes its own journal, Meteorites and Planetary Sciences and also the Meteoritical Bulletin. Members donated ten subscriptions of the former journal to libraries in countries where the journal is unavailable. The Society publishes *Geochimica et Cosmochimica Acta*, together with the Geochemical Society. In 2006, the main scientific event of the Society was the 69<sup>th</sup> Annual Meeting in Zurich, with 370 registered participants. The Society published 12 issues of the

journal and new meteorite data in the Meteoritical Bulletin. Visit the Website at:

<http://www.meteoriticalsociety.org/>

### Society of Economic Geologists Inc. (SEG)



This Society is an international body that is committed to excellence in science, discovery, documentation, interpretation, evaluation and responsible

development of mineral resources and the professional development of its members. SEG formed a tripartite relationship with IAGOD and SGA, and also has a good working relationship with IUGS. Members are currently distributed through more than 80 countries worldwide. SEG is a leading international society in its field, and having co-sponsored meetings with many national and international organizations, including UNESCO, indicates its relevance for important society issues. SEG is closely associated with IAGOD, forming an ICSU cluster. In 2006, SEG organized and sponsored 13 well attended conferences, field trips and short courses in Canada, USA, UK, Chile, Australia, Japan and Russia. These events involved over 20,000 specialists and students from over 50 countries. SEG develops a successful publication policy (guidebooks, review volumes, special publications, monographs, conference series volumes as well as back issues and the Index to Economic Geology, most of the publications are supplied with the CD-ROMs or/and DVD). SEG is playing a modest role in IYPE as an Associate Partner and resources are a key issue.

### Society for Geology Applied to Mineral Deposits (SGA)

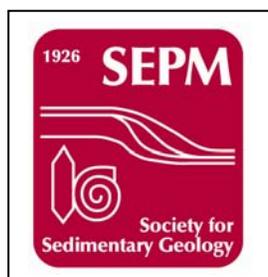


The Society aims to advance the application of scientific knowledge to the study and development of mineral resources and their environment, to promote the profession and to improve and maintain professional standards.

SGA was active in 2006, mainly in co-sponsoring five scientific meetings, editing the journal "*Mineralium Deposita*" and SGA News. The journal is confirmed to be number one amongst Mineral Deposits Journals worldwide. SGA is an Associate Partner in the

International Year of Planet Earth. The SGA Young Scientist Award is granted biannually to a scientist 37 or under who has contributed significantly to understanding of mineral deposits. SGA has a joint project with other societies (SEG, IAGOD) to produce an educational DVD movie entitled “Promoting Responsible Mineral Resource Management for the Planet Earth.

### **Society for Sedimentary Petrology (SEPM)**



SEPM (<http://www.sepm.org/>) is an international not-for-profit Society dedicated to the dissemination of scientific information on sedimentology, stratigraphy, palaeontology, environmental sciences, marine geology, hydrogeology, and many

additional related specialties. SEPM was active in 2006. The Society supports two major scientific journals, the Journal of Sedimentary Research (JSR) and PALAIOS, in addition to producing technical conferences, short courses, and Special Publications. The foundation is also playing a key role in supporting the digitization of the past issues of PALAIOS. SEPM is an Associate Partner in the International Year of Planet Earth. Excellent papers have been published in the Journal of Sedimentary Research.

## Appendices

Appendix 1: Executive Committee Officers, Permanent Secretariat, Executive Committee and Bureau Meetings

Appendix 2: IUGS Adhering Organizations

Appendix 3: Membership Category and Status

Appendix 4: IUGS Financial Situation and Statement

Appendix 5: IUGS Allocations

Appendix 6: ICS- IUGS Ratified Global Boundary Stratotype Sections and Points (GSSP)

Appendix 7: IGCP Projects 2005 (IUGS-UNESCO Co-Sponsored)

