

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

MINUTES

of the

**48th EXECUTIVE COMMITTEE MEETING
FEBRUARY 24 - MARCH 2, 2001
HYDERABAD, INDIA**

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**48th EXECUTIVE COMMITTEE MEETING
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- 5.b. IUGS/UNESCO Program on Geol. Application of Remote Sensing (**GARS**)
- 5.c. IUGS/UNESCO Programme on Mineral and Energy Deposit Modelling (**DMP**)

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ATTENDEES

IUGS EXECUTIVE COMMITTEE:

Ed de Mulder	President (The Netherlands)
Attilio Boriani	Secretary General (Italy)
Werner R. Janoschek	Treasurer (Austria)
Robin Brett	Past President (USA)
Wissam S. Al-Hashimi	Vice President (Iraq)
Peter Bobrowsky	Vice President (Canada)
Gabor Gaál	Vice President (Finland)
Tadashi Sato	Vice President (Japan)
Ian G. Speden	Vice President (New Zealand)
Harsh K. Gupta	Councillor (India)

Secretariat:

Hanne Refsdal	IUGS Secretariat (Norway)
Rognvald Boyd	IUGS Secretariat (Norway)
Cyprien Habimana	IUGS Secretariat (Norway)
Evi Giobbi	Secretary General's Office (Italy)

OBSERVERS:

Jean-Paul Cadet	Councillor from 2002 (France)
Ernesto Abbate	Secretary General: 32 nd IGC (Italy) (present for items 2, 3f, 4a, 4c, 4d, 5a, 6, 8a, 8b, 8c1, 8d and 8e)
W.G.E. Caldwell	Chairman CP (Canada)
Zhang Hongren	Editor, <i>EPISODES</i> (China)
National Committee Representative	
Somnath Das Gupta	(India) (present for items 2, 3f, 4a, 4c, 4d, 5a, 6, 8a, 8b, 8c1, 8d and 8e)

**48th EXECUTIVE COMMITTEE MEETING
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MINUTES

President Ed de Mulder opened the 48th Executive Committee Meeting and welcomed the participants. Apologies had been received from Vice President I. Nyambok, Councillor J. Plant, Zhao Xun (Chairman of the Chinese National Committee) and J. Aaron (Webmaster). De Mulder thanked Dr. Harsh Gupta, IUGS Councillor from India and former Director of the National Geophysical Research Institute (NGRI), for his hospitality in arranging the meeting and the excursion prior to it.

Brett suggested all those present should have the right of expression at meeting. This was approved.

0. WELCOMING ADDRESSES

Gupta welcomed the participants to the NGRI. In view of the recent earthquake disaster in the Punjab he gave a brief presentation of earthquake hazards in India emphasising the impact of earthquakes in recent decades. He concluded with recommendations for measures to mitigate the hazards.

De Mulder congratulated Gupta on his appointment as Secretary of State for the Department of Ocean Development of India. Gupta assured the meeting of his continued participation in IUGS. De Mulder also congratulated Secretary General Attilio Boriani on his appointment as President of the 32nd IGC in Florence.

1. APPROVAL OF THE AGENDA

Boriani had distributed an agenda with a draft order of business including listings of the appropriate participants. De Mulder summarised the order of business.

Boriani pointed out that W.G.E. Caldwell, Chairman of the Committee on Publications (CP), had shown that item 4a should be postponed to March 1 as the CP was to have a meeting on February 28.

The Committee APPROVED the agenda with no further changes.

2. MINUTES OF 47TH EXECUTIVE COMMITTEE MEETING HELD IN RIO DE JANEIRO, BRAZIL, AUGUST 11&14, 2000

2.a. Approval of Minutes

The Committee APPROVED, after minor adjustments, the draft minutes of the 47th Executive Committee meeting held in Rio de Janeiro.

2.b. Actions arising from these minutes

Boriani reviewed the decision and action list resulting from the 47th Executive Committee meeting, noting that most of the actions had been implemented or would be taken up later in the agenda.

3. ANNUAL ADMINISTRATIVE AFFAIRS

3.a. President's Report

De Mulder reported that the Strategic Action Plan (SAP) had taken much of his attention in the five months since the Executive Committee had been elected. He referred to the Task Group meeting held in Catania on December 15 - 17 and to the draft SAP to be discussed. Network building had included visits to China, Norway (meetings with the Secretariat, the Geological Survey and the National Committee), Thailand, Japan, Finland and France (to attend a meeting of the IGCP Board). He had written a separate report on his visits to China, Thailand and Japan. These visits included efforts to extend networks of external contacts to CCOP, ESCAP, Eurogeosurveys, IUGG and ILP. He had met the new presidents of IUGG and ILP in Japan. He had also had routine visits to UNESCO. De Mulder had a wide range of impressions from national committees, partly critical but mainly positive. Some external bodies (e.g. ESCAP) had little knowledge of IUGS.

He introduced the concept of the International Year of the Planet Earth (IYPE). The last century had seen enormous advances in space exploration. This will continue but we one should realise a need to invest in our own planet Planet Earth, its surface and its subsurface and interior. Society faces many problems with a geological dimension (population growth, poverty, cities, poor water supply, contamination, storage of waste, health, resource depletion, hazards). IUGS should show an initiative to increase awareness of these issues. General reactions to the concept were positive. The aims should be:

- Increased consciousness
- Improved knowledge

These can be achieved by:

- Media exposure
- Research programmes on: the Earth's interior and its processes, surviving threats to the Planet, profiting from the Planet's assets.

This would require:

- IUGS support

- Partners such as IUGG, IGU, ILP, ICSU, UNESCO, etc.
- Creation of an IYPE task force
- Funding
- Creation of a professional organization committee.

He proposed that further discussion be held later in the meeting and that the concept be tested over a six-month period before making a final decision on whether to proceed or not.

The Committee ACCEPTED the President's report.

3.b. Past President's Report

Past President R. Brett summarised his activities including work with the Stratigraphic Chart, a US National Committee meeting, two ICSU meetings and other work for IUGS.

The Committee ACCEPTED the Past President's report.

3.c. Vice Presidents' Reports

W. Al-Hashimi reported he used his position as Secretary General of the Arab Geologists' Association (AGA) to encourage support for IUGS. He has contact with 21 countries from Algeria to Indonesia and encourages payments of dues and submission of Annual Reports to IUGS. The AGA journal promotes *Episodes*. An IUGS exhibit was displayed at the Jordanian Mining Congress in Amman and at an industrial minerals workshop in Yemen.

G. Gaál stated that his networking activities have included an International Consortium of Geological Surveys (ICOGS) seminar at the 31st IGC on: Application of Geoscience Mapping and Related Programmes in the 21st Century. ICOGS could be useful for IYPE. He had regular contacts with Eurogeosurveys. *De Mulder: The FOREGS annual report on the state of the European surveys is a source of information (in relation to Gaál's responsibility for Europe). Gaál pointed out that some of this information is available on the CD-ROM published after the seminar (presentation by J. Varet (BRGM)).*

I. Speden referred to his written report. He supported the idea of a more prominent IUGS exhibit at future IGCs. He has discussed the possibility of hosting a future Executive Committee meeting in New Zealand and the Institute of Geological and Nuclear Sciences (GNS) has offered to sponsor a meeting in February or March 2002. Based on his IUGS involvement he was asked to give a presentation on "International Trends in Geosciences" at GNS's conference and to repeat the presentation at the combined conference of the Geological Society of NZ and the NZ Geophysical Society in November. Speden had attended the Consortium of Commonwealth Geological Surveys meeting in Pretoria - where many of the national representatives *present did were not* knowledgeable about IUGS.

