2009

IUGS Annual Report

www.iugs.org

IUGS Secretariat

8/3/2009

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About the Front Cover

Torres del Paine Mountains from Pehoe Lake, Southern Chile.

Photo courtesy of M. Veira

About the IUGS Logo

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

INTERNATIONAL UNION OF GEOLOGICAL S CIENCES

Annual Report 2009

Contents Page

Foreword 3

IUGS — role, structure, membership 4

International Year of Planet Earth 8

Activities of IUGS 10

International Council for Science (ICSU) 12

IGCP Update 16

Treasurer's Report 18

Scientific Activities of IUGS 20

Organizations Affiliated with IUGS 29

Appendices 54

Please cite the report as:

"Annual Report of the International Union of Geological Sciences for 2009"

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

Foreword

This Annual Report of the International Union of Geological Sciences (IUGS) covers activities in 2009. IUGS grew in membership, in number of affiliated organizations 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).

In 2009, 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 full implementation of the International Year of Planet Earth (IYPE) and the final wrap up of the 33rd International Geological Congress in Oslo, Norway (2008), as well as a number of other important tasks.

IYPE progressed and gained great popularity in the world. IUGS also actively participated in the Global GeoPark activities, a new initiative with UNESCO, and UNESCO`s Initiative for Earth Science Education in Africa During 2009 IUGS also became officially involved in the OneGeology initiative, and in the Group on Earth Observations (GEO). Other areas where the Union continues to serve the world geological community are data and terminology standardization, database development and management. IUGS seeks ways to make the service available not only at the high end of the technology, but also as services easily acceptable for a wide range of geologists, without replicating those services already available.

IUGS — Role, Structure, Membership

By Alberto RICCARDI

President of IUGS 2008 -2012

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 Organizations 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 organization.

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 Councilors). The officers play an active role in running the Union, developing new science programs, 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 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 three Executive Committees.

Most of the present Executive Committee (Appendix 1) will serve until the 34th IGC meeting in Brisbane, Australia, in August 2012, but, as proposed in the Strategic Planning Committee, the two Councilors appointed in 2010 remain in office until 2014 , 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 cognizant 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 has been 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 Organizations and affiliated members. The Permanent Secretariat is also responsible for IUGS' archives.

The Government of Norway will no longer support the Secretariat, beginning in 2010. During 2009, IUGS searched for a new home and the Secretariat was transferred to US Geological Survey in Reston, Virginia, USA in December, 2009. The office of the IUGS Secretariat (until Dec. 2009) 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:

- Serve as an impartial international scientific union addressing global issues that involve the earth sciences.
- 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.
- Represent the geological sciences in governmental and non-governmental forums to inform, advice and influence public policy and decision makers.
- Encourage, in cooperation with other organizations, more interdisciplinary involvement within the broad spectrum of the geosciences in developing solutions to global problems.
- Foster collaboration between developed and developing countries in earth science research, capacity building and applications.
- Contribute to earth science education and the advancement of public understanding of the earth sciences and their significance in solving societal problems.
- Encourage the career development of young earth scientists.
- Increase the relevance of IUGS publications to issues of truly global earth science and make these publications more widely available.
- 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 Organizations of IUGS cover the majority of geoscientists of the world. Affiliated organizations (primarily international professional scientific societies) provide a valuable link to a wide cross-section of the world's earth science community. These organizations range in size from less than 100 to nearly 50,000 members.

Appendix 2, gives a full list of the current Adhering Organizations, together with their membership category and status during 2009.

Not all Adhering Organizations maintain an active membership. Members are classified as inactive if they have not paid for 3 years. Inactive Adhering Organizations must pay the Membership Fees for the previous two years as well as the current outstanding year in order to regain an active status. The Fees for 2008-2009 are given in Appendix 3. Only those Adhering Organizations with an active status can vote

on IUGS matters; inactive Adhering Organizations 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 2). 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 (IYPE) 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.

IYPE enjoys global support through UN proclamation, unanimous by all 192 UN member countries. Moreover, the IYPE is actively supported by National Committees in 80 nations. Apart from the Initiators IUGS and UNESCO, IYPE is actively supported by 11 Founding Partners, 36 International Partners, and 25 Associate Partners.

INTERFACE WITH OTHER INTERNATIONAL PROJECTS:

One of the IYPE flagship projects is OneGeology. Another one is the YES initiative, a network of young Earth scientists. Moreover, IYPE co-sponsors the UNESCO Initiative for Earth Science Education in Africa.

CHIEF ACCOMPLISHMENTS IN 2009:

- Planet Earth Lisbon 2009 event in November 2009 hosted by the Portuguese Government National Launches in various countries, strong increase in International partners.
- Publication of the first book in the IYPE-SPRINGER Series on Deep Earth theme, with 9 more titles expected to come in 2010 ;
- Planet Earth book, 2 issues
- New Initiative: The Planet Earth Institute

For more, see www.yearofplanetearth.org

Reports from the Executive Committee

IUGS ACTIVITIES IN 2009

By Alberto RICCARDI

President of IUGS 2008-2012

As announced in 2008, when I was elected as IUGS President, one of the main ideas for the development of IUGS activities in a context of limited funds was the promotion of national and international "grassroots" actions within the framework provided by the goals, strategies and priorities shared by IUGS and other international organizations. For that purpose it became necessary to initiate a Strategic Planning Committee (SPC) to perform a detailed analysis of IUGS external and internal scenarios, with the final goal of addressing as efficiently as possible all earth science issues relevant to the society. Thus, following the approval of the SPC Terms of Reference the two IUGS Vice-Presidents and the Chairs of four IUGS commissions were appointed to provide the necessary links with adhering and affiliate members in activities related to geoinformation, geoeducation, standards and the environment. Two additional members were also appointed on the basis of their expertise in relation to International Geological Congresses and strategic matters. To serve the aims just mentioned, different guidelines were prepared on the work to be done by different members of the EC in relation to Adhering and Affiliate Members, E-Bulletin, IYPE, IGCP and Inactive Members. At the same time IUGS Adhering and Affiliate members and IUGS bodies were informed and their support was requested, to promote multilateral cooperation between them and to increase a productive exchange with other international organizations in matters related to IUGS strategic priorities.

In the External Scenario a number of actions were taken in order to develop a better interaction with other organizations. Directed to that goal was the IUGS Bureau's participation in the 29th General Assembly of the International Council for Science (ICSU) (October, 2008). On the occasion, a meeting of geo-related organizations under ICSU's umbrella was directed to coordinate geoscientific activities. Additionally, in this meeting and in a visit to ICSU's headquarters in February 2009, specific overtures were made to improve the relationship with ICSU's officers and to convey them the intention to maintain and reinforce IUGS participation on all those activities related to ICSU's established priorities on "Environment in Relation to Sustainable Development", "Scientific Data and Information", and "Capacity Building in Science", focused in developing countries. It was considered that IUGS could participate through some of its bodies, such as the Commission on Education, Training & Tech Transfer (COGE), the IUGS Commission for Environmental Management (GEM) and the IUGS Commission on the Management & Application of Geoscience Information (CGI), and in providing links to its affiliated members. On that basis and in order to explore in more detail possible interactions, three members of IUGS Executive Committee were designated to act as liaison between IUGS and ICSU's Regional Offices for Africa, Asia and the Pacific, and Latin America and the Caribbean. With regard to UNESCO, several meetings were held in February 2009 with different officers of the Natural Sciences Sector and the Division of Ecological and Earth Sciences, as well as with UNESCO's General Director. There it was exposed IUGS interest not only in reinforcing existing joint initiatives, such as the International Geoscience Program (IGCP), the Geological Applications of Remote Sensing (GARS) and the International Year of Planet Earth (IYPE 2007-2009), but also in exploring new possibilities in relation to UNESCO's Mid-Term Strategy (2008-2013). In this context it has been proposed, for the IGCP to

study the implementation of a more accountable emphasis on capacity building and on transference of scientific knowledge from developed to developing countries and, as done for ICSU, three members of the EC were designated to act as liaison between IUGS and UNESCO's Regional Science Offices. Additionally and within a vision focused in geoeducation for the general public, preservation of the environment and geological heritage, sustainable development, transference of knowledge, data management and promotion of global standards, the IUGS has become actively involved in promoting the Geopark initiative as member of the Bureau of the Global Geoparks Network.

On the external scenario the IUGS was also recognized as a Participating Organization in GEO (Group on Earth Observations), a voluntary partnership of governments and international organizations, which is coordinating international efforts to build a Global Observation System of Systems (GEOSS). The aim is to construct a global public infrastructure for Earth observations like Internet, will consist of a flexible and distributed network of content providers, where some of the priority areas are of interest to Earth sciences.

With regard to communications and visibility in relation to the International Year of Planet Earth initiative, which was launched by IUGS to demonstrate the potential role of the Earth sciences for building a safer, healthier and wealthier society, the IUGS has continued supporting this important initiative and has been considering ways in which its results could be built upon beyond 2010. Thus the IUGS is supporting the OneGeology project, involving the participation of Geological Surveys around the world in the integration of data in standard format within a dynamic web portal. The IUGS is also supporting the interaction this project has with the IUGS CGI, and is looking forward to a closer collaboration on geostandards with other IUGS bodies and the 34th International Geological Congress (Brisbane, 2012). IUGS support of OneGeology is also connected to IUGS interest on possible interactions with geological surveys through organizations such as the EuroGeoSurveys and the "Asociación de Servicios de Geología y Minería Iberoamericanos" (ASGMI). Another important outcome of the IYPE has been the attraction it has exerted on young people and the organization of the First World Young-Earth-Scientists (YES) Congress (25 - 28 October 2009, Beijing), under the patronage of UNESCO. The IUGS has given its full support to this meeting in the hope that this initiative will result in a permanent world-wide network of young professionals, scientists and politicians, as one of the important legacies of the IYPE.