Appendix 8: Acronyms Used by IUGS

# IUGS – Executive Members and Meetings

## EXECUTIVE COMMITTEE OFFICERS OF THE IUGS IN 2006

President	Prof. Z. Hongren	Aug. 2004 – Aug. 2008	<a href="mailto:iugs8@yahoo.com">iugs8@yahoo.com</a>
Past President	Prof. E.F.J. de Mulder	Aug. 2004 – Aug. 2008	<a href="mailto:e.demulder@planet.nl">e.demulder@planet.nl</a>
Secretary General	Prof. P.T. Bobrowsky	Aug. 2004 – Aug. 2008	<a href="mailto:pbobrows@nrcan.gc.ca">pbobrows@nrcan.gc.ca</a>
Treasurer	Prof. A. Brambati	Aug. 2004 – Aug. 2008	<a href="mailto:brambati@univ.trieste.it">brambati@univ.trieste.it</a>
Vice President	Prof. S. Haldorsen	Aug. 2004 – Aug. 2008	<a href="mailto:sylvi.haldorsen@umb.no">sylvi.haldorsen@umb.no</a>
Vice President	Prof. E. Moores	Aug. 2004 – Aug. 2008	<a href="mailto:Moores@geology.ucdavis.edu">Moores@geology.ucdavis.edu</a>
Councillor	Dr. R. Matsumoto	Aug. 2004 – Aug. 2008	<a href="mailto:ryo@eps.s.u-tokyo.ac.jp">ryo@eps.s.u-tokyo.ac.jp</a>
Councillor	Dr. G. Schneider	Aug. 2004 – Aug. 2008	<a href="mailto:gschneider@mme.gov.na">gschneider@mme.gov.na</a>
Councillor	Dr. M. Mantovani	Aug. 2006 – Aug. 2010	<a href="mailto:msmmanto@usp.br">msmmanto@usp.br</a>
Councillor	Dr. M. Fedonkin	Aug. 2006 – Aug. 2010	<a href="mailto:mfedon@paleo.ru">mfedon@paleo.ru</a>
Councillor	Prof. A.C. Riccardi	Aug. 2002 – Aug. 2006	<a href="mailto:riccardi@fcnym.unlp.edu.ar">riccardi@fcnym.unlp.edu.ar</a>
Councillor	Prof. J.P. Cadet	Aug. 2002 – Aug. 2006	<a href="mailto:jean-paul.cadet@lgs.jussieu.fr">jean-paul.cadet@lgs.jussieu.fr</a>

## PERMANENT SECRETARIAT

Head of Secretariat	Dr. T. Torsnes	<a href="mailto:iugs.secretariat@ngu.no">iugs.secretariat@ngu.no</a>
Assistant	Ms. A. Liinamaa-Dehls	<a href="mailto:Anne.Dehls@ngu.no">Anne.Dehls@ngu.no</a>

## EXECUTIVE COMMITTEE AND BUREAU MEETINGS, JANUARY 2006 - NOVEMBER 2006

56 <sup>th</sup> Executive Committee Meeting	Punta Arenas, Chile	January 6 - 10
Bureau Meeting	Paris, France	February 19 – 22
Bureau Meeting	El Jadida, Morocco	May 4 – 5
Bureau Meeting	Maputo, Mozambique	July 1 – 2
Bureau Meeting	Belfast, Northern Ireland	September 18 – 19
Bureau Meeting	Dublin, Ireland	September 20 – 21
Bureau Meeting	Paris, France	November 20 – 21

# IUGS Adhering Members

## WITH THEIR MEMBERSHIP CATEGORY AND STATUS

A – Active; I – Inactive

Country	Cat.	Stat.	Country	Cat.	Stat.	Country	Cat.	Stat.
Albania	1	A	Guyana	1	A	Peru	1	A
Algeria	1	I	Hungary	3	A	Philippines	1	I
Angola	1	A	Iceland	1	A	Poland	2	A
Argentina	3	A	India	5	A	Portugal	2	A
Australia	6	A	Indonesia	1	A	Romania	3	A
Austria	3	A	Iran	3	A	Russia	8	A
Azerbaijan	1	A	Iraq	2	I	Saudi Arabia	4	A
Bangladesh	1	A	Ireland	2	A	Senegal	1	I
Belarus	1	I	Israel	2	A	Serbia	1	A
Belgium	3	A	Italy	7	A	Slovak Republic	2	A
Belize	1	I	Ivory Coast	1	I	Slovenia	1	A
Bolivia	1	I	Jamaica	1	A	Somalia	1	I
Bosnia - Herzegovina	1	A	Japan	8	A	South Africa	4	A
Botswana	2	I	Jordan	1	A	Spain	4	A
Brazil	4	A	Kazakhstan	3	A	Sri Lanka	1	I
Bulgaria	2	A	Kenya	1	A	Sudan	1	A
Burkina Faso	1	I	Korea North (PDR)	1	I	Surinam	1	A
Burundi	1	I	Korea South (ROK)	2	A	Swaziland	1	I
Cameroon	1	A	Latvia	1	A	Sweden	3	A
Canada	5	A	Lebanon	1	A	Switzerland	4	A
Chile	1	A	Libya	1	A	Syria	1	A
China, P. R.	7	A	Lithuania	1	A	Taiwan (Taipeh)	3	A
Colombia	1	A	Luxembourg	1	A	Tanzania	1	I
Congo	1	A	Madagascar	1	I	Thailand	1	A
Costa Rica	1	I	Malawi	1	I	Tunisia	1	I
Croatia	1	A	Malaysia	1	A	Turkey	3	A
Cuba	1	I	Mexico	2	I	Uganda	1	A
Cyprus	1	A	Mongolia	1	A	Ukraine	3	I
Czech Republic	2	A	Morocco	2	A	United Kingdom	7	A
Denmark	3	A	Mozambique	1	A	Uruguay	1	A
Ecuador	1	I	Namibia	1	A	USA	8	A
Egypt	2	I	Netherlands	4	A	Uzbekistan	2	A
Estonia	1	A	New Zealand	3	A	Venezuela	1	I
Finland	3	A	Nicaragua	1	I	Vietnam	1	A
France	7	A	Niger	1	I	Yemen	1	A
Gambia, Rep. of	1	I	Nigeria	1	A	Zambia	1	A
Georgia	1	I	Norway	3	A			
Germany	7	A	Pakistan	1	A	118 Adhering Orgs.		
Ghana	1	I	Panama	1	I	83 Active		
Greece	2	A	Papua New Guinea	1	I	35 Inactive		
Guatemala	1	I	Paraguay	1	I			