I. Nyambok was unable to attend and had not submitted a report.

T. Sato (and P. Bobrowsky) had been elected as Vice-Presidents at the IUGS Council meeting held during the 31st IGC in Rio de Janeiro. He had arranged the visit by de Mulder to Japan in October, including meetings with the Japanese National Committee under its new Chairman, Professor T. Saito who was very concerned about funding for IUGS, with the new President of ILP, Professor Taira, and with Professor M. Kono, president of IUGG. He has good contact with the Japanese National Committee but is concerned about contact with other national committees. He has had contact with U. Cordani relating to changes in the Statutes for the IGC. He discussed the possibility of putting the IUGS logo on items such as a mini-compass.

P. Bobrowsky had also been elected Vice President at the 31st IGC. He had attended the IGCP Project 454 meeting in Uppsala (on medical geology), met with the Director of the Geological Survey of Sweden, had attended a workshop on geoinicators in Poland, met with the director of the Geological Survey of Poland, attended a sand-and-gravel meeting in Korea where he gave a lecture on the IUGS, met with the director of the Ministry of Natural Resources and Mining, which would like to have a lead role in representing IUGS in Korea, attended the IGCP project 425 meeting on landslides in Tokyo (at which an international consortium on landslides was proposed, including sponsorship by IUGS and UNESCO - see item 5.d) and the Task Group meeting in Catania at which the Strategic Action Plan was discussed. He is chairman of the Canadian National Committee but has tendered his resignation and will attend his last meeting this autumn.

The Committee ACCEPTED the Vice Presidents' written and oral reports and urged the Committee members to submit written reports to the Secretariat in the future, enabling these to be distributed prior to the annual meetings of the Executive Committee.

3.d. Secretary General's Report

Boriani presented a written report. He works 50% as Secretary General. He has much correspondence and contact with the Secretariat. He attended the Catania Task Group and Paris Bureau meetings. He had prepared the application for funds for IGCP for 2001. He had been elected President of the 32nd IGC. The combined work load of this function and IUGS closer to the Congress would be too great so he intended resigning as Secretary-General. He had already informed de Mulder and Brett, Chairman of the Nominating Committee, of this decision. He hoped that his tenure as President would lead to heightened visibility for IUGS at the 32nd IGC. He referred to the recommendations in the Strategic Action Plan that IUGS and IGC should be more strongly linked. He would be able to encourage this. He acknowledged assistance from E. Giobbi, from one of his Ph.D. students, from H. Refsdal and from Z. Johan's assistant, M.-O. Gerault.

De Mulder expressed a desire to profit as long as possible from Boriani's experience.

The Committee ACCEPTED the Secretary General's report.

3.e. Treasurer's Report

W. Janoschek summarised the contents of his written report and commented on the move of the Treasurer's Office from France to Austria. The main account is now in Vienna. All funds are in a short-term account as it generates a higher interest. The accounts are still to be audited by representatives of the French National Committee, hence some of the question marks in his report. The US National Academy of Sciences had paid USD 75,000 - an extra USD 5,000 over the sum budgeted. IUGS had budgeted some money for implementation of the Strategic Action Plan, but the bigger part of the sum will be effective only in 2001, because the first meeting to implement the SAP was held so late as mid December in Catania.

Janoschek has had contact with the UNESCO Earth Sciences Division, the treasurer of ICSU in Brussels and ICSU headquarters in Paris.

Bobrowsky, on behalf of the Canadian National Committee, wanted to see a more systematic approach to the categorisation of the countries in terms of membership fee levels (some rich countries pay only low fees). He suggested use of some form of indicator, e.g. GNP/head, in order to revise the system in a more equitable manner. He also felt that inactive countries should be approached. Janoschek pointed out that the Statutes state that changes in the membership categories may be made on written agreement between National Committees and IUGS. The role of geology in each country should also be considered. All IUGS officers should use their influence in this matter. Gupta felt that IUGS should have a target for a higher budget. Brett said that attempts have been made to upgrade countries, and every year to approach countries that have not paid. IUGG has a category 0 for countries, which do not pay - he didn't support this, preferring that the country be listed with an asterisk in *Episodes*. Janoschek pointed out that Canada pays dues in Category 7 and Australia only in Category 5 but that three state surveys in Australia are associate members and thus pay membership fees. Sato stated that the fundamental matter is what IUGS does for each country. De Mulder agreed that these matters should be taken up, including the question of what IUGS does for the member countries.

The Committee ACCEPTED the Treasurer's report and reiterated their its thanks to Past Treasurer Z. Johan and his assistant M.-O. Gerault for their excellent work..

3.f. IUGS National Committees

Boriani related that two new applications had been received, from Slovenia and Albania. Janoschek described the geological organizations in Slovenia - university departments, a Geological Survey, an Academy of Sciences and a Geological Society. The application from Albania was from the Geological Survey, not from a geoscientific institute. Janoschek has tried to encourage Albania to form a national committee:, but there are problems as Albania already has a National Committee for Natural Sciences.

The applications from Slovenia and Albania were APPROVED unanimously, pending ratification of the decision by the Council.

De Mulder pointed out that IUGS now has 114 members.

Boriani: The Czech National Committee has a new chairperson, Dr. V. Babuska.

Boriani stated that the following 31 Adhering Bodies had submitted an 2000 annual report:

Austria, Azerbaijan, Bangladesh, Belarus, Bulgaria, Canada, Chile, Colombia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Namibia, New Zealand, Norway, Russia, Slovak Republic, South Africa, Sweden, Taipei-China, Thailand, Turkey, Ukraine, and Vietnam.

15 of the reports contain comments and suggestions. 11 are of varying quality, a few of them very simple. The South African report is very comprehensive. Azerbaijan had invited the IUGS to involve National Committees more and wanted more emphasis on mineral resources. Bangladesh wanted more emphasis on cultural heritage, capacity building and reduction of the vulnerability of cities. Bulgaria suggested that an intermediate IGC be held on controversial matters in geology. Canada wanted better communications. Colombia, where the National Committee is also the Stratigraphic Commission, wanted assistance in biochronology and stratigraphic matters. The Czech Republic wanted commitment on education at school level and more involvement in IGC. Denmark asked for a justification of the increase in fees. Estonia complained because their country has been listed as ex-Soviet at the 31st IGC in Rio de Janeiro: they want to be categorised as European. Finland stated that there is too little money for research in universities and wanted more emphasis on hydrogeology and the environment. Iran wanted more rapid information on decisions. Ireland argued for a higher profile for geology internationally. Italy felt emphasis should be placed on implementation of the Strategic Action Plan. Sweden stated that the IUGS should have a higher visibility among geologists. Taipei, China complained because they were identified at the 31st IGC as Taiwan and not as Taipei, China and that their delegate was not admitted to the meeting of the IGC Council. Ukraine recommended that *Episodes* should have more material from the

National Committees and the Commissions and that it should also have regional overviews.

De Mulder said the Executive Committee should pay heed to these valuable suggestions. The Committee must pay attention to relationships with the National Committees. Latecomers can send reports to the Secretariat. Caldwell felt that the suggestion from the Ukraine is interesting; *Episodes had approached them*. De Mulder pointed out that most of the comments were dealt with in the Strategic Action Plan. *Brett stated that the average proportion submitting reports is about 28 of the 55 countries that pay their dues.*

The Committee thanked all the Adhering Organizations that had submitted an annual report.

3.g. Permanent Secretariat

H. Refsdal reported that she intended to reduce her working time to 50%. Director A. Bjørlykke, Geological Survey of Norway and a member of the Norwegian National Committee had proposed the following solution: Refsdal will take care of daily administration assisted by Habimana, and Habimana and Boyd will attend the meetings and produce the minutes. Refsdal has a part-time assistant who takes care of secretarial work. Refsdal said this support may allow programmes now on hold like the Database on Deep Drilling to resume if funding becomes available. De Mulder accepted the changes, which he felt would add support to the Executive Committee, and thanked the Norwegian government and the National Committee for their support.