During 2009 the IUGS was confronted with two new situations in areas that are fundamental for its work and visibility. In January 2009, the IUGS was informed by the Norwegian National Committee for Geology that their support to the IUGS Secretariat will be terminated by the end of 2009, an understandable decision after many years of generous support. Thus, the IUGS worked to relocate its Secretariat in another country, and for the end of 2009 it was relocated in the United States Geological Survey, U.S.A. On another issue, at the end of 2008 China's editorial responsibility on the journal *Episodes* was terminated, as established in a MOU between the China Ministry of Land and Resources and IUGS. In January 2009 the EC of the IUGS expressed its thanks to the Government of China and all the members of the editorial staff for the excellent work done, and at the same time accepted a kind and generous proposal by the Geological Society of India to publish *Episodes* for the period 2009-2012. Since then a smooth transition of the editorial office from China to India has taken place and the *Episodes* is now published with the same quality standards and was fully up-to-date by the end of 2009. In connection with policies on communication another important work undertaken was in relation to improve the content, management system and graphical improvement of the IUGS website, which was completed by the end of 2009.

On behalf of the EC I extend my thanks to all those who have helped and are helping on these and other endeavors. As ever the support and collaboration of the whole IUGS constituency is essential to maintain and improve IUGS efficiency in attaining its goals.

THE INTERNATIONAL COUNCIL FOR SCIENCE (ICSU)

By Alberto RICCARDI

President of IUGS 2008-2012

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 various unions in each scientific discipline. There are now almost 30 of these unions, including the eight Earth science related unions (informally called the GeoUnions). They include: 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 Union of Radio Science (URSI), 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 scientific cooperation. ICSU serves the scientific world and the general public in several areas:

- Forms standing scientific committees that cross union disciplinary boundaries in order to encourage research and scholarship in those areas that require a multidisciplinary approach.
- Acts as a lighthouse in the enforcement of freedom of access for all scientists to international meetings, workshops, and visits; and listing behavioral standards of scientific ethics.
- Enhances capacity building, especially in developing countries, by working with its unions to ensure that scientists in developing countries are included in projects, made aware of opportunities, and included in scientific dialogues.
- Issues position statements on topics that are controversial to some, but in which scientists have a firm opinion.
- Conducts a small but useful cross-disciplinary grants program, 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.

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 geoscience 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

The tasks of the Secretary General proved challenging during 2009. 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 2009, 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 IYPE 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 was instrumental in the launching with UNESCO the International Year of Planet Earth (2008-2009), described elsewhere in this Annual Report.

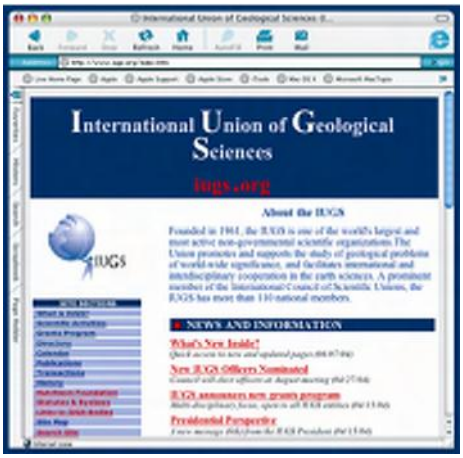
"Corporate accountability" is maintained through the publication of the Annual Report and Minutes of the Executive Committee Meeting. These formal documents create a more professional and structured image to non- geologists and are welcomed by government politicians and bureaucrats, non-geological organizations and societies. In 2009, the Annual Report for 2008 was released as a digital file downloadable on the IUGS homepage.

The distribution of monthly electronic Bulletins to its Adhering Organizations, scientific bodies and Affiliated Organizations has been widely lauded. These short, informal "news bites" briefly convey current 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 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).



IGCP UPDATE

By GEREL Ochir (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. 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:

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.

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.

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. 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 William CAVAZZA (Treasurer)

The IUGS Office of the Treasurer at the University of Bologna operates two bank accounts (USD and €) at *UniCredit Banca SpA* (Bologna). IUGS also owns two guaranteed deposit accounts with *Assicurazioni Generali* (Trieste). As of December 31st 2009, IUGS financial assets totalled 1,089,703.38 USD, including the (i) Hutchison, (ii) Russian, and (iii) Officers from Developing Countries reserve accounts. Total financial assets include 506,595.02 € in the two guaranteed deposit accounts mentioned above. The complete IUGS Financial Situation and Statement for 2009 is published in *Episodes* (v. 33, p. 134-135).

IUGS Income

78% of IUGS 2009 income came from the Adhering Members; the remaining 22% came –in decreasing order of importance- from (i) UNESCO, (ii) the Local Organizing Committee of the 34th International Geological Congress (Brisbane), (iii) publication royalties, (iv) and bank/investment interests. UNESCO's contribution for 2009 to the International Geoscience Programme (IGCP) included contributions from IYPE (50,000 USD), the Government of the People's Republic of China (20,000 USD), and the Government of the United States of America (10,000 USD). The IUGS President, Treasurer and Secretary General all have their travel expenses – in total or part- covered by their own respective countries; the expenses for the rest of the IUGS Executive Committee are covered by IUGS.

The year 2009 represents an all-time high in IUGS membership (see table below). Kosovo and Tajikistan joined IUGS in 2009 as Category 2 Adhering Organizations.

Status of Adhering Members by fees category - 2009

Category	Active	Inactive	Total	Number of Adhering Members that paid in 2009*
1	43	26	69	25 (26)
2	16	1	17	13 (11)
3	16	-	16	14 (15)
4	8	-	8	8 (8)
5	1	-	1	1 (1)
6	2	-	2	2 (2)
7	4	-	4	3 (3)
8	4	-	4	4 (4)
Total	**94** (94 in 2008) (88 in 2007)	**27** (25 in 2008) (30 in 2007)	**121** (119 in 2008) (118 in 2007)	**70** (70 in 2008) (66 in 2007)

*as of Dec. 31, 2009; in brackets the number of Adhering Members that paid in 2008.

IUGS Expenditures

About 80% of the expenses for the year 2009 went directly to the funding of IUGS scientific activities (IGCP, publications, support of commissions, committees, affiliated organizations, task groups). The remaining 20% was spent for IUGS routine meetings, for representative meetings, ad-hoc reviews of IUGS committees, the contribution to ICSU, and promotion.

Total allocation for IGCP 2009 was 189,500 USD compared to 166,000 USD in 2008. During 2009 IUGS received 60,000 USD from UNESCO for IGCP, of which 5,299 USD were for IGCP 2008. A portion (31,500 USD) of the 2009 allocation was transferred by UNESCO to its Field Offices. The remaining 158,000 USD (and 8,000 USD for IGCP 2008) were administed directly by the IUGS Office of the Treasurer at the University of Bologna.

A total of USD 108,000 was allocated to the IUGS Commissions. The largest amount was allocated to the International Commission on Stratigraphy – ICS (USD 40,000.00). A total of USD 16,002 was allocated to the following Joint Programs: Scientific Commission on the Lithosphere (ILP), GARS and Geoparks Network.

IUGS expenditures often do not reflect the real costs. Our 2009 annual contribution of USD 23,000 to EPISODES for editing, lay-out, printing, and distribution, covers only a part of the actual costs incurred by the Geological Society of India which hosted 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 –or part- of their travel costs. These forms of support save IUGS about USD 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. From January 1st, 2010, the Permanent Secretariat will be hosted by the United States Geological Survey in Reston, Virginia. IUGS is extremely grateful to the Argentinean, Canadian, Indian, Italian, Norwegian, and U.S.A. governments for this generous support that enables the Union to invest significantly more in science development than would be otherwise possible.

Balance as of December 31st, 2009	
Income 2009:	USD **+ 455,158.61**
Expenses 2009:	USD **- 426,157.00**
Balance:	USD **+ 29,001.61**

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), the Mineral Resources Sustainability Project (MRSP), and the Global Geoparks Network programs. IUGS also collaborates with ICSU and IUGG in the Scientific Committee for the Lithosphere (SCL), which co-ordinates the International Lithosphere Program (ILP). In these programs, 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 program at the quadrennial IGC. The IUGS also participates in the Group on Earth Observations (GEO) and the OneGeology Initiative.

IUGS Committees

Ad hoc Review Committees

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. This is carried out by Ad Hoc Review Committees (ARC's), which are staffed by members of the IUGS Executive Committee.

On 24-25 September 2009 an ARC reviewed the IUGS Commission on the Management and Application of Geoscience Information (CGI) and the review report will be published in Episodes in 2010.

Nominating Committee

Past President of IUGS, Prof. Zhang Hongren, was appointed Chair of the Nominating Committee, by the IUGS Council in Oslo. The Nominating Committee is responsible for making nominations for the positions on the Executive Committee.

Publications Committee

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, until June 2009)

Fred Spilhaus (Executive Director AGU, Washington, D.C. , became the new Chair on 19 September 2009)

Ex officio members:

Mudlappa Jayananda (Editor, Episodes, India)

Zhenyu Yang (Previous Editor, Episodes, Nanjing, China)

The Committee also keeps in close contact with Peter Bobrowsky, 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.