# Categories of IUGS Membership

## MEMBERSHIP FEE (2004-2006)

<b>Categories of Membership for 2004</b>								
Category	1	2	3	4	5	6	7	8
Units	1	2	4	7	12	20	35	70
Value in US \$	460	920	1840	3220	5520	9200	16100	32200

<b>Categories of Membership for 2005</b>								
Category	1	2	3	4	5	6	7	8
Units	1	2	4	7	12	20	35	70
Value in US \$	469	938	1876	3283	5628	9380	16415	32830

<b>Categories of Membership for 2006</b>								
Category	1	2	3	4	5	6	7	8
Units	1	2	4	7	12	20	35	70
Value in US \$	485	970	1940	3395	5820	9700	16975	33950

# IUGS Financial Situation and Statement

## Income in 2006

INCOME	RECEIVED			TOTAL
	for < 2006	for 2006	for > 2005	(US dollars)
<b>Membership dues</b>	<b>29,081.00</b>	<b>247,742.64</b>	<b>0.00</b>	<b>276,823.64</b>
Member countries	29,081.00	247,742.64	0.00	
<b>IGCP Program</b>	<b>20,952.88</b>			<b>20,952.88</b>
UNESCO	8,952.88			
UNESCO - Hydrology	2,000.00			
US Contribution	10,000.00			
<b>UNESCO Other Contracts</b>	<b>31,500.00</b>			<b>31,500.00</b>
New IGCP Program and Orientation (4500027900)	21,000.00			
IGCP Reforms (4500028053)	10,500.00			
<b>UNESCO Other Programs</b>	<b>21,250.00</b>			<b>21,250.00</b>
GARS-Remote Sensing	3,000.00			
GARS-Tiger Ship (4500028048)	8,250.00			
IYPE Brochure (2005)	10,000.00			
<b>Other incomes</b>	<b>4,472.83</b>	<b>8,640.77</b>		<b>13,113.60</b>
Episodes Royalties		207.59		
Geological Society of London		8,433.18		
Restitution of IGCP 459 for 2005	4,472.83			
<b>Interests</b>				<b>28,357.93</b>
<b>INCOME</b>				<b>391,998.02</b>

## Expenses in 2006

	PAID			TOTAL
	for < 2006	for 2006	for > 2006	
<b>EXPENSES</b>				
<b>IGCP Projects</b>	<b>10, 000.00</b>	<b>148, 360. 00</b>		<b>158, 360. 00</b>
UNESCO		86, 860.00		
IUGS	10, 000.00	61, 500.00		
<b>UNESCO Other Contracts</b>	<b>24, 641.53</b>			<b>24, 641.53</b>
New IGCP Program and Orientation (4500027900)	16, 000.00			
IGCP Reforms (4500028053)	8, 641.53			
<b>UNESCO Other Programs</b>	<b>18, 250.00</b>			<b>18, 250.00</b>
GARS-Tiger Ship (4500028048)	8, 250.00			
IYPE Brochure (2005)				
<b>Joint Programs</b>	<b>3, 000</b>	<b>27, 436.90</b>		<b>30, 436.90</b>
GARS-Remote Sensing IUGS		6, 000.00		
GARS-Remote Sensing UNESCO	3,000			
ILP		17, 000.00		
Geoparks Networks		4, 436.90		
<b>IUGS Commissions, Task Groups, Initiatives, Committees and Other</b>		<b>68, 500. 00</b>		<b>68, 500. 00</b>
Commissions		50, 000.00		
Task Groups		6,500.00		
Initiatives		4,000.00		
Committees		8,000.00		
<b>Affiliated Organisations</b>		<b>13, 500. 00</b>		<b>13, 500. 00</b>
<b>IUGS Grants</b>		<b>0. 00</b>		<b>0. 00</b>
<b>International Year of Planet Earth (Loan)</b>		<b>40, 000. 00</b>		<b>40, 000. 00</b>
<b>Hutchison Fund Awards</b>		<b>0. 00</b>		<b>0. 00</b>
<b>Contributions</b>		<b>7, 500. 00</b>		<b>7, 500. 00</b>
Contribution ICSU		7, 500.00		
Office expenses		0.00		
<b>Other expenses</b>		<b>79, 624. 11</b>		<b>79, 624. 11</b>
Routine meetings		58, 231. 31		
Representing Scientific Meetings		12, 178.62		
Exhibition		2, 935.90		
Annual report, brochure		0.00		
Bank charges		6, 278.28		
<b>Episodes</b>		<b>26, 000. 00</b>		<b>26, 000. 00</b>
Contribution China		23,000.00		
Reserves		0.00		