4.a. COMMITTEES

4.a.1. Committee for Research Development (CRD)

Brett (commentator) stated that IUGS doesn't do research - Committee for Planning or Strategic Planning would be better names. The committee should be delegated tasks by the Executive Committee *and review and assess Commissions and other IUGS bodies. De Mulder agreed and said these should include assessment of the Commission on Stratigraphy (ICS). He would like to have a proposal from I. Speden as commentator on the ICS.* Reviews should be carried out primarily by the Executive Committee but with external help as needed. Brett said that there are mechanisms for review processes using external assistance; IUGS should not use the full Executive Committee.

The Executive Committee AGREED that Speden would prepare a draft Terms of Reference for the Committee and the profile its membership should have.

4.a.2. Committee for Publications (CP)

Caldwell (commentator) reported on the meeting of the [CP Committee for Publications](#) held on February 28. Zhang reported on *Episodes*, covering both its history and proposals for the next three years including conversion to a review journal. Caldwell felt it would be wise to meet in Washington with F. Spilhaus (member of the CP) later this year to discuss this. The new direction would necessitate changes among the Associate Editors. Caldwell feels that *Episodes* is in very good hands.

Brett, who represented J. Aaron, said Aaron was working hard on the [IUGS](#) web site. Brett and others wanted a better flow of information to Aaron.

Caldwell felt that the most difficult item considered was the International Stratigraphic Chart. Copies held by UNESCO had been distributed at the 31st IGC, others were held by the Secretariat. Two requests for editions in other languages had been received: French (J.-P. Cadet and CGMW would be responsible and the edition would also have the CGMW logo) and Chinese. **This was agreed.** UNESCO had omitted several critical pieces of information required by IUGS including copyright. IUGS will claim copyright, alone, using stickers giving the ISBN number and address from which the Chart is available. No copies are to be distributed without the sticker. The price will be USD 10 + postage and handling. Caldwell will then write to China regarding the Chinese-language version. UNESCO has submitted a draft contract and wants to be involved in the French and all later versions and revisions. The CP recommends that the draft contract be rejected. The Committee asked Janoschek to take this up with UNESCO assisted by Cadet. The Committee wants wide distribution of the Chart and translation.

Caldwell gave a recommendation on the composition of the CP to the President.

Caldwell stated that the CP had discussed proposals for a new series of non-serial publications to be published by a commercial publisher. **However,** it had been decided to postpone further deliberations until the recommendations of the Strategic Action Plan emerged. This should now be taken up again as the proposals are in accord with the Strategic Action Plan. Caldwell will also try to help the Secretariat to clear its storage facilities in which large numbers of non-serial publications in little demand are stored. De Mulder thanked Caldwell. He added that free copies of the Chart would be distributed at conferences in developing countries. Janoschek suggested that one more member of the Executive Committee, Brett, should join the CP (in addition to the two already suggested) to handle contact with Spilhaus. De Mulder agreed. He indicated that he would propose names for the external members before the end of the Executive Committee meeting. The CP has done a good job and all the important issues had been considered. A Bureau meeting to be held later would consider external membership. Speden asked if non-CP members

could be allowed to make proposals. De Mulder responded in the affirmative.

The Committee thanked W.G.E. Caldwell for his work on the CP, the Editor, Managing Editor and other staff of *Episodes* and J. Aaron, webmaster for their sterling work in connection with IUGS publication activities.

The Committee APPROVED the following composition of the Committee on Publications: Caldwell (Chairman), Aaron, Bobrowsky, Brett, Zhang, Janoschek, Spilhaus.

4.a.3. Committee for Finances (CF)

Boriani pointed out that IUGS has an Advisory Board on Finance (ABF) but that it existed only in the Statutes. The Strategic Action Plan recommends that it be recreated.

The Committee AGREED that Janoschek would coordinate a task group, which will make a proposal on the establishment of the Committee for Finances.

4.b. COMMISSIONS

4.b.1. Commission on Geological Science for Environmental Planning (COGEOENVIRONMENT)

Summary 2000:

2000 was a successful year for COGEOENVIRONMENT that saw 22 new action items generated at its annual meeting in Rio de Janeiro. A new Chairman, Vice-Chairman and Secretary General were appointed and this has had an impact on the financial management and reporting in the second half of 2000.

The Commission's profile in the international community is high, giving an increase in Corresponding Membership to 250 and countries represented now at 85. With the retirement of four officers and the resignation of one, the executive presently consists of 10 members, representing 10 countries, with plans to add 3 officers in 2001.

Several new products and activities of the Commission have fostered greater awareness and appreciation of environmental geology amongst public, private and government individuals. Existing liaisons were consolidated to enhance cross-disciplinary communications within the IUGS.

Several meetings were organised and/or co-sponsored:

- Workshop on Geoindicators in Ustka, Poland;*
- Workshop on Health and the Geochemical Environment in Uppsala, Sweden;*
- 2 special and 1 general symposia as well as 2 short courses for IGC in Rio; and*

- *Special session on Engineering Geology and Environmental Planning for Expo 2000 in Hannover. Public and professional lectures, as well as papers in journals on similar subjects were given and published by officers and members.*

COGEOENVIRONMENT Newsletter 16 was printed and distributed. The second Medical Geology Newsletter was also published. Numerous technical and scientific articles and publications in refereed journals and books were produced by officers and corresponding Members of the Commission

The Working Group on Urban Geology has commenced its activities and is now strengthening linkages with similar groups.

The Working Group on Geoecology is now finalising its implementation plan while the Working Group on Sustainable Subsurface Management is drawing-up its objectives, mandate and future plan. Working Groups on Geological Heritage and Tourism, and Land use Systems have also been proposed.

The Working Groups on Medical Geology, Geoindicators Network (GEOIN) and COGEOENVIRONMENT all have their own websites prominently linked to the IUGS site.

Bobrowsky (commentator) reported that the brochure on the Essential Role of Geosciences is very popular - it has been translated into several languages including Chinese, Russian, Spanish, Persian and Malay. Two newsletters had been printed but funding of these was problematic. The Geoindicators group was dissolved as a working group but is functioning actively outside IUGS; it is running at a deficit. The Working Group on Medical Geology is two years old, has a good web site and has led to an IGCP project. He asked whether this activity should be brought up to a higher level in IUGS. A working group on Geological Heritage and Tourism had been proposed but might overlap with Geosites and ProGeo (the latter not a part of IUGS).

Cadet asked how the working groups function. Bobrowsky replied that they form a group, define a plan of action, run short courses, symposia, etc. Brett said he believed these activities have the potential to generate funding. Medical geology could be brought to the attention of ICSU. ICSU might want it in SCOPE but this might not be a good idea (because of low geological involvement).

De Mulder felt that these were very positive activities but perhaps both geoindicators and medical geology should be separate entities. Bobrowsky said they should be special projects not working groups, i.e. with specific goals and a timetable. Gaál suggested that the Executive Committee ask for written proposals, indicating potential conflict of interests. Boriani said that someone should take an initiative for preparation of proposal. De Mulder agreed and indicated that COGEOENVIRONMENT should take the

initiative. Brett suggested making a proposal to ICSU, in which other links would emerge.

Conclusion: The Secretary General should approach the Commission for proposals on a new status for Geoindicators and Medical Geology and should also contact ICSU.

The Committee ACCEPTED the COGEOENVIRONMENT report and complimented the Commission on its good work.

4.b.2. Commission on Global Sedimentary Geology (GSGP)

Summary 2000

The main activities of the Commission were the Meeting of the Commission and the confirmation by the IUGS Council, August 11 in Rio, of the new Chairman and new Programme Development Committee.

Furthermore, the Commission built up and opened a web site for GSGP. The Commission organised the meeting of the CRER Working Group in Vieste-Gargano, Italy, September 25-28. The theme of the meeting was Quantitative Models on Cretaceous Carbonates and the Eastern Margin of the Apulia Platform. A new flagship project for GSGP: "Global Ancient Oceanic Environments and Events (GAOEE)" was proposed, and preparation of the Oman PANGAEA Symposium and field meeting for January 2001 in Muscat, Oman was set in motion.