Strategic Planning Committee (SPC)

The SPC was established during 2009 and is in charge of advising and formulating recommendations to the Executive Committee on new opportunities and strategies for IUGS in its external and internal scenarios.

The committee consists of the following members:

Atilio Boriani (Chair, Università degli Studi di Milano, Italy), Jacques Charvet (IUGS Vice-President), Ochir Gerel (IUGS Vicepresident), Gary Lewis (COGE Chair), Kristine Asch (CGI Chair), Kevin Telmer (GEM Chair), Stan Finney (ICS Chair), Peter Cook (Research Centre for Greenhouse Gas Technologies, Australia)

Finance Committee (FC)

Following the IUGS Statutes (# 44) and a recommendation (18) by the IUGS Strategic Action Plan (2000) Terms of Reference for a Finance Committee were approved by the EC at the end of 2009, with the following primary roles: 1) Identify external financial opportunities for IUGS; 2).

Propose to the EC ways to improve IUGS financial operations, including the allocation of funds in relation to the strategic priorities and missions adopted by the EC; 3) To audit IUGS finances and present a report to the IUGS Council every four years before the election of a new EC.

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 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.

During 2009 there has been an increase in the geographic spread of COGE with four new commissioners having agreed to serve on COGE. Funded by the US National Science Foundation, a document on Earth Science Literacy was released, outlining the top Earth science 'ideas'. COGE has also promoted the 3rd IESO 2009 which was recently held in Taiwan during September 14-22, 2009, with 117 participants from 17 countries registered with an average age of 16.6.

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. During 2009 the Interoperability Working Group (IWG) of the CGI has continued to focus on the development and implementation of GeoSciML as an interchange format for geoscience data. The CGI Interoperability Working Group and the Multilingual Thesaurus of Geosciences are working closely to address a number of vocabulary issues common to both groups. CGI continues to represent the IUGS at CODATA, where the evolution and acceptance of the GeoSciML standards and its demonstration through the OneGeology initiative has generated considerable interest. CGI and its members of its Council continue to be very closely involved in the development of OneGeology – the global initiative to make digital geological map data for the Earth more accessible. Currently 113 nations are participating in OneGeology and 40 of these are serving 219 datasets to the OneGeology web portal (http://portal.onegeology.org/). CGI practice in research data management was identified as best practice and targeted for further study and broader adoption by ICSU's Strategic Coordinating Committee for Information and Data (SCCID). SCCID will advise ICSU on future directions for CODATA and the World Data System (WDS). CGI is actively involved in various continents particularly through collaboration with agencies, and with the holding of several conferences in: Europe, North America, South America, Asia, Oceania, and Africa. CGI has 239 members in 64 countries across the world.

The Commission maintains an updated and informative website:

http://www.bgs.ac.uk/cgi_web/welcome.html

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 216 members in 46 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.

Publication productivity in 2009 remained high with "Geology and Religion: A history of harmony and hostility" being issued by the Geological Society of London as Special Publication SP-310 and including a collection of 32 research papers totaling 368 pages. INHIGEO members have also contributed to Episodes with significant papers of historical interest in geology as well as historical reviews of past International Geological Congresses. The annual INHIGEO Newsletter has continued for 2009 as a substantial publication with 124 pages and a newly designed cover, and was also circulated in pdf format for the first time as well as in hard copy. A new INHIGEO website was established in early 2009, providing general information about the Commission. The annual INHIGEO conference for 2009 was held in Calgary, Canada, focusing on the historical development of significant fossil sites and of the petroleum industry. INHIGEO Members also organized two symposia on Geological and paleontological sciences in cultural contexts from the 17th to 20th centuries and on Instruments in the History of the earth sciences' at the *XXIII International Congress of History of Science & Technology* in Budapest, Hungary.

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 caliber. 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 total agreement. The limited progress is due in part to the remaining undefined stage (series and system) boundaries being difficult to define for a variety of reasons and the subcommissions having addressed the "easy" boundaries first.

Having been in office for just over one year, the current ICS executive has installed its own approach for resolving important ICS matters, namely one that is open and democratic, addressing all matters with extended, open discussion and deliberation and deciding them with majority votes. This approach was best demonstrated by the manner in which the controversy regarding definitions of the Quaternary and Pleistocene were addressed. This included widely advertising and holding an open discussion session at the 33rd IGC for presentation of proposals in a setting in which all proposals and positions could be not only presented but also challenged. It was followed by submission of formal proposals, which the responsible subcommissions were directed to discuss and deliberate and then vote to approve or reject. Subsequently, the proposals were subject to six weeks of internet-based discussion before being voted on by the ICS Bureau. Such an approach is time consuming, but it ensures that all who want to contribute to the discussion can, including those who are not members of ICS. It ensures that all positions are not only presented but also challenged in order that those voting can make informed decisions.

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 organizations, 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 own 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 are a field in which international organizations are highly necessary.

IUGS Initiatives

GeoHeritage and Geoparks

The Secretary General is primarily responsible for all GeoHeritage issues for the Union, Councillor Colin Simpson represents IUGS in the Bureau of UNESCO's Global GeoParks Network (GGN) and Vice-President Jacques Charvet represents IUGS in the European GeoParks Network (EGN).

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 a Memorandum of Understanding (MoU) with the International Union for the Conservation of Nature (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.

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 recognized and measured. The Task Group is organized 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 Isotopic Geology (TGIG)

The TGIG is a joint working group of IUGS and IUPAC (International Union of Pure and Applied Chemistry). 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 was focused on nine nuclides (40K, 87Rb, 138La, 147Sm, 176Lu, 187Re, 232Th, 235U, 238U).

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 programs) and Europe. 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) as the major platform for the group's activities.

The year of 2009 was for TecTask a special period as the Task Group is in the process to become elevated to an IUGS commission on Structural Geology and Tectonics. TecTask is in the process to comply with the established statutes and by-laws. At the same time it seeks rejuvenation of the commission board while striving for a balanced representation of the diversity in the global Earth Science community. The major topics for 2009 revolve around training courses (Africa,), the increase of TecTask community which accounts now about registered 850 members and activities to develop a world data base on significant outcrops (Outcropedia). TecTask is pursuing better communication and establishment of appropriate networks among individual scientific organizations and research groups (e.g. national Tectonic Study Groups). An important role is the educational one, in the field and in the lab.

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 program 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 focusing 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. GARS Programme has a strong interface with other international projects and thus has continued to enhance the visibility of earth science amongst the space agencies, inter-governmental UN organizations and world research programmes sponsored by GEO.

International Lithosphere Programme (ILP)

This program (http://sclilp.gfz-potsdam.de/index.php?id=38), 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 Program 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 programs that address world-class problems. ILP is in the IYPE as a founding partner, with responsibility for the Deep Earth Team. A Flyer was produced as well as a book in the Springer series (Volume 1: Frontier in Interrelated Solid Earth Sciences). ILP also had several Task Forces. They participated in EGU and disseminated publications. ILP held annual meetings in Albania, Canada, France, Mexico, Morocco, and UAE (Au Dhabi).

IUGS-UNESCO Task Group on Global Workforce (TGGW)

The IUGS-sponsored taskforce on the Global Geoscience Workforce is focused on illuminating three distinct issues: 1. Establish definitions of comparability of data and information regarding the jobs, education, fields, and international mobility of geoscientists. 2. Determine a global baseline knowledge of the quantity and diversity of the geoscience workforce. 3. Identify capacity-building strategies for a durable global competency in the Earth sciences.

The participants in the taskforce are recruited from national organizations such as national geological surveys or national societies who have specific knowledge of the human resource capacity of the geosciences in their geographic region and/or a specific employment regime. Most of these individuals are expected to be middle-level professionals who have as a primary responsibility to monitor these issues for their institution and to advise their leadership. During April 2009 the American Geological Institute began recruiting membership of the taskforce from the participants in the WSS-22 workshop at the 33rd IGC in Oslo, from contacts in industry and national geological surveys, and through recommendations of individuals in these populations. During that time, AGI recruited individuals from North America, Europe, Asia, Africa, and Australia, while nearing identification of individuals in

South America and deeper exposure in Asia and Africa. During May 2009, the American Geological Institute was notified of an interest of aligning the taskforce jointly with IUGS and UNESCO. AGI engaged discussions with UNESCO regarding this association and have come to an understanding that it will not need to consider this an official UNESCO designation, but that they are interested as a party in participation and result. With this development, the taskforce has again reengaged individuals to expand its scope so that it will be possible to begin the key fundamental discussions regarding a baseline of comparability in definition of 'geoscientist' and their activities.

Organizations Affiliated with IUGS

Through its expanding number of Affiliated Organizations, IUGS maintains contact with the broadest possible range of Earth Scientists. The Affiliated Organizations not only provide important expertise for the Union, but also disseminate information coming from IUGS to their members.

African Association of Women in Geosciences (AAWG)

The AAWG was born in Nairobi, Kenya in 1995 in order to encourage women geoscientists in Africa to participate in Earth Sciences related conferences and to inform about or become involved in gender issues related to the Earth Sciences.

During 2009 the AAWG held and participated in several meetings: Pre-congress meeting of the fifth conference of the African Association of Women in Geosciences "AAWG" entitled "Women and Geosciences for Peace" (Abidjan, Ivory Coast, May 2009), First International Conference on Girls and Women in S & T in Africa (Bamako, Mali, July 2009), UNESCO Earth Science Education Initiative in Africa Workshops (Dakar, Senegal, February, 2009; Assiut, Egypt, October, 2009), roundtable "Women in the Geosciences Workforce", Young Earth Sciences Congress (Beijing, October, 2009), First Journeys of Earth Sciences of Doukkala-Abda Region (El Jadida, Morocco, December 2009. The AAWG website: www.aawg.org is sponsored by the Geological Society of Romania.