<i>...continued from previous page</i>				
Episodes: Dissem. Devel. Countries	2,000.00	3,000.00		
<b>Contingency</b>			<b>6,022.23</b>	<b>6,022.23</b>
<b>GEOSEE (closing)</b>			<b>7,188.57</b>	<b>7,188.57</b>
<b>EXPENSES</b>				<b>480,023.34</b>

Excess of Income over Expenses = **US\$ 88,025.32**

<b>ACCUMULATED BALANCE</b>	
On 31 December 2005	729,526.81
On 31 December 2006	669,931.87

# IUGS Allocations in 2006

Budget 2006 (US\$)	
<b>IGCP</b>	
UNESCO	90 860
IUGS	61 500
<b>Joint Programmes</b>	
GARS	6 000
ILP	17 000
GEOPARKS NETWORKS	5 000
<b>IUGS Commissions</b>	
GEM	5 000
CGI	5 000
CSP	2 000
ICS	30 000
INHIGEO	4 000
COETTT COGE	4 000
SECE	2 000
<b>IUGS Task Groups</b>	
TGGGB	1 500
TECTASK	5 000
<b>IUGS Initiatives</b>	
IMGA	4 000
<b>Committees</b>	
PC (Publications Committee)	8 000
<b>Affiliated Organizations</b>	
AGID	500
CGMW	2 500
GSAf	5 000
ICL	2 000
IGEO	4 000
<b>International Year of Planet Earth</b>	
LOAN	40 000
<b>Contributions</b>	
ICSU	7 500
<b>Other expenses</b>	
Routine Meetings	40 000
Representative Scientific Meetings	14 000
Exhibitions	4 000
Annual report	3 000
Bank Charges	6 000
<b>Episodes</b>	
Contribution to China	23 000
Episodes distribution UNESCO's contribution	3 000
<b>Contingency</b>	10 000

# ICS – IUGS Ratified (2006)

## GLOBAL BOUNDARY STRATOTYPE SECTIONS AND POINTS (GSSP)

*St* – stage; *Se* – series; *Ss* – sub System; *Sy* – system; *E* – Eon

Stage (base of)	Stratotype Section	<i>Episodes</i> Volume	
<b>PHANEROZOIC</b>			
<b>Neogene</b>			
1. Holocene	NGRIP ice core, Greenland	Anticipated	2007
2. Upper Pleistocene		Anticipated	2007
3. Middle Pleistocene		Anticipated	2007
4. Calabrian St, Lower Pleistocene Se	Vrica, Calabria, Italy	8	(2) 1985
5. Gelasian St, U. Pliocene	Monte San Nicola, Sicily, Italy	21	(2) 1998
6. Piacenzian St, M. Pliocene	Punta Piccola, Sicily, Italy	21	(2) 1998
7. Zanclean St, Pliocene Se	Eraclea Minoa, Sicily, Italy	23	(3) 2000
8. Messinian St, Pliocene Se	Oued Akrech, Morocco	23	(3) 2000
9. Tortonian St, Pliocene Se	Monte dei Corvi, Ancona, Italy	28	(1) 2005
10. Serravallian St, Pliocene Se		Anticipated	2007
11. Langhian St, Miocene Se		Anticipated	2008
12. Burdigalian St, Miocene Se		Anticipated	2008
13. Aquitanian St, Miocene Se, Neogene Sy	Lemme-Carrosio, Italy	20	(1) 1997
<b>Paleogene</b>			
14. Chattian St, Oligocene Se		Anticipated	2007
15. Rupelian St, Oligocene Se	Massignano, NE Italy	16	(3) 1993
16. Priabonian St, Oligocene Se		Anticipated	2007
17. Bartonian St, Oligocene Se		Anticipated	2008
18. Lutetian St, Eocene Se		Anticipated	2007
19. Ypresian St, Eocene Se	Luxor, Egypt	Ratified	2003
20. Thanetian St, Eocene Se		Anticipated	2007
21. Selandian St, Eocene Se		Anticipated	2007
22. Danian St, Paleocene Se, Paleogene Sy	El Kef, Tunisia	Ratified	1999

*St* – stage; *Se* – series; *Ss* – Sub-System; *Sy* – System; *E* – Eon

<b>Stage (base of)</b>	<b>Stratotype Section</b>	<b>Episodes</b>	<b>Volume</b>
<b>Cretaceous</b>			
23. Maastrichtian St	Tercis, Landes France	24 (4)	2001
24. Campanian St		Anticipated	2008
25. Santonian St		Anticipated	2007
26. Coniacian St	Hannover, Germany	Anticipated	2007
27. Turonian St	Rock Canyon, Colorado, USA	28 (2)	2005
28. Cenomanian St	Mont Risou, France	Ratified	2002
29. Albian St		Anticipated	2008
30. Aptian St		Anticipated	2007
31. Barremian St		Anticipated	2007
32. Hauterivian St		Anticipated	2007
33. Valanginian St		Anticipated	2007
34. Berriasian St		Anticipated	2008
<b>Jurassic</b>			
35. Tithonian St		Anticipated	2007
36. Kimmeridgian St		Anticipated	2007
37. Oxfordian St		Anticipated	2007
38. Callovian St		Anticipated	2007
39. Bathonian St		Anticipated	2007
40. Bajocian St	Cabo Mondego, Portugal	20 (1)	1997
41. Aalenian St	Fuentelsalz, Spain	24 (3)	2001
42. Toarcian St		Anticipated	2007
43. Pleinsbachian St	Robin Hood's Bay, UK	29 (2)	2006
44. Sinemurian St	Quantox Head, Somerset, UK	25 (1)	2002
45. Hettangian St		Anticipated	2007
<b>Triassic</b>			
46. Rhaetian St		Anticipated	2008
47. Norian St		Anticipated	2008
48. Carnian St		Anticipated	2007
49. Ladinian St	Bagolino, Brescia Province, Italy	28 (4)	2005
50. Anisian St		Anticipated	2007
51. Olenekian St		Anticipated	2007
52. Induan St, Triassic Sy, Mesozoic	Meishan, Zhejiang, China	24 (2)	2001