The commission published the proceedings of the PANGAEA session held at the IAS European meeting in Heidelberg in the fall of 1997, a special issue of "Paleogeography, Paleoclimatology, Paleoecology vol. 161/1-2", and a News Report in Episodes 23/3.

I. Speden (commentator) reported that the Commission is active and is responding to initiatives from the Executive Committee. The Commission has a new chairman, Dr. A. Baud from Switzerland.

The Committee ACCEPTED the GSGP report.

4.b.3. Commission on the History of Geological Sciences (INHIGEO)

Summary 2000

The Commission now contains 159 members from 36 countries. .

The Commission's main activity involved the presentation of two Symposia on the history of geology at the IGC in Rio de Janeiro, on 'Geology in the Tropics' and 'Major Developments in Geology in the Twentieth Century'.

A poster on the theme of 'Women in Geology' (treated historically) was prepared by Dr Martina Koelbl-Ebert (Germany) and displayed at the IUGS booth in Rio, attracting favourable comment.

INHIGEO contributed substantially to the 'William Smith Millennium Meeting: Celebrating the Age of the Earth' at the Geological Society, London, in June, one of the new UK Members being the principal organiser.

The Secretary General has initiated the compilation of a database on the 'expertise' of the Members of the Commission, which is proving useful for getting papers refereed, writing book reviews, soliciting contributions to *Episodes*, etc.

A new series on 'Classic Papers' in geology has been established in *Episodes*, consisting of summaries, extracts, and commentaries on major papers in the geosciences, or essays on a 'field' of historical importance. The Secretary General inaugurated the series in September with a paper on 'James Hutton's "Theory of the Earth" (1788)'. The December issue contained a paper on Mohorovicic by Yugoslav member, Professor Alexander Grubic.

The Commission published INHIGEO Newsletter No.32, the final paper from the INHIGEO session at the 1997 International History of Science (in *Annals of Science*), Papers from the Neuchâtel Symposium (in *Eclogae Geologicae Helveticae*), and a bibliography on the geology of Armenia. The Commission edited the second issue of the English-language Newsletter of the Japanese Committee for the History of Geology.

Sato (commentator) referred to his written report. Several members commended the work of the Commission. Bobrowsky praised its use of *Episodes* and said IUGS should require this of other commissions. Gupta asked about the history of IUGS - what should be preserved? How should the material be used? Brett: This was tried a few years ago at a cost of USD 2,000 but the person given the task did not complete it. Caldwell felt that more of the Commission's work should have been visible under the IUGS logo.

Conclusion: The Commission should be asked to look at IUGS history, at critical geological problems and important personalities in geology.

The Committee ACCEPTED the INHIGEO report and complimented the Commission on its good work.

4.b.4. Commission on Petrology and Chemistry of the Solid Earth (COPCSE) (formerly CIMP)

Summary 2000

The commission's main activity is to sponsor international symposia and to publish proceedings in return for royalties.

It was formerly known as the Commission on Igneous and Metamorphic Petrogenesis (CIMP).

The change of name to Commission on Petrology and Chemistry of the Solid Earth (COPCSE), to better reflect a broader scope in the work of the Commission, was not approved at the IUGS Council

meeting held during the 31st IGC. However, the Council passed the reported decision on the name change on to the Executive Committee.

~~No report had been received as of February 2001.~~

Boriani regretted that no report had been received. He said that the Commission's work, (from an IUGS viewpoint), is characterised by low (zero) cost, high scientific level and high visibility (use of the IUGS logo). Brett indicated that it had been suggested the Commission should form a separate body but the members did not want to. Brett objected to the expression "petrology of the solid earth", (there being no "petrology of the non-solid" earth.) Boriani had written to Professor Arndt asking why no report had been submitted but had yet to receive an answer.

Conclusion: Contact should be established with Professor Arndt, posing the question as to whether the scientists involved wished to maintain their status as an IUGS Commission with the commitments which this normally involves.

The Committee REGRETTED that no report had been submitted

4.b.5. International Commission on Stratigraphy (ICS)

Summary 2000

In November 2000, five more Global Stratigraphic Section and Point sites (GSSP) were formally accepted by the ICS, and forwarded to IUGS for ratification in early 2001. These golden spikes are, from younger to older: Base Maastrichtian Stage (uppermost Cretaceous); Base Triassic System; Base Capitanian Stage (uppermost Middle Permian); Base Wordian Stage, (Middle Permian); and Base Roadian Stage (base of Middle Permian). During 2000, the IUGS ratified GSSPs for base of Zanclean and Messinian stages (Miocene) and Sinemurian (early Jurassic). These bring the number of formalized stage boundaries in the Phanerozoic to 37, out of a potential total of approximately 88+ stages. All except one (the base of Paleogene or the Cretaceous-Paleogene boundary) have also been published, primarily in Episodes. Over half of the 37 GSSPs had been ratified since 1996, after a slow start in 1977; the acceleration is directly related to the urgency placed by the three previous ICS Bureaus on the all-important issue of international stratigraphic consensus and standardisation. ICS Subcommissions have indicated that several GSSPs are slated for rounds of voting in early 2000 (?) and are soon to be submitted to ICS, and a dozen more GSSPs are in an advanced stage of preparation.

It is with great satisfaction that ICS declares that, with the placement of the GSSP for the base of the Triassic, all Phanerozoic erathems have formalized standard definitions: the base of the Paleozoic, the base of the Mesozoic, and the base of the Cenozoic. The location of the GSSP for the base of the

*Triassic System and the base of the Mesozoic Erathem is in the Meishan section in China at the First Appearance Datum of the conodont *Hindeodus parvus*. This event provides a global correlation horizon that is immediately after the peak of the major C-13 anomaly and fern-spike that marks the mass extinction. We also note with satisfaction that this particular GSSP received a 100% Yes vote within the ICS.*

As part of the 31st IGC in Rio de Janeiro, ICS organized or was associated with several very well attended and successful symposia, including: 'Paleogene Events and Subdivisions', 'Prospects for the Geological Time Scale in the 21st Century', 'International Standard References for the Permian System', 'Cretaceous Stage Boundaries', 'The Precambrian - Earth Time's Last Frontier', 'Paleontological, Stratigraphical and Paleogeographical Relations among S. America, Laurentia, Avalonia and Baltica during the Ordovician', 'Devonian Paleogeography and Paleoclimatology of Western Gondwana', and 'Quantitative Stratigraphy: Documenting the Geological Record'.

In addition, an informative and well-attended business meeting was held to inform the geological community about status and future plans within the ICS, including a discussion of a proposed re-organization of its structure to strengthen its mandate.

In co-operation with IUGS, UNESCO and CGMW, the ICS published a new edition of the International Stratigraphic Chart that was distributed during the 31st IGC. The Commission also endorsed the effort of the Stratigraphical Commission of the Geological Society of London towards publication of the study "Simplifying Stratigraphical Time". With the sponsorship of the Norwegian Polar Institute in Tromsø and the hydrocarbon industry, the Norwegian Committee on the Stratigraphy of Svalbard produced a comprehensive work entitled "Lithostratigraphic Lexicon of Svalbard".

Speden (commentator) reported that this is the largest Commission: there are major issues related to regional and personal differences. The Commission had 50 meetings/workshops and over 2,000 publications during the year. They are considering establishment of two new Subcommissions - on the Archaean and the Proterozoic. The ICS should be commended for its goal as regards GSSPs. Recommendation 1.3 on merging three pairs of Subcommissions has been withdrawn. The initiative to dissolve Subcommissions has not been prepared properly. The ICS is incorrect in its conclusion that the International Stratigraphic Chart is out of print (the Secretariat has 2,700 copies). The ICS wants a change in statutes, approving mandates for sub-commissions for 4-year periods.

Several members of the Committee recommended that caution be exercised in relation to the organizational changes planned by ICS, noting, as accepted by the Chairman, Professor F. Gradstein, that these must be in accord with the IUGS statutes and were

subject to approval by the Committee. De Mulder concluded that the Executive Committee should send the recommendations back and ask for more detailed preparation.