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 organizations, 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 amounts to about 32,000. Meetings included the the Annual Meeting in Houston and the International Convention (Denver). 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 reached digital metadata agreements with a number of partners to add information from 130 additional journals to GeoRef. 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.

AGI continues to make progress on some key areas, including education, outreach, government affairs, GeoRef, and environmental affairs. An activity of significance is an effort to increase communication between AGI and its member societies. AGI conducted numerous conduct interviews with the Presidents and Executive Directors of its federation members. In the important area of K-12 education, AGI has completed *The Earth and You* video for elementary classrooms. AGI also received a grant from the National Science Foundation in support of the 2010 Earth Science Education Summit to be held February 9-11, 2010, Houston, Texas. AGI's High School Environmental Science curriculum is complete was to be available and marketed in December 2009. In addition, AGI conducted leadership workshops in Houston during the summer for K-5 teachers and middle school teachers. Finally, Earth Science Week 2009, with a theme of *Understanding Climate*, received funding support from numerous government and industry partners. The impact of Earth Science Week continues to grow and reached more than 20 million individuals this year. AGI sponsored an International Photo Contest in support of IYPE. On environmental activities AGI published the new Environmental Awareness Series book "Living with Unstable Ground" and another book on Remote Sensing is in preparation.

It is the first-year anniversary of the transition from *Geotimes* to EARTH. Reader support and interest has been good. The AGI led the effort to support a series of virtual roundtable that were held as part of the Young Earth-Scientists Congress in Beijing in October. AGI feels this technology and approach will be more widely used in the geosciences in the future.

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. It is an active Union with over 55,000

members ranging from geologists to astrophysicists. AGU's supports more than 5300 scientific article publications per year, with online publication of 10-20 articles daily. It's has a worldwide meetings program and their 2009 Fall Meeting, attracted more than 15,000 attendees from over 100 countries. It has outreach efforts in education, science policy, and public information.

Arab Geologists Association (AGA)

AGA has a significant role in the organization of geology in Arabian countries, which helps in promoting IUGS visibility in this area.. A meeting of AGA in Jordan in May 2009 was attended by delegates of Iraq, Jordan, Yemen, Libya, Egypt, Sudan, and Syria. A conference of Syrian geologists was held on October 2009 in relation to AGA and under the patronage of the Ministry of Oil and Mineral Resources of Syria.

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. The Association sponsors the publication of the journal Geochemistry: Exploration, Environment, Analysis in partnership with the Geological Society of London, and publishes a quarterly newsletter, EXPLORE, which is distributed throughout the world and contains timely articles on a variety of applied geochemistry topics. The Association also produces special publications and conducts short courses on topics of concern in the fields of applied geochemistry. In June of 2009, AAG hosted its biennial symposium (the 24th International Applied Geochemistry Symposium) in Fredericton, New Brunswick, Canada. The AAG sponsors an annual Distinguished Lecturer Series. For 2007 - 2009, Dr. Kurt Kyser, Director of the Queen's Facility for Isotope Research at Queen's University in Kingston, Ontario, Canada served the Association in this important capacity. Visit the Website at: http://www.appliedgeochemists.org/

Association Pour l'Etude des Argile

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. AIPEA's efforts in 2009 were directed towards activities in support of the organization of the 14th International Clay Conference (14ICC), its most important technical event, which took place at Castellaneta Marina (Italy) during June 14-20th, 2009 (see HYPERLINK "http://www.14icc.org" www.14icc.org).

Association of European Geological Societies (AEGS)

The Association currently has 31 members from 29 countries. Membership to AEGS is open to all nongovernmental societies, institutions and organizations 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. During 2009 the MAEGS-16 was held on July in Cluj/Napoca (Romania).Scientific sessions were focused on Education in Geology, Geology and Cultural Heritage, 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. 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 2009. 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), 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. During 2009 many activities were continued and some new initiatives commenced: e.g. the GROWNET project, an internet-based project disseminating examples and discussion on best practices in groundwater development and management in low-income developing countries via a dedicated website (HYPERLINK http://www.igcp-grownet.org www.igcp-grownet.org), which is funded through IGCP; AGID IYPE Outreach Project entitled "Geoscience Information for Schools in Developing Countries", with a short title, intended for

school children, “The Earth and Me”, or TEAM, which has the aim to produce simple leaflets on practical geoscience topics, published in vernacular languages, and distributed free to schools in deprived areas of low-income countries; AGID Working Group on Geoethics, which produces a regular Newsletter and organized a session in October 2009; an international conference “Geoscience for Global Development” was organised by AGID, The Bangladesh Geological Survey, Geological Society of Bangladesh and IGEO (Dhaka, Bangladesh, October 2009). AGID continues to communicate and disseminate information through AGID’s GEOSCIENCE NEWSLETTER . and its website.

Balkan Geophysical Society (BGS)

The Balkan Geophysical Society (BGS) is a non-profit organization, constituted in accordance with the agreement which was set up in 1993 between the geophysical societies of Balkan peninsula countries. The member societies include:

- Association of Geophysicists of Albania
- Bulgarian Geophysical Society
- Hellenic Geophysical Union
- Association of Hungarian Geophysicists
- Romanian Society of Geophysics
- The Chamber of Geophysical Engineers of Turkey
- Geophysical Society of Yugoslavia

The objectives of the BGS are to promote the application of geophysics, to foster the collaboration and mutual assistance between geophysicists of member countries. The BGS achieves its objectives through joint research projects, publications, congresses, workshops, courses, inviting lecturers. The BGS shall be to develop closer cooperation with the international geophysical societies. Please visit the website :

www.balkangeophysoc.gr

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). During 2009 it was established the Organising Committee of the CBGA XIX Congress

which will take place in Thessaloniki, Greece on September 2010, and a final agreement was reached between CBGA and the Official Journals of CBGA, GEOLOGICA CARPATHICA (Slovakia) and GEOLOGICA BALKANICA (Bulgaria) on publishing, free of charge, issues of CBGA. The CBGA web page was established through the 2010 CBGA Congress web page (http://www.cbga2010.org/CBGA.htm).

Centre Internationale pour la Formation et les Echanges Geologiques (CIFEG)

French (non-profit) Foundation with support from UNESCO, IUGS, BRGM, and Ministry of Foreign European Affairs. The main goal of CIEFG is to facilitate multilateral exchange of geoscientific knowledge between the North and South. Has interface with UNESCO (Earth Sciences Education in Africa – www.earth-science-education-initiative-africa.org) and AEGOS (African European Geo-Resources Operation System - www.aegos.org). 2009 accomplishments include different activities in relation to: 1) Mawari Project (Sustainable Management of groundwater resources in the Rift System); 2) PANGIS (Pan African Network for a Geological Information System); 3) SANGIS (South East Asia Network for a Geological Information System)**; 4)** *Training activities*: Assistance provided to the Ministry of the Mines and Geology of the Republic of Guinea.

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

The Circum-Pacific Council for Energy and Mineral Resources was founded in 1972. It is a non-profit international organization of Earth Scientists and Engineers. The Council develops and promotes research and cooperation among industry, government and academia for the sustainable utilization of earth resources in the Pacific Region. During the last 25 years, CPC has sponsored 5 Pacific-wide conferences, 6 regional symposia and dozens of workshops in different countries. 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 HYPERLINK "http://www.hazpac.org" http://www.hazpac.org; 2) RimSim, short for Pacific Rim 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. The Circum-Pacific Council on Energy and Mineral Resources (CPC) business meeting was held on 23 April 2009. Visit the Website at: http://www.circum-pacificcouncil.org/.

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. Several significant achievements in 2009 concern the publication of maps: 3rd edition of the Geological Map of the World, thoroughly revised, printed at the scale of1:50 M; 1:25 M scale map printed in January to be presented at the next CGMW General Assembly in UNESCO. CGMW is engaged in the realization of two large international mapping projects: the Geological Map of Asia and the Structural Map of the Circum-polar Arctic. The 4th workshop on the International Geological Map of Asia (IGMA) was held in Beijing (October 2009). CGMW is participating in the new UNESCO initiative on Geoscience Education in Africa with the publication in November 2009 of "The changing faces of Africa. Elements of African geology", a booklet presenting a comprehensive synthesis of the geology of Africa. CGMW participated in 7 international meetings in 2009.

Drilling, Observation and Sampling of the Earth's Continental Crust (DOSECC)

DOSECC is a not-for-profit corporation whose mission is to provide leadership and technical support in subsurface sampling and monitoring technology for addressing topics of scientific and societal importance. DOSECC provides the engineering, technology and management support to enable scientists to achieve their objectives. DOSECC since the late 1990's has performed or provided expertise or drilling equipment to more than 39 scientific drilling projects throughout the world. Funding for drilling projects comes from numerous international sources, including the International Continental Scientific Drilling Program (ICDP) and various national scientific funding agencies (e.g. United States, Germany, Austria, Switzerland, etc.). DOSECC communicates to the scientific community by publication of two newsletters annually, production of drilling publications, and booth displays at internationally attended conferences and conventions (GSA, AGU, others on a case-by-case basis). Drilling data and results are communicated to the Principal Investigators of each project, who then compile the data for publication using project results. During 2009 Preparation for, and conduct of, scientific drilling projects in Russia, Israel, Turkey, USA, Macedonia, Ethiopia, and Kazakstan.