*St* – stage; *Se* – series; *Ss* – Sub-System; *Sy* – System; *E* – Eon

Stage (base of)	Stratotype Section	Episodes	Volume
<b>Permian</b>			
53. Changhsingian St	Zhejiang, China	29 (3)	2006
54. Wuchiapingian St	Penglaitan, Guangxi, China	Ratified	2004
55. Capitanian St	Stratotype Canyon, Texas, USA	Ratified	2001
56. Wordian St	Stratotype Canyon, Texas, USA	Ratified	2001
57. Roadian St, Guadalupian Se, M. Permian	Stratotype Canyon, Texas, USA	Ratified	2001
58. Kungurian St		Anticipated	2007
59. Artinskian St		Anticipated	2007
60. Sakmarian St		Anticipated	2007
61. Asselian St, Cisuralian Se, Permian Sy	Aidaralash Creek, Kazakhstan	21 (1)	1998
<b>Carboniferous</b>			
62. Gzhelian St, Pennsylvanian Ss		Anticipated	2007
63. Kasimovian St, Pennsylvanian Ss		Anticipated	2008
64. Moscovian St, Pennsylvanian Ss		Anticipated	2007
65. Bashkirian St, Pennsylvanian Ss, U. Carboniferous	Arrow Canyon, Nevada, USA	22 (4)	1999
66. Serpukhovian St, Pennsylvanian Ss		Anticipated	2007
67. Visean St, Pennsylvanian Ss		Anticipated	2006
68. Tournasian St, Mississippian Ss, Carboniferous Sy	La Serre, France	14 (4)	1991
<b>Devonian</b>			
69. Famennian St	Coumiac, France	8 (2)	1985
70. Frasnian St, U. Devonian Se	Col du Puech, France	14 (2)	1991
71. Givetian St	Irdane, Morocco	18 (3)	1995
72. Eifelian St, M. Devonian Se	Wetteldorf, Germany	8 (2)	1985
73. Emsian St	Zinzilban Gorge, Uzbekistan	20 (4)	1997
74. Pragian St	Praha Holyne, Czech Republic	12 (2)	1989
75. Lochkovian St, L. Devonian Se, Devonian Sy	Klonk, Barrandean, Czech Republic	Ratified	1972
<b>Silurian</b>			
76. Pridoli Se	Pozary, Barrandean, Czech Rep.	8 (2)	1985
77. Ludfordian St,	Sunnyhill, Wales	8 (2)	1985
78. Gorstian St, Ludlow Se	Pitch Coppice, Wales	8 (2)	1985
79. Homerian St,	Whitwell Coppice, Wales	Ratified	1980
80. Sheinwoodian St, Wenlock Se	Hughley Brook, Wales	Ratified	1980
81. Telychian St,	Cefn Cerig, Wales	8 (2)	1985
82. Aeronian St,	Trefawr forestry road, Wales	8 (2)	1985
83. Rhuddanian St, Llandovery Se, Silurian Sy	Dob's Linn, Moffat, Scotland	8 (2)	1985

**Ordovician**

84. Hirnantian St	Wangjiawan, Yichang, China	29	(3)	2006
85. Katian St	Black Knob Ridge, Oklahoma, USA	Ratified		2005
86. Sandbian St	Fågelsång, Skane, Sweden	Ratified		2002
87. Darriwillian St, M. Ordovician	Huangnitang, China	19	(3)	1997
88. Floian St	Diabasbrottet, Västerg., S. Sweden	Ratified		2002
89. Tremadocian St, Ordovician Sy	Green Point, Newfoundland, Canada	24	(1)	2001

**Cambrian**

90. Paibian St, Furongian Se	Paibi, NW Hunan, China	Ratified		2003
91. Nemaakitian-Daldynian St, Cambrian Sy, Early Palaeozoic	Fortune Head, Canada	17	(2)	1994
		19	(3)	1996

*St – stage; Se – series; Ss – sub System; Sy – system; E – Eon*

<b>Stage (base of)</b>	<b>Stratotype Section</b>	<b>Episodes</b>	<b>Volume</b>
<b>PROTEROZOIC</b>			
92. Ediacaran Sy	Enorama Creek, Flinders Ridge, Australia	Ratified	2004
93. Proterozoic is divided by absolute ages into 3 Eras, with 10 Systems		14	(2) 1991
<b>ARCHAEAN</b>			
94. Divided by absolute ages into 4 Eras		15	(2) 1992