Caldwell pointed out that the formal justification on the base of the Maastrichtian, which has never been in dispute, is 750 pages long: he questioned whether the goals relating to the GSSPs (50% in 2004 and 100% in 2008) were realistic. Brett reminded the Committee that the aim to finish GSSPs so quickly was based on a recommendation from IUGS but that it had been followed up unrealistically.

Speden's written conclusion: *The Executive Committee compliments the ICS Bureau on their productivity, their initiative in reviewing the work of the Subcommissions and their proposals for restructuring these and establishing new Subcommissions. The Commission should note the importance of completing key projects and of maintaining key roles to ensure the continuing commitment of participants. It should also ensure that detailed planning and costing are completed and undertake wide consultation on major issues. This should include, where appropriate, the publication of plans, information and opinions in international journals, including Episodes, to establish a consensus before decisions are finalised on major issues of global significance or on the termination of Subcommissions or Working Groups.*

With regard to the proposed changes to Subcommissions and Working Groups, the Executive Committee is pleased to ratify the merging of the Quaternary and Neogene Subcommissions, conditional on the approval of the Chairpersons of the Subcommissions and subsequent ratification by the Executive Committee of the establishment of a new Subcommission on the Late Cenozoic and the dissolution of the Subcommission on Gondwana Stratigraphy. The Executive Committee also commends the steps being taken to review the status of the Precambrian and Terminal Proterozoic bodies and the Silurian and Devonian Subcommissions.

With regard to the proposed termination of the Subcommissions on Geochronology and Stratigraphic Classification, the Executive Committee recommends further extensive consultation with the members of the two Subcommissions, national stratigraphic committees and stratigraphers worldwide before termination of the Subcommissions should be contemplated. It is essential that key work in the Subcommissions, such as that by the ISSC on sequence stratigraphy and cyclo-stratigraphy is completed satisfactorily and that the long-term needs of stratigraphic classification and terminology are ensured.

Further consultation with stratigraphers worldwide and National Committees is also necessary to determine whether chronostratigraphic units should be merged with geochronologic units and whether the present International Stratigraphic Guide should be replaced by a mandatory code. The present guide serves a valuable role and is widely accepted and used. Major changes

should be made only after reasoned debate and the presentation of cases, where appropriate, in scientific journals, over an adequate period of time as was the case in development of the present guide in the late 1960s and early 1970s. It is the opinion of the Executive Committee that procedures for stratigraphic classification should never be mandatory and that they should be classed as guidelines, rather than rules. The opportunity must always exist to challenge even widely accepted, long-standing procedures, providing the challenges build on sound scientific argument.

With regard to the establishment of the new Subcommittee on Stratigraphic Information Services this is a promising initiative, which needs careful, detailed planning and budgeting to ensure proper establishment and continuity. The Executive Committee encourages the ICS to proceed with preparation of a proposal involving a stratigraphic database and links, Geological Time Scale information and geohistory education site and links, and to forward the proposal as soon as practical for consideration by the Executive Committee.

With regard to the status of work on Global Stratigraphic sections and Points, the Executive Committee supports the valuable work being undertaken and commends current progress and the objective of completing this work by 2008. It is pleased to ratify the five GSSPs for which voting approval was obtained, namely: Base Maastrichtian Stage (uppermost Cretaceous); Base Triassic System; Base Capitanian Stage (uppermost Middle Permian); Base Wordian Stage, (Middle Permian); and Base Roadian Stage (base of Middle Permian).

The Executive Committee approves the ICS request for a mandate to determine the terms of its Working Groups and the proposal for a maximum of four to five years in the first instance. Regular review of the progress of each Working Group is recommended.

The Executive Committee regrets that it is not able to release copyright while discussions continue on the publication of the Stratigraphic Chart in other languages. It is deeply conscious of the need to distribute the chart widely and is actively pursuing this goal.

The Committee ACCEPTED the ICS report, complimented the Commission and its Chairman on their major achievements and excellent work and commended the above proposals to its attention.

4.b.6. Commission on Systematics in Petrology (CSP)

Summary 2000

The Commission and its three active Subcommissions continued their work on systematics, classification and nomenclature of

igneous and metamorphic rocks in business and working meetings, circulars and written discussions.

The Subcommission of Systematics of Igneous Rocks (SSIR) re-organised the 2nd edition of "A classification of igneous rocks and glossary terms", to be published in 2001 by Cambridge University Press thanks to the Subcommission co-ordinator Roger Le Maître. The Subcommission edited also the first three chapters concerning nomenclatural aspects and current review by the members of the SSIR.

The Subcommission on the Systematics of Metamorphic Rocks (SSMR) prepared the Flow Charts and text on "How to Name a Metamorphic Rock" for the CSP posters distributed during the 31st IGC in Rio de Janeiro.

The Subcommission on Data Bases for Petrology (SDBP) organised IUGS Symposium 24-4 "Use and Future of Geological Base", it updated the IGBA and SEDBA (adding new data, correction of previous data, revision of software) and developed a different version for different platforms. Finally the Subcommission established and improved the Subcommission's websites to Spain, Japan, China and Russia.

The Subcommission on Systematics in Sedimentary Rocks (SSSR) was under review (?).

Boriani (commentator) will try to find a solution by helping J. Keller in finding a successor and with progress in the SSMR. A proposal had been received from a Syrian geologist to translate "A Classification of Igneous Rocks and Glossary of Terms" into Arabic. The proposal should be considered by the CP.

The Committee ACCEPTED the ICS report

4.b.7. Commission on Tectonics (COMTEC)

Summary 2000

COMTEC supported international collaboration in research and teaching in 2000, but the severe budgetary reductions limited activities. COMTEC was well represented at the 31st IGC, where a large number of sessions were sponsored by COMTEC, and two posters that describe and promote COMTEC were displayed: these posters are available for future COMTEC publicity. Poster A gives a summary of the role and organization of COMTEC, and Poster B describes the Subcommissions' activities. Eight papers were published or accepted

The Subcommission on Tectonic and Surface Process Interactions (SOPTSPI) was involved in two highly topical workshops (on active tectonics of Turkey and seismicity of Europe), a symposium on faulting in Japan and a field workshop at the 31st IGC.

The Subcommission on Rheology continued with its collaborative program of research and training with the Argentine Geological

Survey. The Working Group on Textural and Microstructural Tools to Understand Magmatic to Subsolidus Processes in Igneous Rocks (TAMTUMSPIR) was represented at two major conferences: The Geological Association of Canada meeting, and Geoscience 2000. 8 papers were published or accepted in 1999, one book was published, and 7 conference presentations were made. COMTEC supports a wide range of activities in areas that would not otherwise be funded, with collaborators from Argentina, Australia, Belgium, Eire, Italy, Sicily, Sweden, UK, USA, and Zimbabwe. In 2001, a workshop will be held in Argentina, and support for the two sub-commissions will continue.

Gupta (commentator) reported that he and others raised questions about the status of the Commission and certain of its activities, but that some of the subcommissions did valuable work. There was a consensus that it should have closer links to IUGG. Boriani pointed out that the rheology subcommission has a very narrow professional base. This is not in accord with IUGS policy. De Mulder said the Subcommissions should be given an opportunity to justify their existence.

The Committee ACCEPTED the COMTEC report and complimented the Commission on its good work.