European Association of Science Editors (EASE)

EASE (http://www.ease.org.uk/)is a non-governmental and not-for-profit organization operated exclusively for promoting improved communication in geoscience. 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). In September 2009 the EASE triennial conference was held in Pisa in September on Integrity in Science Communication, centered on three themes: Physical integrity, including plagiarism and data preservation; Moral integrity, covering bias in peer review, authorship and conflict of interest; Editorial Responsibility, examining intellectual property and how to detect image manipulation. During 2009 four issues of the journal European Science Editing (ESE) were published and the EASE web site was expanded and an EASEditors Twitter account was launched.

European Federation of Geologists (EFG)

The European Federation of Geologists is a non-governmental organization that was established in 1981 and includes today 20 national association members.

EFG is a professional organisation whose main aims are to contribute to a safer and more sustainable use of the natural environment, to protect and inform the public and to promote a more responsible exploitation of natural resources.

GEOTRAINET, “Geo-Education for a sustainable geothermal heating and cooling market” is a European initiative for training and educating designers and installers of geothermal heat pumps. EFG is also involved in EURO-AGES, TerraFirma and GMES.

The guidelines to achieve these aims are the promotion of excellence in the application of geology and the creation of public awareness of the importance of geoscience for the society. The web site address

Is www.eurogeologists.de

European Geoparks Network (EGN)

The European Geoparks Network (EGN), an active Network of collaboration among European territories, recognized by the European Union, constitutes the European branch of the Global Geoparks Network. Its new affiliation with IUGS (obtained in 2009) will mirror the closer cooperation between IUGS and the Global Geoparks Network through UNESCO.

Established in 2000, the European Geoparks Network (EGN) aims to protect geodiversity, to promote geological heritage to the general public and to support sustainable economic development of geopark territories through the development of geological tourism. Originally consisting of 4 territories, the network has been expanded to include 35 territories in December 2009, across 13 European countries. 4 new members joined the Network during 2009.

A strict evaluation procedure has been settled for new applications and renewal after 4 years; it includes the visit of two experts. 6 Evaluation and 16 revalidation missions took place during 2009.

The EGN organized two meetings in 2009, in Sardinia and Portugal, where was held the 8th European Geoparks Conference with more than 350 participants; and published the European Geoparks book (176 pages). The annual International Intensive Course on Geoparks, co-organized by the European Geoparks Network in close cooperation with the Global Geoparks Network, took place on Lesvos island, Greece, last September. The European Geoparks Week reached in 2009 its highest popularity with 121.025 visitors, and 441 events all over Europe. The network operates primarily by continuous electronic communication.

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. 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. During 2009 EMU organized a School on ‘Advances in the characterization if industrial minerals’ (George Christidis, Technical University of Crete, Chania, Greece, June 14-18, 2009). EMU helped 56 institutional libraries facing serious financial difficulties (mainly in Eastern Europe and Latin America) by donating them free subscription of European Journal of Mineralogy. Two further volumes of the EMU Notes in Mineralogy are in print. EMU has its own homepage (HYPERLINK "http://www.univie.ac.at/Mineralogie/EMU" http://www.univie.ac.at/Mineralogie/EMU).

Italian Federation of Earth Sciences (FIST)

"Geoitalia", the Italian Federation of Earth Sciences, is a non-profit making organisation of social utility, hereinafter referred to as FIST Onlus. It was founded on 21 November 1996, on the initiative of the voluntary association Italian Federation of Earth Sciences, by the following scientific associations: Italian Geological Society, Italian Mineralogy and Petrology Society and Italian Palaeontology Society.

FIST Onlus aims to accomplish goals of social value by undertaking activities directed towards Italy's economic, social and cultural development, and by promoting and disseminating knowledge of the Earth, geological risks, natural processes determining environmental features, and forms of global change.

GEOITALIA,
FEDERAZIONE ITALIANA DI SCIENZE DELLA TERRA, ONLUS

In 2009 FIST pursued its institutional goals through: the organization of the 7th Forum Geoitalia 2009, in Rimini; the printing and publication of the Geoitalia periodical review; the diffusion of information online and the coordination of cultural activity in the field of Earth Sciences, the promotion of all geosciences among students, ministries and the public.

Geochemical Society (GS)

The Geochemical Society encourages the application of chemistry to the solution of geological and cosmological problems. Its membership (around 3000 from about 45 countries) 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. *Elements Magazine* is an international magazine of mineralogy, geochemistry and petrology published through a collaboration of fourteen societies. *Geochemistry, Geophysics, Geosystesm (G-cubed)* is an on-line only journal supported by GS and maintained by AGU. 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, which in 2009 was held in Davos, Switzerland. For more information on the Geochemical Society, visit www.geochemsoc.org.

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.

During 2009, the GSAf was represented in many events as AEGOS launch meeting held in Cape Town, the 37th IGCP-Scientific Board meeting at UNESCO in Paris, the IYPE meeting of STI leaders and National Committee chairs (Africa) held in South Africa, the IYPE closing meeting (Portugal), the Pan African Parliament meeting (South Africa), and at the official launch of the Mozambican National Committee of IYPE. The Geological Society of Africa as an associate partner was represented during the four Geoeducation UNESCO initiative in Africa workshops organized in Angola, South Africa, Egypt and Senegal.

The Society redesigned its website, established Regional News Bulletins and compiled a list of Earth Sciences of African Universities and African institutions dealing with earth sciences to create a databank to be used for the UNESCO Earth Science Education in Africa initiative.

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 geo science knowledge and insight to human needs and aspirations and stewardship of the Earth. The GSA is one of the most active of geological societies, with significant outreach programs. Membership has reached 22,065 - the 5th year of steady membership growth (an increase of more than 25% since 2003). The GSA International Section (formerly the International Division) has members in 97 countries, representing 40+ scientific specialties and interests.

GSA student members (27% of GSA's membership), receive free online access to GSA journals (over US $190 annual value), mentor programs, employment services, travel grants, and research funding. In FY2009, the GSA Graduate Student Research Grants Program funded 194 research proposals (a total of US$530,425). The GSA website outreach has 10 sections attracting worldwide student interest, and the Teacher Advocate Program has seen significant growth. Mentoring programs are growing and expanding at both Annual and Section Meetings.

The EarthCache web project, provides fun and educational opportunities to the general public, has doubled in the past year, with more than 6,000 sites in 93 countries worldwide. More than a 250,000 have logged in to these sites. The EarthTrek citizen science program launched in June with over 650 participants signed up to collect data. Three science projects started in July and more projects are under development with scientists around the globe.

In 2009 GSA published 22 peer-reviewed scholarly books and continued its publication of journals: *Lithosphere,* GSA's newest journal was launched in February 2009; *GSA Bulletin,* is distributed in print and online bimonthly (online archives available from 1945); *Geology is* published monthly in print and

online (online archives available from 1973); *Geosphere*, published bimonthly online-only; *GSA Today*, (the science and news magazine for members and the earth-science community worldwide). The joint quarterly *Environmental & Engineering Geoscience is* a joint effort between the Association of Environmental and Engineering Geologists and GSA.

Visit the Website at http://www.geosociety.org/

Geological Society of India (GSI)

The Geological Society of India (GSI) was founded in 1958 with the main objectives of promoting the cause of advancement in all branches of Earth Sciences in India by co-operating with other institutions with similar objectives. The GSI has 1475 Life Members, 723 Annual Members, 10 Honorary Fellows and 11 Corporate Members.

During the reported period GSI published a monthly journal, two text-books, and two special publications, organized a training programme on Gemology, twelve monthly lectures, one special lecture and two endowment lectures. The journal is now being published under an agreement signed with Springer (India) Pvt. Ltd. This agreement has enabled the publishing of the electronic version of the Journal for worldwide dissemination via Springer Link and also to distribute the International Print Edition outside India. A number of other activities were also developed by the GSI Northern Chapter at Varanasi, New Delhi University, Dehradun, Punjab University and Rajasthan University.

The GSI is also focusing on issues related to the management of surface and underground water resources, and has been also taking up the issue of supply of safe drinking water supply to all the citizens of India in various forums in furtherance of the National Water Policy of the Government of India.

The GSI Golden Jubilee Celebration was held in Bangalore and included six technical sessions with 32 presentations and the release of five special volumes and seven volumes of the proceedings of the seminars. The Golden Jubilee Year was celebrated with a series of seminars held in different parts of India, six of which took place during the period considered by the report.

The GSI website underwent significant improvements with a continuous updating of its database, inclusion of abstracts from 1958 and full papers from 1995 onwards, uploading of old memoirs and text books. The GSI website as been linked to IUGS website.

Relationship with the IUGS has been steadily improving through the affiliation of the GSI to IUGS and through a MOU between GSI and IUGS formalizing the GSI editorial and production support to publish IUGS journal Episodes. Abstracts of the Journal are hosted in the GSI website.

Geologische Vereinigung (GV)

Geologische Vereinigung has 1600 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. The society communicates with its members by GMit (GeowissenschaftlicheMitteilungen), 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. In 2009 the annual meeting took place in Göttingen "Earth Control on Planetary Life and Environment". They are providing support for students to attend meetings and courses. During the GV member assembly the GV section "Sedimentology" was founded and an optional combined full membership with Deutsche Mineralogische Gesellschaft (DMG) has been decided. The society communicates with its members by GMit (Geowissenschaftliche Mitteilungen), a quarterly jointly edited with the other earth-science societies of Germany. The GV has started a new series of publications by Springer Verlag, entitled "Frontiers in Earth Sciences".