# IGCP Projects – 2006

## (IUGS-UNESCO CO-SPONSORED)

Project Number	Title Leader(s) Duration
463	<b>Upper Cretaceous Oceanic Red Beds</b> C. Wang (China), M. Sarti (Italy), R.W. Scott (United States), L.F. Jansa (Canada) 2002-2006
467	<b>Triassic time and Trans-Panthalassan Correlations</b> M. J. Orchard (Canada), L Krystyn (Austria), J. Tong (China), S. Lucas (United States), H. Campbell (New Zealand), F. Hirsch (Japan), K. Ishida (Japan), Y. Zacharov (Russia) 2002-2006
469	<b>Variscan terrestrial Biotas and Palaeoenvironments</b> C. J. Cleal (United Kingdom), S. Oluštil (Czech Republic), Y. Tenchov (Bulgaria), E. Zodrow (Canada) 2003-2007
470	<b>The Neoproterozoic Pan-African belt of Central Africa</b> F. Toteu (Cameroon) 2002-2006
471	<b>Evolution of Western Gondwana during the Late Palaeozoic</b> C.O. Limarino (Argentina), L.A. Buatois (Argentina) 2002-2006
473	<b>GIS Metallogeny of Central Asia</b> R. Seltmann (United Kingdom), 5 young scientists 2002-2006
474	<b>Depth Images of the Earth's Crust</b> B.J. Drummond (Australia), L.D. Brown (United States), F.A. Cook (Canada), O. Oncken (Germany), G.S. Fuis (United States), R.W. Hobbs (United Kingdom), Songlin Li (China), D.M. Finlayson (Australia) 2003-2007
475	<b>Deltas in the Monsoon Asia-Pacific Region (DeltaMAP)</b> S. Goodbred, Jr. (United States), Y. Saito (Japan) 2003-2007
476	<b>Monsoon Evolution and tectonic-climate Linkage in Asia</b> R. Tada (Japan) 2003-2007
478	<b>Neoproterozoic-Early Palaeozoic Events in South-West--Gondwana</b> C. Gaucher (Uruguay), D. Poiré (Argentina), P. C. Boggiani (Brazil), A. Braun (Germany), H. Frimmel (South Africa), J.B. Germs (South Africa) 2003-2007
479	<b>Sustainable Use of Platinum Group Elements</b> J. E. Mungall (Canada), M. Iljina (Finland), C. Ferreira-Filho (Brazil) 2003-2007
480	<b>Structural and Tectonic Correlation across the Central Asia Orogenic Collage: Implications for Continental Growth and Intracontinental Deformation</b> B. Natal'in (Turkey), A. Yin (United States), A. M. C. Sengör (Turkey), M. Kuzmin (Russia) 2004-2008
481	<b>Dating Caspian Sea Level Change</b> S.B. Kroonenberg (Netherlands), S. Leroy (United Kingdom) 2003-2007
482/489	<b>Geodynamics of the East African Rift System / Geophysical Characteristics and Evolution of the South-western Branch of the East African Rift System</b> G. Mulugeta (Sweden)/ A. Atekwana (United States), M.P. Modisi (Botswana), M.N. Sebagenzi (D.R. Congo), J.J. Tiercelin (France) 2003-2007
485	<b>The Boundaries of the West African Craton</b> N. Ennih (Morocco); J-P. Liégeois (Belgium) 2003-200
486	<b>Au-Ag-Telluride-Selenide Deposits</b> N. J. Cook (Norway), K. Kojonen (Finland) 2003-2007