4.b.8. Commission on Management and Application of Geoscience Information (COGEOINFO)

Summary 2000

- Training of geoscientists from developing countries.
Members of the Commission and their associates conducted extensive training sessions for representatives of the Pan African Network for Geological Information System (PANGIS) and Southeast Asia Network for a Geological Information System (SANGIS) countries, using in part database and GIS software developed in previous years by COGEOINFO. A six-month training course was conducted for geoscientists from 15 countries at the Musee Royale pour l'Afrique Centrale, Belgium (MRAC).
- Additional funding from the European Science Foundation.
Members of COGEOINFO succeeded in obtaining European Science Foundation (ESF) support for a series of workshops. Efforts were concentrated on preparation for a EURESCO Conference that is scheduled for Spa, Belgium, on July 7-12, 2001. COGEOINFO contributed USD1000 toward the planning costs. The Euresco Conference will be entitled "Characterisation of the Shallow Subsurface: Implications for Urban Infrastructure and Environmental Assessment"
- Increased use of the Multilingual Thesaurus for Geosciences.
Using funds from sales of hard copy and fees for licensed use of the Digital MTG, COGEOINFO continued to foster even more widespread use of the important geoscience tool. The basic

Multilingual Thesaurus Geoscience was cited well in excess of 500,000 times whilst the Digital version is being used increasingly within information systems, particularly in Europe. Versions in additional languages are in preparation and a version of the Digital MT with Access database has been completed.

- Bibliography 2000 workshop

COGEOINFO is scheduled to participate in a South-East Asia earth science bibliographic workshop to be organized by CIFEG and funded by UNESCO. The bibliography workshop will be held in Orléans for a selected group of SANGIS countries.

- Publications

COGEOINFO produced a scoping study on web-based databases for IUGS data. The Commission's members contributed articles to the "Applied Geoscience Forum" for the journal "GisWorld".

De Mulder (commentator) reported that B. Kelk is the new Chairman of the Commission. The Commission meets only once every two years but is quite active and has got much credit for the Thesaurus. They have been given a good review. The main problems relate to lack of personnel. They should also have more involvement from outside Europe. There was a consensus that too few people were involved and that they met too infrequently. The Commission's work should be discussed in a strategic context, involving the Chairman. Further discussion concerned the merits of payment for use of the Thesaurus as against free access to it. Janoschek related that payments were already being collected (also from organizations which have contributed to it).

The Committee ACCEPTED the COGEOINFO report.

4.b.9. Commission on Geoscience Education and Training (COGEOED)

Officers of the Commission have not yet been appointed.

H. Refsdal informed the Committee that W. Fyfe had made a proposal but that the person proposed had declined. Brett suggested that the Executive Committee should canvas for candidates.

4.c. WORKING GROUPS

4.c.1. IUGS Working Group on World Landslide Inventory

This Group was formally disbanded at the IUGS Council meeting held during the 31st IGC in Rio in August 2000.

4.c.2. UNESCO-IUGS Working Group on Global Geosites

Summary 2000

In Europe, the Group organised the 3rd International Symposium in Madrid in a joint effort between IUGS, the Geological Survey of Spain and various ministries. A regional group for southern Europe was established and a network of contributors from Portugal, augmenting successful work in Spain and Italy.

In Asia, a Geosites workshop was held at the Aegean IASEC Conference in Izmir, and preparation for workshops to be held in China and Kazakhstan continued.

In Africa, South Africa was selected as the first African country to start Geosites, and a geoconservation conference was organised during the Geocongress in Cape Town.

The Group participated in the 31st IGC and presented the Geosites project.

An IUGS/IUCN joint proposal to UNESCO for the identification of Geosites/World Heritage Sites was put forward and 12 sites proposed as World Heritage Sites received the attention of the WORKING GROUP. The concordat between IUGS and IUCN on geological input to the World Heritage Series was finalised.

Publications on Geosites appeared in proceedings from the Madrid International Conference, and Internet release will follow publication of the first European list of country geosite frameworks.

Bobrowsky (commentator) stated that the Chairman and primus motor is W. Wimbledon. The Group is going well in Europe and Asia, but little is happening in the Americas. Brett said that the Group's function was to advise UNESCO and that it had done a good job. Janoschek said this would remain as an internal activity in the UNESCO Earth Science Division. The European geoparks intend to ask for use of the IUGS logo and will be organised as a group with its headquarters in Digne-les-Bains, France. IGCP board members will be used as consultants. Geoparks is a major opportunity for increasing the visibility of the geosciences.

Conclusion: The Executive Committee should ask for an informative article in *Episodes* and should require better accounting and budgets as a condition for further financial support. Boriani will prepare a draft letter to Wimbledon for approval by the Executive Committee, in which it is recommended that he have closer contact with Geoparks and with IGCP Scientific Board members as experts (not as IGCP representatives).

The Committee ACCEPTED the report from the Working Group and complimented the Group and its Chairman on their good work.

4.c.3. IUGS Working Group on Continental Geochemical Baselines

Summary 2000

The aim is to establish a land-surface global geochemical reference network, providing multi-media, multi-element baseline data for a wide variety of environmental and resource applications.

A symposium on geochemical baseline activities was organised as part of the 31st IGC in Rio de Janeiro

Sampling had been completed in most FOREGS countries and analytical data are available for most of these samples. Preliminary maps of geochemical data for Europe have been prepared and preliminary interpretation has begun.

Funding for sampling in Southern India had been secured from the Indian Government for 12 cells - about one tenth of the total. SE Asian countries (members of the CCOP group) are reported as intending to take steps towards establishing geochemical baselines in accordance with the recommendations of Darnley et al. (1995).

The Annual Business Meeting of the IUGS Global Geochemical Baselines Working Group was held in Athens on 14 - 17 November. The meeting was held in conjunction with the FOREGS Geochemistry Working Group Annual Meeting. A joint meeting of the Groups with the EuroGeoSurveys "Soils and Land use Policy Sector" and the European Soil Bureau was also held.

The Group updated its Web site hosted by the BGS at ww.bgs.ac.uk/IUGS, designed a new logo, and circulated the first preliminary maps of European geochemical data for preliminary discussion and interpretation. Numerous papers and conference presentations were also published.

Bobrowsky (commentator) stated that a very comprehensive report had been submitted and that he regretted that Professor Plant was not present to give her own comments. Finance is the major concern. IUGS is highly profiled in the Group's activities. He suggested that they should have as much support as possible.

The Committee ACCEPTED the report from the Working Group and complimented the Group and its Leader on their excellent work.

4.c.4. IUGS Working Group on Geochronological Decay Constants

Summary 2000

The Group's aim is to allow a reliable establishment of a numerical timescale, linking stratigraphy with isotope geology. The Group organised a special session during the AGU Spring Meeting and published a Status Report.

The Group published "Call for an Improved set of Decay Constants for Geochronological Use" (*Geochimica et Cosmochimica Acta* 65), "A Test for Systematic Errors in $^{40}\text{Ar}/^{39}\text{Ar}$ Geochronology Through Comparison with U-Pb Analysis of a 1.1 Ga Rhyolite" (*Geochimica et Cosmochimica Acta* 64), and "In Pursuit of the ^{40}K Branching Ratios: K-Ca and ^{39}Ar - ^{40}Ar Dating of Gem Silicates" (*Chemical Geology* 169).

Boriani pointed out that the Group includes 10-12 of the best geochronologists in the world and is doing an excellent job. This is a good example of standardisation.

The Committee ACCEPTED the report from the Working Group and complimented the Group and its Leaders on their excellent work.

4.c.5. IUGS Working Group on Fossil Fuels

Summary 2000

The year was marked by the transition from a Commission to a Working Group with a redirection of focus. Several meetings were held between the Officers in order to provide terms of references, research plans and implementation plans for the Working Group activities. Considerable attention has been given to ensuring the overall coherence between the previous Commission and Working Group activities, their priorities and their relationship to other programs and activities.

The Working Group succeeded in the latter half of the year to use a state-of-the-art concept on "geointelligence" to support natural resource evaluation based on knowledge gathering from global Internet and Intranet data stores. This collaboration was conducted both by using remote link techniques via Internet/Intranet and by setting up intensive meeting periods and one workshop in November in Trondheim.

A new work program for the Fossil Fuels Working Group in line with its mission statement and goals is under development and will be implemented over the next four years according to the IUGS Strategic Plan as well as the policy of individual IUGS member countries.