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. 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 GeoChemisty (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. In 2009 two very successful conferences: International Applied Geochemistry Symposium held in Fredericton, New Brunswick, Canada. IAGC organized and chaired several technical sessions and the Ingerson International Lecture delivered as the keynote presentation of the IAGC sponsored session. The IAGC Working Group on Applied Isotope Geochemistry held the 8th International Symposium on Applied Isotope Geochemistry in La Malbaie in Quebec, Canada. IAGC involved in the 2009 Geological Society of America Annual Meeting held in 18-21 October in2009 Portland, OR, USA and sponsored the 13th Annual topic session on" Sources, Transport, Fate and Toxicology of Trace Elements in the Environment". The Association's major monthly journal, Applied Geochemistry, and a Newsletter contain publications available for all members.

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, Geoarchaeology, 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) 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.

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 3850 individual members from over 140 countries. There are currently 44 National Chapters. IAH is a key partner of UNESCO in its International Hydrological Programme. 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, is one of the major cited international journals dealing with groundwater issues. It is in its 17th volume and now has 8 issues per year with a target of 2050 pages annually. 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. The major IAH event of the year was the 37th Congress which was held jointly with the 8th Scientific Assembly of the International Association of Hydrological Sciences (IAHS) in Hyderabad, India in September. The overall theme was “Water, a vital resource under stress: how science can help?” The convention drew just over 500 delegates from 62 countries, divided about equally between Indian and international participants. IAH, through its Commissions and Chapters, organized and co-sponsored nearly 20 groundwater related meetings around the world.

International Association for Mathematical Geosciences (IAMG)

This specialized 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. In 2009 a renewed effort to support IAMG student chapters around the world was launched. Highlights of the IAMG's 2009 activities were: 1) the Annual Meeting held on 23-28 August 2009, at Stanford University, California, USA; 2) a renewed effort to support student chapters to promote Mathematical Geology among the younger generation; and 3) a new IAMG Section to promote Mathematical Geology in China.

Visit the Website at 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 favoring integration with other disciplines. A global association with ca. 1,750 members from 97 countries, in 2009 IAS held the 27th IAS Meeting of Sedimentology in Alghero, Italy, 29-30 September. Furthermore, the IAS co-sponsored conferences and workshops in Switzerland, Argentina, and Bulgaria. The IAS published 7 issues of its journal *Sedimentology* comprising 2,257 pages in total. The electronic paper handling of the journal is working smoothly. *Sedimentology* is accompanied by a Newsletter. The IAS Homepage (http://www.iasnet.org) is regularly updated.

International Consortium on Landslides (ICL)

ICL (http ://icl. dpri.kyoto-u.ac.jp/) is involved with international coordination, 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 member bodies (surveys, universities, etc.) representing some 30 countries , There is considerable scientific focus, but minor attention to the public or education

of young scientists. In 2009 the ICL recognized several World Centers of Excellence (WCoE) under the collaboration of the United NationsUniversity system.. They support about 20 international projects focused on capacity building, technology transfer and education related to reducing risk associated with landslides. They launched a full color quarterly journal with Springer now distributed to some 1500 subscribers.

International Federation of Palynological Societies (IFPS)

Currently, 22 societies are members of IFPS (http://www. geo. arizona .edu/palynology/ifps.ht ml). Activity of The International Federation of Palynological Societies (IFPS) in 2009 was related to the newsletter *Palynos* which was regularly published, the IFPS website, and the electronic version of the *"World Directory of Palynologists"* which was regularly updated.

International Geosciencelogical 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. During 2009 IGEO organized: Third International Earth Science Olympiad (IESO2009) in Taipei, Taiwan, (September 14 to 22, 2009); co-organized: International conference on GEOSCIENCE FOR GLOBAL DEVELOPMENT (GeoDev) with AGID in Dhaka, Bangladesh from October 26 to October 31, 2009. Issued two Newsletters in January and April 2009. IGEO is supporting the 'Earth Learning Idea' initiative and published one per month ideas for teaching Earth science throughout IYPE during 2009.

International Medical Geology Association (IMGA)

Because of the importance of geological factors on health, and the general lack of appreciation an understanding of the importance of geology in such relationships, COGEOENVIRONMENT decided in 1996 to establish an international Working Group on Medical Geology. Working Groups are established for a defined lifetime (in the order of 1 or 2 four-year terms). In March 2002 the IUGS announced that

the International Working Group on Environmental Geoindicators, and the International Working Group on Medical Geology would be assigned Special Project status (Special Initiatives) and operate directly under the IUGS since. 2003. In January 2006 IMGA was established and has become financially independent from IUGS. IMGA has been reported. However, medical geology has been included in curricula at universities, has received several prestigious awards and has been highlighted all over the world. Several courses have been held. Numerous presentations have been held at meetings and conferences dedicated to public health, geosciences and medical sciences.

International Mineralogical Association (IMA)

IMA is a large international scientific organization, comprises 39 mineralogical societies or groups (one per country) with a limited number of individual memberships. Its activities are carried out by 11 commissions and working groups. The Association promotes exchanges among mineralogists of all nations by organising events or publishing relevant literature. The 'Annual List of New Minerals and Changes in Nomenclature' is now available on the IMA website.

International Palaeontological Association (IPA)

IPA's 1200 members and nineteen corporate member organisations aim to promote and coordinate international cooperation in paleontology and to encourage the integration and synthesis of all palaeontological knowledge (http://ipa.geo.ku.edu/index3.html). The IPA is affiliated with the IUGS and with the IUBS, as well as with IYPE and ICZN, and with such magazines as *Lethaia* and *Geoheritage*. 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 has Associate Partner status in sponsorship of the International Year of Planet Earth (2008-2009).Three well known electronic directories (The *Directory of Paleontologists of the World*, the *Directory of Fossil Collections of the World*, and the *PaleoLink Database*) are supplemented recently by a new electronic directory *PaleoParks: The Preservation and Conservation of Fossil Sites* (<http://ipa.geo.ku.edu:591/PaleoParks/). The IPA established the PaleoParks Initiative to protect endangered fossils sites which are of a great scientific and educational value (15 aims and goals for this program are published at:

<http://paleopolis.rediris.es/cg/CG2009_BOOK_03/Chapter1>.

In 2009 the IPA sponsored two international meetings in Switzerland and Canada.

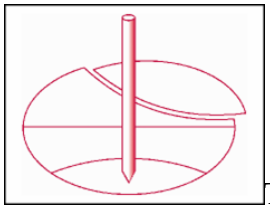
International Permafrost Association (IPA)

The objectives of IPA (http://www.geo.uio.no/IP A/) 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. IPA is an Associate Partner in the International Year of Planet Earth. 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. 2009 was a transition year for the International Permafrost Association (IPA), after the Ninth International Conference on Permafrost, held in 2008 and before the Third European Conference on Permafrost to be held in 2010. Through a partnership with the Arctic Portal (www.arcticportal.org), based in Iceland, the IPA created a brand new website (www.ipa-permafrost.org) 2009 was also a year of planning for the 2010 International Polar Year Open Science Conference to be held in Oslo.

International Society for Rock Mechanics (ISRM)

The ISRM (http://www.isrm.net/)operates in the field of physical and mechanical behavior 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. 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/ho me/) 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 has 23 technical committees, which are asked to produce reports. A Newsletter of interest to the younger members will be re-launched soon. During 2009, the ISSMGE created tree new Board Level Committees: the Technical Oversight **Co**mmittee (TOC), the Membership, Practitioners, Academicians Committee (MPAC) and the Innovation and Development Committee (IDC). Five new Member Societies joined ISSMGE (Dominican Republic, Kyrgyzstan, Singapore, Tajikistan and Thailand). The society prepared a report entitled "Risk, Recognition and Reward in Geotechnical Professional Practice". In October 2009, the XVII International Conference for Soil Mechanics and Geotechnical Engineering was held with the 4th International Young Geotechnical Engineers' Conference in Alexandria, Egypt. Ten other conferences were organized under the auspices of ISSMGE in Argentina, Kazakhstan, Germany, Japan, Italy and Thailand. The ISSMGE produces a quarterly bulletin. Since 2008 the ISSMGE is publishing the International Journal of Geoengineering Case Histories.

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. Visit the Website at: http://www.meteoriticalsociety.org/

National Ground Water Association (NGWA)

NGWA has more than 14,000 members in 60 nations to advance the science and technology of the ground water professions. NGWA is supported by dues from individual and organizational members, and by income derived from its other activities. Major Ground Water Science and Engineering Activities in 2009 were: 1) The initial NGWA Groundwater for the Americas conference convened in Panama City, Panama in June; 2) 2009 Ground Water Summit at Tucson, Arizona;. 3) The Water Science and Technology Board at The National Academies has invited NGWA to assist in a review of the USGS NAWQA Program; 4) NGWA provided comments on the U.S. Senate bill titled "Strengthening

Education and Training in the Subsurface Geosciences and Engineering for Energy Development."; 6) NGWA serves on the U.S. National Committee of UNESCO's International Hydrological Programme and cooperates with IHP centers, including the newly formed U.S.-based Center for Integrated Water Resources Management, hosted by the US Army Corps of Engineers in Alexandria, Virginia; 7) NGWA maintains cooperative agreements with 13 foreign counterpart associations, as well as with the Association of American State Geologists, Geological Society of America, Global Water Partnership, International Association of Hydrogeologists, Source Water Collaborative, and the Water Footprint Network.