- 487 **Seismic microzoning of Latin America cities by realistic modelling of seismic ground motion**  
J. L. Alvarez Gómez (Cuba), A. Giesecke (Peru), G. F. Panza (Italy)  
2004-2008
- 490 **Environmental Catastrophes**  
S. Leroy (United Kingdom), I. Stewart (United Kingdom)  
2003-2007
- 491 **Middle Palaeozoic Vertebrate Biogeography, Palaeogeography and Climate**  
M. Zhu (P.R. China), G. Young (Australia)  
2003-2007
- 493 **The Rise and Fall of the Vendian Biota**  
M. Fedonkin (Russia), P. Vickers-Rich (Australia), J. Gehling (Australia)  
2003-2007
- 495 **Quaternary Land-Ocean Interactions: Driving Mechanisms and Coastal Responses**  
A. Long (United Kingdom), S. Islam (Bangladesh)  
2004-2008
- 497 **The Rheic Ocean: its origin, evolution and correlatives**  
U. Linnemann (Germany), R. D. Nance (United States), M. de Wit (South Africa), E. Bozkurt (Turkey), P. Kraft (Czech Republic), F. Pereira (Portugal), R. A. Strachan (United Kingdom)  
2004-2008
- 499 **Devonian land-sea interaction: evolution of ecosystems and climate**  
P. Königshof (Germany), J. Lazauskiene (Lithuania), E. Schindler (Germany), Volker Wilde (Germany) and N. Yalçin (Turkey)  
2004-2008
- 500 **Westerlies and Monsoons: Impacts of Climate Change and Variability on Dryland Environments, Hydrogeology and People**  
D. Thomas (United Kingdom)  
2004-2008
- 502 **Global Comparison of Volcanic-hosted Massive Sulphide Districts: the controls on distribution and timing of VMS deposits**  
R. Allen (Sweden), F. Tornos (Spain), J. Peter (Canada), N. Çagatay (Turkey)  
2004-2008
- 503 **The impact of the changing palaeogeography and palaeoclimate on the major biotic changes through the Ordovician (Ordovician biodiversification, end-Ordovician extinction, Silurian radiation)**  
T. Servais (France), D.A.T. Harper (Denmark), J. Li (China), A. Munnecke (Germany), W. Owen (United Kingdom), P.M. Sheehan (United States) 2004-2008
- 506 **Marine and Non-marine Jurassic**  
Jingeng Sha (China), Nicol Morton (France), W. A.P. Wimbledon (UK), Paul E. Olsen (USA), Alberto G. Riccardi (Argentina), Grzegorz (Gregory) Pieńkowski, (Poland), Yongdong Wang (China)  
2005-2009
- 508 **Volcano collapse and fault activity - "Young Scientists Project"**  
I.Alejandro Petrinovic (Argentina), T. Toulkeridis (Ecuador), A.Concha Dimas (Mexico)  
Claudia Corazzato (Italy)  
2005-2007
- 509 **Palaeoproterozoic Supercontinents and Global Evolution**  
S.M. Reddy (Australia), R. Mazumder (India), D.A.D. Evans (USA)  
2005-2009
- 510 **A-type Granites and Related Rock through Time**  
Roberto Dall'Agnol (Brazil), Carol D. Frost (USA), O. Tapani Rämö (Finland)  
2005-2009
- 511 **Submarine Mass Movements and Their Consequences**  
Jacques Locat (Canada), Jurgen Mienert and Roger Urgeles - (IOC link)  
2005-2009
- 512 **Neoproterozoic Ice Ages**  
Emmanuelle Arnaud (Canada), Marly Babinski (Brazil), Yves Goddérés (France), Galen Halverson (France), Martin Kennedy (USA), Conall Mac Niocaill (UK), Vibhuti Rai (India), Graham Shields (Australia), Zhu Maoyan (China)  
2005-2009
- 513 **Karst Aquifers and Water Resources**  
Chris Groves (USA), Yuan Daoxian (China), Bartolome Andreo-Navarro (Spain), Heather Viles (UK)  
2005-2009
- 514 **Fluvial Palaeosystems: Evolution and Mineral Deposits**  
N. Patyk-Kara (Russia), A. Duk-Rodkin (Canada), Baohong HOU (Australia), Li Ziyang (China), Vladimir Dolgopolo (Kazakhstan)  
2005-2009

- 515 Coastal Vulnerability related to Sea Level Change**  
U. Simeoni (Italy), Maria Snoussi (Morocco), Zdravko Belberov (Bulgaria), François Sabatier (France)  
2005-2009
- 516 Geological Anatomy of East and South East Asia**  
Ken-ichiro Hisada (Japan), Punya Charusiri (Thailand), Byung-Joo Lee (Rep.of Korea), Xiaochi Jin (China)  
2005-2009
- 518 Fluvial sequences as evidence for landscape and climatic evolution in the Late Cenozoic**  
David Bridgland (UK)  
2005-2009
- 519 Hydrogeology, Hydrochemistry and Management of Coastal Aquifers on the Atlantic Coast of South America**  
Emilia Bocanegra (Argentina)  
2005-2009
- 521 Black Sea - Mediterranean Corridor during the last 30 ky: Sea level change and human adaptation**  
Valentina Yanko-Hombach (Canada), Yucel Yilmaz (Turkey), Pavel Dolukhanov (UK)  
2005-2009
- 522 Dawn of the Danian**  
Jeffrey D. Stilwell (Australia), Claudia Del Río (Argentina)  
2005-2009
- 523 GROWNET – Gobar Ground Water Network**  
Shrikant Daji LIMAYE (India), Dr A J Reedman (UK)  
2005-2009