Al-Hashimi (commentator) reported that the Group has worked for several years to hold a seminar in Iran without success. Products from the Group have included a CD-ROM and a proceedings volume. Al-Hashimi feels that the Group's report should be more specific and that this should also apply to plans for 2001. The report should also be supplemented with copies of products. This should be a condition for a new grant. Al-Hashimi, in response to a question, indicated that the Group's interests include petroleum and gas hydrates and that industry is involved. Boriani reported that he had received a draft Terms of Reference for the Group from its Chairman.

Conclusion: Boriani should write to the Group asking for further information relating to their activities in 2000, including a financial account, further information on their plans for 2001 and for a work plan to supplement the Terms of Reference.

The Committee ACCEPTED the report from the Working Group.

4.c.6. Proposed new Working Groups

IUGS Working Group on Public Affairs

De Mulder stated that the Working Group had been approved, in order to handle policy statements for use by IUGS and others. Brett said the concept was intended for use locally and internationally. IUGS should disseminate the documents. D. Applegate at AGI (Public Affairs) would be an ideal person as Chairman. He has been Congressional Fellow and would be willing. On 7.7.2000 a survey was sent to National Committees and affiliates asking for position statements and other information and for nominations. 22 surveys were returned. Obvious policy issues include: Creationism, nuclear waste, etc. Papers should be published in *Episodes* or released on the web.

Conclusion: Brett is asked to write a letter to D. Applegate, confirming his selection as Chairman of the Working Group and asking him to propose other members with a suitable geographic distribution. He is to be encouraged to use the IUGS web site to disseminate material from the Group.

The Committee COMMENDED D. Applegate for his interest in taking a lead role in establishing this important Working Group.

4.d. AFFILIATED ORGANIZATIONS

4.d.1. American Association of Petroleum Geologists (AAPG)

Summary 2000

AAPG's total membership as of Dec 31, 2000 was 30,497. The annual meeting was held in New Orleans, in April, with an attendance of 6,856, and the International Conference and Exhibition was held October 14-18 in Bali Indonesia, jointly with IPA, and had a attendance of almost 2,000 with 50 countries represented. The EXPLORER'S "Century Issue" won the APEX award for publication excellence. Eleven new publications were published including a Special Publication "International Oil and Gas Ventures - A Business Perspective".

Al-Hashimi encouraged efforts to find better ways of cooperating with such organizations. The other Committee members agreed. De Mulder pointed out that a Task Group is working towards this goal.

The Committee ACKNOWLEDGED the AAPG report.

4.d.2. Association of Exploration Geochemists (AEG)

Summary 2000

The Association of Exploration Geochemists (AEG) has an active membership of c. 900 members. It is preparing to host its 20th biennial International Geochemical Exploration Symposium and related workshops and field trips in Chile in May 2001.

The Association cosponsored a number of symposia and workshops including:

- *The 5th International Symposium on Environmental Geochemistry (Cape Town),*
- *Geology and Ore Deposits 2000: The Great Basin and Beyond (Reno),*
- *Geology and Geochemistry of the Yandal Belt, Western Australia (Perth)*

The Association had ended its long association with the Journal of Geochemical Exploration and initiated a new journal in partnership with the Geological Society of London. The first issue of the journal, Geochemistry: Exploration, Environment, Analysis, will be published early in 2001.

AEG published and distributed a monthly Newsletter: EXPLORE as well as special publications, and conducted short courses on topics related to exploration and environmental geochemistry.

AEG continued to support its web site <http://www.aeg.org/>

Bobrowsky commented that the Executive Committee had too little time to consider the full, original reports thoroughly. A discussion on ways of disseminating the material from the Affiliated Organizations, including suggested use of the web site and CD-ROMs.

The Committee ACKNOWLEDGED the AEG report.

4.d.3. Association of European Geological Societies (AEGS)

Summary 2000

AEGS has 31 members from 30 countries. It organised an annual meeting of its Executive Committee held in Cracow (Poland) to prepare the next MAEGS-12, in addition to two others held in London and Rio de Janeiro. The AEGS Secretary General participated in the IUGS Executive Committee meeting in Rio de Janeiro.

AEGS published and distributed (in Europe) about 200,000 copies of AEGS leaflets, improved its homepages, structure and information, and created two new addresses: www.aegs.de and www.aegs.org

"Chronicle of AEGS" was prepared and will be published in September 2001, in connection with the 12th Meeting of the Association of European Geological Societies (MAEGS-12). The meeting will coincide with the 25th Anniversary of AEGS.

The Committee ACKNOWLEDGED the AEGS report.

4.d.4. Arab Geologist Association (AGA)

Summary 2000

AGA:

- *Promoted Arab membership in IUGS,*
- *Held a poster exhibition for IUGS and COGEOENVIRONMENT during the Jordanian Mining Conference held in Amman in April,*
- *Published an advertisement for Episodes in its Newsmagazine,*

- AGA covered all correspondence costs and secretarial work for IUGS Vice President Dr. Al-Hashimi including postage, fax and e-mail costs during the year.
- Held a symposium on the History of Earth Sciences in Arab and Muslim Countries: Origin, Development & utilization (Baghdad, May 30-31),
- Held a Symposium on the Future of Water and Food in the Arab World (Baghdad February 6-7).

AGA participated in the Jordanian Mining Conference held in Amman (April 25-28), in the National Symposium on Industrial Rocks & Minerals held in San'a (Yemen May 2-3) and in the 14th Iraqi Geological Congress held in Baghdad (October 15-17)

The Secretary General of AGA was a convenor of the session on Petroleum Geology and Reservoir Analysis held during the 31st IGC in Rio de Janeiro (August 6-17).

AGA approached the UNESCO office in Cairo and the UNDP office in Baghdad forwarding some proposals for co-operation. AGA continued its endeavour with the Inter-Islamic Network on Water Resources Development for the organization of a symposium on Karst Water Resources to be held in Amman in November 2001.

AGA continued its efforts in looking for a proper partner in Egypt to host the 5th Conference on the Geology of the Middle East. It had also contacted the Geology Department at Cairo University with a view to organising AGA's 3rd Symposium on Geological Correlation between Arab countries parallel with GAW-6 planned to be held in Cairo February, 2002.

AGA decided to hold its conference on Gypsum Soil (Gypcrete) in Baghdad in 2001 after being unable to find a host in Syria.

AGA continued its training programme on Seismic Exploration.

Publications: Geoscience Newsmagazine: Geoscience & Arab Development

Al-Hashimi (commentator) reported that three AGA symposia were held under the IUGS banner. IUGS organizations should link more to promote joint ventures/projects etc. AGA is not in such a strong position as to support IUGS but the contact is important. De Mulder plans to attend the Jordanian Geological Conference in April.

The Committee ACKNOWLEDGED the AGA report.

4.d.5. American Geological Institute (AGI)

Summary 2000

AGI has improved the design and promotion of "Geotimes" and released high school and middle school curricula, EarthComm, and IES (Investigation Earth Systems) modules. AGI published the

report: Status of Academic Geoscience from 232 U.S. degree-granting geoscience departments,

AGI improved its web site by creating a geoscience events calendar, and new innovations related to Internet services (AGI Web Services) and e-mail service delivery of references (GeoRef Services) to its Member Societies.

The Committee ACKNOWLEDGED the AGI report.

4.d.6. Association of Geoscientists for International Development (AGID)

Summary 2000

A debate has now been initiated within AGID as to whether, with the increasing activities of many new NGOs, AGID in its current form has become redundant or whether, with reorganization and possible changes in its overall objectives, it still has a role. The Executive Committee of AGID was supposed to report back on the issue to its members, with recommendations, by August 2000.

The AGID General Assembly was held during the 31st IGC, and AGID organised a Symposium on "NGOs' Sustainable Development of National Resources".

AGID awarded four William Scholarships and distributed up-to-date geoscientific literature (4,000 books and monographs, 1,000 complete volumes of journals) to libraries in developing countries through AGID's Book and Journal Exchange Scheme.