The European Association for the Conservation of the Geological Heritage (ProGEO)

ProGEO objectives are: to promote the conservation of Europe's rich heritage of landscape, rock, fossil and mineral sites, to inform a wider public of the importance of this patrimony, and of its relevance to modern society, to advise, in our countries and in Europe as a whole, those responsible for protecting our Earth heritage, to organiseorganize and participate in research into all aspects of planning, science, management and interpretation that are relevant to geoconservation, to involve all countries in Europe, exchanging ideas and information in an open forum, and taking a full part in conservation in a global setting, including the formulation of conventions and legislation, to work towards an integrated European listing of outstanding geoscience sites, thus enabling full support to be given to the work of other international bodies, as well as to national initiatives towards site protection, to achieve an integrated approach to nature conservation, promoting a holistic approach to the conservation of biological and physical phenomena. ProGEO normally publishes 4 issues of the Newsletter annually to its members and also organizes meetings in different European countries

Society of Economic Geologists Inc. (SEG)

Established in 1920 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. SEG now have a membership of 5,404, and 4 active Student Chapters. 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. SEG is playing a modest role in IYPE as an Associate Partner and resources are a key issue in 2009 SEG organized, participated and sponsored very successful 8 symposiums and forums, 3 exhibitions, 9 short courses and 1 field course, including the 2nd European SEG Student Chapter Conference hold in Budapest. Eight issues of Economic Geology and four issues of the SEG Newsletter were published during the year.

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 2009, 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. The 10th SGA Biennial Meeting – SGA contribution to IYPE was held in August 20-23, Townsville, Australia. Three business meetings held in Wurtzburg and Townswille, Australia. SGA co-sponsored Geology Society of London Mineral Deposit Special Interest Group Research in progress Meeting, January 6-9, and XXVIII UUNESCO-SEG-SGA Latin American Course on Metallogeny held in May, 19-26 Bello Horizonte, Brazil, and Ore Deposit Models and Exploration Workshop (SGA-SEG) in November 4-8, in Beijing, China. 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 Geology (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 2009. 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.

In 2009 a total of five new books are either published or in the process of being published and the pipeline for future books continues to be well filled. SEPM has now instituted an online submission and review process, similar to the journals for its books. One of the biggest accomplishments this year was the digitization and CD production of essentially their entire past book publications, which includes some 150 books. In 2009, SEPM held its Annual Meeting in Denver, CO, jointly with A.A.P.G. (American Association of Petroleum Geologists) and was involved in three major research conferences, two in Houston and one in Chile. SEPM also organized a number of short courses and fieldtrips.

Geological Society of France (SGF)

SGF is a non-profit association, born in 1830, whose mission is to promote Earth Sciences for addressing topics of scientific and societal importance. It is composed of 1100 members, 1600 subscribers for one of its publications; a board of 24 people manages the institution. The SGF interfaces with world wide projects by the participation in the Geoscienceworld aggregate, and organization of international meetings. The chief accomplishments in 2009 include: reorganization of the house Maison de la Géologie with the French Federation of Geology (grouping 19 other societies); publication of the Bulletin (6 issues), Géochronique (4); Books (Vuibert) 2 collections; Books (Springer): collection Lecture notes in Earth Sciences and collection Frontiers in Earth Sciences. A critical milestone to be achieved next year (2010) is the merging of three major French geological societies (SGF-UFG-CNFG).

APPENDIX 1

IUGS — Executive Members and Meetings

EXECUTIVE COMMITTEE OFFICERS OF THE IUGS IN 2009

President	Prof.Alberto Riccardi	Aug. 2008 — Aug.	2012
Past President	Prof. Z. Hongren	Aug. 2008 — Aug.	2012
Secretary	Prof. P.T. Bobrowsky	Aug. 2004 — Aug.	2012
Treasurer	Prof. William Cavazza	Aug. 2008 — Aug.	2012
Vice President	Prof. Jacques Charvet	Aug. 2008— Aug.	2012
Vice President	Prof. Ochir Gerel	Aug. 2008 — Aug.	2012
Councillor	Dr. Ezzohra Errami	Aug. 2008 — Aug.	2012
Councillor	Dr. Colin Simpson	Aug. 2008 — Aug.	2012
Councillor	Dr. M. Mantovani	Aug. 2006 — Aug.	2010
Councillor	Dr. M. Fedonkin	Aug. 2006 — Aug.	2010

PERMANENT SECRETARIAT

Head of Secretariat Dr. T. Torsnes iugs.secretariat@ngu.no

Assistant Ms. A. Liinamaa-Dehls Anne.Dehls@ngu.no

EXECUTIVE COMMITTEE AND BUREAU MEETINGS, AUGUST 2008 - NOVEMBER 2009

60th Executive Committee Meeting	Sydney, Australia,	January, 2009
Bureau meeting	Maputo, Mozambique	October, 2008
Bureau Meeting	Paris, France	February, 2009
Bureau Meeting	Lisbon, Portugal,	November, 2009

APPENDIX 2

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
Azerbaidian	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 -	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			

APPENDIX 3

ALLOCATION TABLE 2009

EXPENSES USD		**Allocated 2009**
IGCP		
	UNESCO	**90.000**
	IUGS	**60.000**
Joint Programmes		
GARS		
Geological Application of	IUGS	**10.000**
Remote Sensing	UNESCO	
ILP		
Scient. Comm. on the Lithosphere		**5.000**
Geoparks Networks		**3.500**
IUGS Commissions		
	New Commissions *(Call for Proposals)*	**0**
	CGI *(Geoscience Info)*	**15.000**
	COGE *(Edu., Training / Tech Transfer)*	**7.500**
	GEM *(Geosci. Env. Mgmt)*	**10.000**
	ICS (*Stratigraphy*)	**40.000**
	INHIGEO (Hist. Geol. Sci.)	**4.500**
	TECTASK (*Tectonics and Structural Geology*)	**7.000**

IUGS Task Groups		
	TGGB (*Geochemical Baselines*)	**4.000**
	Global Geoscience Workforce	**1.000**
	TGIG Isotope Data in Geosciences	**4.900**
Committees		
	PC (Publications Committee)	**2.000**
Affiliated Organizations		
	AGID Ass. of Geoscientists for International Development	**2.000**
	Balkan Geophysical Society	**500**
	CGMW Commission for the Geological Map of the World	**4.000**
	GSAf Geological Society of Africa	**7.500**
	IAMG International Association for Mathematical Geology	**5.000**
	ICL International Consortium on Landslides	**2.000**
	IMGA Int. Medical Geology Association	**2.000**
	IGEO International Geological Education Organization	
Contributions		
	ICSU	**4.250**
Other expenses		
	Routine Meetings	**45.000**
	Representative Scientific Meetings	**6.000**
	Exhibitions	**3.000**
	Annual report	**0**
	Website	
	ARC	**10.000**
	Promotion Items	**5.000**
	Bank Charges	**4.000**
Episodes		
	IUGS Contribution	**23.000**

Episodes: Dissemin. Devlp. Countries	UNESCO	**2.450**
Contingency		**12.000**
Hutchinson reserve		**2.000**
Episodes transition		**5.000**
Secretariat expenses		**12.500**
Secretariat transition		**12.500**
Officers reserves		**11.000**

445.100

APPENDIX 4
IGCP PROJECTS

480 Tectonics of Central Asia
B. Natal'in (Turkey), A. Yin (United States), A. M. C. Şengör (Turkey), M. Kuzmin (Russia), Shuwen Dong (China)
2005-2009
http://www.igcp.itu.edu.tr/

493 The Rise and Fall of the Vendian Biota
M. FEDONKIN (Russia), P. Vickers-Rich (Australia), J. Gehling (Australia)
2003-2007 (OET)
http://www.geosci.monash.edu.au/precsite

495 Quaternary Land-Ocean Interactions
A. Long (United Kingdom), S. Islam (Bangladesh)
2004-2008 (OET)
www.geography.dur.ac.uk/projects/igcp495

497 The Rheic Ocean
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 (OET)
http://www.snsd.de/igcp497/

499 Devonian land-sea interaction: Evolution of Ecosystems and Climate in the Devonian
P. Königshof (Germany), J. Lazauskiene (Lithuania), E. Schindler (Germany), Volker Wilde (Germany) and N. Yalçin (Turkey)
2004-2008 (OET)
http://www.senckenberg.de/igcp-499

500 Dryland Change: Past, Present, Future
D.Thomas (United Kingdom)
2004-2008 (OET)
http://igcp500.ouce.ox.ac.uk/

502 Global Comparison of Volcanic-hosted Massive Sulphide Districts
R.Allen (Sweden), F. Tornos (Spain), J. Peter (Canada), N. Çagatay (Turkey)
2004-2008 (OET)
<http://www.1tu.se/tkg/>
<http://www.1tu.se/tkg/avd/kgo/forsk/IGCP>

503 Ordovician Palaeogeography and Palaeoclimate

T. Servais (France), D.A.T. Harper (Denmark), J. Li (China), A. Munnecke (Germany), A. W. Owen (United Kingdom), P.M. Sheehan (United States)
2004-2008 (OET)
http://sarv.gi.ee/igcp503/

506 Marine and Non-marine Jurassic
Jingeng Sha (China), Nicol Morton (France), W. A.P. Wimbledon (United Kingdom), Paul E. Olsen (United States), Alberto G. RICCARDI (Argentina), Grzegorz (Gregory) Pieñkowski (Poland), Yongdong Wang (China)
2005-2009
http://www.nigpas.ac.cn/IGCP506index.asp