# Acronyms Used by IUGS

AAPG	American Association of Petroleum Geologists
AEG	Association of Exploration Geochemists
AEGS	Association of European Geological Societies
AGA	Arab Geologists Association
AGI	American Geological Institute
AGID	Association of Geoscientists for International Development
AGU	American Geophysical Union
AIPEA	Association Internationale Pour l'Etude des
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe
BGS	British Geological Survey
BRGM	Bureau de recherches géologiques et minières
CCOP	Committee for Coastal and Offshore Geoscience Programmes in E & SE Asia
CEI	Central European Initiative
CGI	Commission on the Management and Application of Geoscience Information
CGMW	Commission for the Geological Map of the World
CHRONOS	Interactive Chronostratigraphy and Stratigraphic Databases
CIFEG	International Centre for Training and Exchanges in the Geosciences
COGEOETT	Commission for Education, Training and Technology Transfer
COGEOINFO	old acronym for CGI
COILS	Committee on Interdisciplinary Lithosphere Surveys
COMTEC	Commission for Tectonics (currently being reformulated as TGTSG)
COPCSE	Commission on the Physics and Chemistry of the Solid Earth
CPCEMR	Circum-Pacific Council for Energy and Mineral Resources
CRD	Committee for Research Directions
CSP	Commission on Systematics in Petrology
DIVERSITAS	International Programme on Biodiversity Science
DMP	Deposit Modelling Programme (now called MRSP)
EASE	European Association of Science Editors
ECROFI	European Current Research on Fluid Inclusions
EGN	European Geoparks Network
EGS	European Geophysical Society (now part of EGU)
EGU	European Geosciences Union
EITI	Extractive Industry Transparency Initiative
EMPG	European Mineralogy, Petrology & Geochemistry Symposia
EMU	European Mineralogical Union
Episodes	Episodes – IUGS' journal
esfs	Earth Sciences for Society (International Year of Planet Earth tag-line)
ECGSEP	European Commission on the Geological Sciences for Environmental Planning
EUG	European Union of Geosciences (now part of EGU)
FOREGS	Forum of the European Geological Survey Directors
GARS	Geological Applications of Remote Sensing
GCOS	Global Climate Observing System (part of IGOS)
GEM	Commission on Geology for Environmental Management
GIS-UDRIL	GIS Upstream Digital Reference Information Library (from AAPG)
GS	Geochemical Society
GSA	Geological Society of America
GSAf	Geological Society of Africa
GSL	Geological Society of London
GSSP	Global Boundary Stratotype Section and Point
GTOS	Global Terrestrial Observing System (part of IGOS)
GV	Geologische Vereinigung
IAEG	International Association of Engineering Geology and the Environment
IAG	International Association of Geomorphologists
IAGC	International Association of Geochemistry and Cosmochemistry
IAGOD	International Association on the Genesis of Ore Deposits
IAH	International Association of Hydrogeologists
IAMG	International Association of Mathematical Geologists
IAS	International Association of Sedimentologists
ICESA	International Commission for the Earth Sciences in Africa

ICL	International Consortium on Landslides
ICS	International Commission on Stratigraphy
ICSU	International Council for Science
IFPS	International Federation of Palynological Societies
IGBP	International Geosphere-Biosphere Programme
IGCP	International Geoscience Programme (formerly Int. Geol. Correlation Prog.)
IGEO	International Geoscience Education Organization
IGES	International Geochemical Exploration Symposia
IGOS	Integrated Global Observation System
IGU	International Geographical Union
ILP	International Lithosphere Programme (run by SCL)
IMA	International Mineralogical Association
IMGA	International Medical Geology Association
INHIGEO	International Commission on the History of Geological Sciences
INQUA	International Union for Quaternary Research
IYPE	International Year of Planet Earth
IPA	International Palaeontological Association
IPA	International Permafrost Association
IPL	International Programme on Landslides
ISRM	International Society for Rock Mechanics
ISSMGE	International Society of Soil Mechanics and Geotechnical Engineering
IUGG	International Union of Geodesy & Geophysics
IUGS	International Union of Geological Sciences
IUHPS	International Union for the History and Philosophy of Science
JNCC	Joint Nature Conservancy Council (UK)
LEGENDS	Lithospheric Evolution of Gondwana East from Interdisciplinary Deep Surveys
MAEGS	Meeting of the Association of European Geological Societies
MetSoc	Meteoritical Society
MRSP	Mineral Resources Sustainability Programme (formerly DMP)
MTG	Multi-lingual Thesaurus for the Geosciences
NGO	Non-governmental organisation
NPS	New Publications Series (of IUGS; now wound-up)
NSF	National Science Foundation (of the USA)
PANGIS	Pan-African Network for a Geological Information System
ProGeo	European Association for the Conservation of the Geological Heritage
SANGIS	South East Asian Network for a Geological Information System
SAP	Strategic Action Plan
SHW	Science for Health and Wellbeing
SCL	Scientific Committee on the Lithosphere (organising committee of ILP)
SCOPE	Scientific Committee on Problems in the Environment
SDBP	Sub-commission on Databases in Petrology
SEG	Society of Economic Geologists
SEPM	Society for Sedimentary Geologists
SGA	Society for Geology Applied to Mineral Deposits
SPC	Strategic Planning Committee
SSIR	Sub-commission on the Systematics of Igneous Rocks
SSMR	Sub-commission on the Systematics of Metamorphic Rocks
TGFF	Task Group on Fossil Fuels
TGGDC	Task Group on Geochronological Decay Constants
TGGGB	Task Group on Global Geochemical Baselines
TGPA	Task Group on Public Affairs
TECTASK	Task Group Tectonics and Structural Geology
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USGS	United States Geological Survey

## IUGS PRESIDENT 2004-2008

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