507 Paleoclimates of the Cretaceous in Asia Yong Il Lee (Korea), Xiaoqiao Wan (China), Takashi Sakai (Japan), and Krishnan Ayyasami (India) 2006-2010
http://igcp507.kopri.re.kr/

509 Palaeoproterozoic Supercontinents and Global Evolution
S.M. Reddy (Australia), D. Evans (United States), R. Mazumder (India)
2005-2009
http://earth.geology.yale.edu/igcp509/

510 A-type Granites and Related Rock through Time
Roberto Dall'Agnol (Brazil), Carol D. Frost (United States), O. Tapani Rämö (Finland), L.J. Robb (South Africa)
2005-2009
http://www.igcp-510.org

511 Submarine Mass Movements and Their Consequences
Jacques Locat (Canada), Juergen Mienert (Norway) and Roger Urgeles (Spain)- (IOC link)
2005-2009
http://www.geohazards.no/IGCP511

512 Neoproterozoic Ice Ages
Graham A. Shields (Australia), Emmanuelle Arnaud (Canada)
2005-2009
www.IGCP512.org

513 Karst Aquifers and Water Resources
Chris Groves (United States), Yuan Daoxian (China), Bartolome Andreo-Novarro (Spain), Heather Viles (United Kingdom)
2005-2009
http://hoffman.wku.edu/igcp/513.html (General information)
http://hoffman.wku.edu/karst2007/k2007.html
http://www.wku.edu/cehp

http://www.cosis.net/members/meetings/sessions/information.php?p_id=247&s_id=4433

514 Fluvial Palaeosystems: Evolution and Mineral Deposits
A. Duk-Rodkin (Canada), Baohong Hou (Australia), Li Ziying (China), Vladimir Dolgopolov (Kazakhstan), N. Patyk-Kara (Russia) passed away in 2008
2005-2009
http://www.igem.ru/igcp514/

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
http://staff.aist.go.jp/hara-hide/igcp516

519 Hydrogeology, Hydrochemistry and Management of Coastal Aquifers on the Atlantic Coast of South America
Emilia Bocanegra (Argentina), Emilio Custodio (Spain), Marisol Manzano (Spain), Gerson Cardoso (Brazil), Jenny Reynolds Vargas (Costa Rica),
2005-2009
http://www.mdp.edu.ar/exactas/geologia/cgcyc/hidrogeologia.html
http://www.mdp.edu.ar/exactas/geologia/cgcyc/iugs/Index.htm

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 (United Kingdom)
2005-2009
http://www.avalon-institute.org/IGCP
http://black.sealevel.ca
http://www.bridge.bris.ac.uk/projects/EMBSECBIO
http://www.paleontol.geo.sfedu.ru

523 GROWNET – Gobal Ground Water Network
Shrikant Daji Limaye (India), Antony J Reedman (United Kingdom)
2005-2009
http://www.igcp-grownet.org

524 Arc-Continent Collision
Denis Brown (Spain), Chi-Yue Huang (Taiwan)
2007-2009
www.ija.csic.es/gt/IGCP524

526 Risks Resources and Record of the Past on the Continental Shelf

Francesco L.atino Chiocci (Italy), Lindsay Collins (Australia), Michel Michaelovitch de Mahiques (Brazil), Renée Hetherington (Canada)
2007(-2011).
http://gte526.geoma.net

529 Availability of groundwater resources in selected urban areas in Southern African Development Community (SADC) region
Imasiku A. Nyambe (Zambia)
2007-2011

540 Gold-bearing hydrothermal fluids of oregenic deposits
P.S. Garofalo (Italy), J.R. Ridley (USA), Vsevolod Prokof'ev (Russia)
2007-2011
http://www.geomin.unibo.it/igcp_540

543 Low-temperature thermochronology: applications and inter-laboratory calibration
Massimiliano Zattin (Italy), J. I. Garver (USA), Vitaliy A. Privalov (Ukraine), Alexei V. Soloviev (Russia), Cornelia Spiegel (Germany), Maarten de Wit (South Africa), Dewen Zheng (China)
2007-2010
http://www.geoscienze.unipd.it/~zattin/Home.html

546 Subduction zones of the Caribbean
Antonio Garcia-Casco (Spain), Uwe Martens (USA)
2007-2011
http://www.ugr.es/~agcasco/igcp546/

555 Rapid Environmental/Climate Change in the Cretaceous Greenhouse World
Chengshan Wang (China), Robert Scott (USA), Hugh Jenkyns (UK), Michael Wagreich (Austria), William Hay (USA); Zakharov Y.D. (Russia)
2007-2010
www.cretaceousworld.com/igcp555

557 Diamonds, xenoliths and kimberlites
Holger Sommer (Botswana), Klaus Regenauer-Lieb (Australia), Christoph Hauzenberger (Austria) Jonathan Kashabano (Tanzania), Gétan Moloto-A-Kenguemba (Central African Republic)
2007-2011
http://igcp557.uni-graz.at/

559 Crustal Architecture and landscape Evolution
Bruce R. Goleby (Australia) and 14 members (USA, Canada, China, Finland, Netherlands, New Zealand, Russia)
2008-2012
http://www.earthscrust.org

565 Geodetic Monitoring of the Global Water Cycle
Hans-Peter Plag (USA), Richard S. Gross (USA), Markus Rothacher (Germany), Norman L. Miller (USA), Susanna Zerbini (Italy), Chris Rizos (Australia)
2008-2012
http://www.iag-ggos.org/igcp565

567 Earthquake Archaeology – Archaeoseismology along the Alpine-Himalayan seismic zone
Manuel Sintubin (Belgium), Iain Stewart (United Kingdom), Tina Niemi (USA), Erhan Altunel (Turkey)
2008-2012
http://ees.kuleuven.be/igcp/567/

571 Radon, health and natural hazards
Gavin K. Gillmore (UK), Robin G.M. Crockett (UK), Frederic Perrier (France), Tadeusz Przylibski (Poland), Vivek Walia (Taiwan of China), Bikram Jit Singh Bajwa (India)
2009-2013
http://www2.northampton.ac.uk/appliedsciences/appliedscience/research/igcp

572 Permian-Triassic ecosystems
Zhong Qiang Chen (Australia), Richard J. Twitchett (United Kingdom), Jinnan Tong (China), Margret L. Fraiser (USA), Sylvie Crasquin (France), Steve Kershaw (United Kingdom), Thomas J. Algeo (USA), Kliti Grice (Australia)
2008-2012
http://www.igcp572.org/

574 Bending and Bent Orogens, and Continental Ribbons
Stephen T. Johnston, (Canada), Gabriel Gutierrez-Alonso (Spain), Arlo Weil (USA)
2009-2013
http://www.brynmawr.edu/geology/faculty/aweil/IGCP-574/

580 Application of magnetic susceptibility on Paleozoic sedimentary rocks
Anne-Christine da Silva (Belgium), Michael T. Whalen (USA), Jindrich Hladil (Czech Republic), Daizhao Chen (China), Simo Spassov (Belgium), Frederic Boulvain (Belgium), Prof. Devleeschouwer Xavier (Belgium)
2009-2013

581 Evolution of Asian River Systems
Hongbo Zheng (China), Ryuji Tada (Japan), Peter Clift (UK), Masood Ahmad (India), Zheng-Xiang Li (Australia), Kuo-Yen Wei (Taiwan of China)
2009-2013
http://isg.nju.edu.cn/Exchange/Index.aspx

582 Tropical Rivers: Hydro-Physical Processes, Impacts, Hazards and Management
Edgardo M. Latrubesse (Argentina), Rajiv Sinha (India), Jose C. Stevaux (Brazil)
2009-2013

Website in preparation

Funded projects	30
O.E.T.	7
Total	37

APPENDIX 5

Acronyms Used by IUGS

AAPG	American Association of Petroleum Geologists
AAWG	African Association of Women in Geosciences
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 fdr Geowissenschaften und Rohstoffe
BGS	Balkan Geophysical Society
BGS	British Geological Survey
BRGM	Bureau de recherches géologiques et minières
CCOP	Coordinating Committee for Geoscience Programmes in East and Southeast 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 Petrolo
DIVERSITAS	International Programme on Biodiversity Science
DMP	Deposit Modelling Programme (now called MRSP)
DOSECC	Drilling, Observation and Sampling of the Earth's Continental Crust
EASE	European Association of Science Editors
ECROFI	European Current Research on Fluid Inclusions
EFG	European Federation of Geologists
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)
FIST	Italian Federation of Earth Sciences
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
GGN	Global Geoparks Network
GIS-UDRIL	GIS Upstream Digital Reference Information Library (from AAPG)
GS	Geochemical Society
GSA	Geological Society of America
GSAf	Geological Society of Africa
GSI	Geological Society of India
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
IAGOD	International Association on the Genesis of Ore Deposits

IAH	International Association of Hydrogeologists
IAMG	International Association of Mathematical Geosciences
IAS	International Association of Sedimentologists
ICL	International Consortium on Landslides
ICS	International Commission on Stratigraph
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
IUCN	International Union for the Conservation of Nature
IUGG	International Union of Geodesy & Geophysics
IUGS	International Union of Geological Sciences
IUHP S	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 organization
NGWA	National Ground Water Association
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 Petrolo
SEG	Society of Economic Geologists
SEPM	Society for Sedimentary Geologists
SGA	Society for Geology Applied to Mineral Deposits
SGF	Geological Society of France
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 Geolo
TGGW	IUGS-UNESCO Task Group on Global Workforce
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USGS	United States Geological Survey

APPENDIX 6

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