AGID published and distributed "AGID Update" No 3, "Geoscience and Development" No 6, and three editions of "South and West Asian Geoscience Newsletter" (on AGID's website)

De Mulder reported that AGID was in transition and would assess the situation in a year's time. Members in developing countries have problems with access to literature and travel money. IUGS should await developments and give support if possible. AGID's membership is low and there are many life members who don't pay fees. IUGS gives USD 2 - 3,000/a. AGID has applied for USD 1,000 in 2001. Abbate: AGID is committed to activity at the IGC in Florence.

The Committee ACKNOWLEDGED the AGID report.

4.d.7. American Geophysical Union (AGU)

Summary 2000

AGU helps to promote the development of the earth sciences and helps to apply the results of these on other studies. AGU has a membership of 38.000 individual members in the Earth and Space Sciences, and a budgeted income of \$26.2 million. AGU supports the U.S. National Committee for IUGS.

C. 150.000 pages of back issues of AGU journal (1995-2000) were made available in electronic form in 2000, and collaboration in Europe was extended to include specific arrangements with EUG (European Union of Geosciences), GSL and EGS (European Geophysical Society)

AGU organised four large meetings and numerous others of varying size.

Publications: The AGU weekly newspaper (EOS), the Journal of Geophysical Research, Water Resources Research, approximately thirteen new books and eight other scientific journals.

Gupta (commentator) stated that AGU is the most visible organization in earth science today. He proposed that IUGS should consider producing a journal like EOS. Brett, de Mulder and Caldwell felt this was a promising idea for the future, though pointing out that EOS had a financial basis that was not possible in IUGS at present.

Conclusion: Gupta was asked to write a position paper on his proposal for an EOS-type journal, for broad consideration within the IUGS family.

The Committee ACKNOWLEDGED the AGU report.

4.d.8. Association Internationale pour l'Étude des Argiles (AIPEA)

Summary 2000

- *Newsletter 2000*
- *Starting up procedures for: Bradley Award, AIPEA Medal Award, and Student Travel Fund*
- *Preparation for the 12th ICC (International Clay Conference), Council Meeting and General Assembly.*

The Committee ACKNOWLEDGED the AIPEA report.

4.d.9. Carpathian Balkan Geological Association (CBGA)

Summary 2000

CBGA has 13 country-members. It interfaces mainly with IGCP and partly with the geological section of the Central European Initiative (CEI).

CBGA held a Council Meeting on September 6, during which a new member, Macedonia was elected, and the programme of the next Congress (including excursions) was prepared. CBGA held an International Conference ESSE WECA (Environmental, Structural and Stratigraphical Evolution of the Western Carpathians), and meetings of CBGA commissions on Sedimentology, Stratigraphy, and Tectonics during the conference.

CBGA published: "Slovak Geological Magazine", vol.6, Nos. 2-3, and "Geological Map of Western Carpathians" at a scale of 1:500,000

The Committee ACKNOWLEDGED the CBGA report.

4.d.10. Commission for the Geological Map of the World (CGMW)

Summary 2000

Membership: All Geological Surveys (or organizations responsible for national geological mapping) of all countries and territories of the world, while other interested organizations may be allowed to join as Associate Members only.

CGMW held its General Assembly during the 31st IGC and ratified its new officers. CGMW sponsored a special Symposium on Small-Scale International Cartography in Earth Sciences and held a stand at GEOEXPO.

CGMW produced and published the 2nd edition of the "Geological Map of the World" at 1:25,000,000, the "Maps of the World Environment during the Last Two Climatic Extremes (CLIMEX)", "Mineral Atlas of the World" at 1:10,000,000, "Geological Map of South America" at 1:25,000,000, "International Geological Map of Europe and the Mediterranean Region" at 1:1,500,000, a new Catalogue of CGMW cartographic production, etc.

Sato (commentator) reported on the important achievements in 2000 and stated that IUGS should foster its relationship with CGMW. Cadet: CGMW plans several new sets of maps: Geological, hydrogeological, resource, seismotectonic at 1:20,000,000 as well as maps of the oceans and three sets of geophysical maps, e.g. depth to MOHO. They plan to improve sales and will have booths at EUG, GSA and other major meetings.

The Committee ACKNOWLEDGED the CGMW report and complimented the organization on its major achievements in 2000.

4.d.11. International Centre for Training and Exchanges in the Geosciences (CIFEG)

Summary 2000

Membership: Four members acting through a network of more than 70 geoscientists and economic geographers, with a budget of USD 352,563.00 contributed by the French Government (80%), UNESCO (7%) and other countries (13%).

CIPEG participated at the 31st IGC in Rio de Janeiro and sponsored a workshop in Malta for specialists on natural risks and water resources from the Caribbean and Mediterranean islands.

CIFEG:

- Improved PANGIS (Pan African Network for Geological Information System) with Ms-Access (T.M.) software,
- Trained new partners on data up-dating under Ms-Access, transfer of CDS-ISIS data to Access version, and on PANGIS network, (3)

- Held a technical SANGIS (South Asia Network for Geological Information Systems) Workshop,
- Presented the SANGIS project at the CCOP 36th Annual Session and the 34th Steering Committee,
- CIFEG completed the installation of the English version of the CIFEG Web site (www.cifeg.org),
- Published PANGEA Newsletter No 31/32

The Committee ACKNOWLEDGED the CIFEG report

4.d.12. Circum-Pacific Council for Energy and Mineral Resources (CPCEMR)

Summary 2000

- *Circum-Pacific Map Project: preparation and publication of the map schedules was nearly completed.*
- *East Asia Map Series: Eight maps published by the USGS are being used in the CCOP Circum-Pacific Geotectonic Map Project.*
- *Circum-Pacific Geospacial Data Project: Results were displayed and discussed at the AAPG International Conference and at the CCOP Annual Meeting.*
- *Crowding Rim: preparations continued for the "Crowding Rim Summit" to be held in August 2001.*

The Committee ACKNOWLEDGED the CPCEMR report

4.d.13. European Association of Science Editors (EASE)

Summary 2000

EASE became a Company Limited by Guarantee, registered in England and Wales (UK) in August. It has a membership of 930 from 53 countries.

EASE held its triennial conference in Tours (France), and courses in scientific writing in Eastern Europe continued. A joint workshop with the British Medical Journal was held for journal editors, and preparations for a joint seminar with the Association of Learned and Professional Society Publishers scheduled in early 2001 were made.

Three issues of EASE's Bulletin "European Science Editing" (Volume 26) were distributed, and the EASE web site was improved.

Janoschek (commentator) pointed out that EASE is no longer a scientific organization in a formal sense but maintained that this doesn't change its goals.

Conclusion: De Mulder writes to EASE informing them of the necessity of changing their status to Associated Member and of the fee involved in this change.

The Committee ACKNOWLEDGED the EASE report.

4.d.14. European Mineralogical Union (EMU)

Summary 2000

EMU continued to co-operate closely with its members (national mineralogical societies of Europe) and gives regular scientific sponsorship and organises symposia within the framework of two European series of mineral science-related meetings: EMPG (Experimental Mineralogy, Petrology and Geochemistry) and EUG (European Union of Geosciences).

EMU organised its annual Council Meeting during EMPG IX (Bergamo, Italy, April) and elected its Executive Committee for 2000-2004 during the meeting.

EMU gave scientific sponsorship to the EMPG IX meeting, organised its second EMU School and Symposium (subject: Environmental Mineralogy, Budapest, May 15 - 19).

EMU helped 20 institutional libraries facing serious financial difficulties (mainly in Eastern Europe and Latin America) by donating free subscriptions to European Journal of Mineralogy.

EMU prepared its third School (subject/place/date/coordinator: Mixing in Silicate and Oxide Systems, Lübeck, June 23 - July 2, 2001, Charles Geiger), and started to prepare its fourth and fifth Schools (Energy Modelling of Minerals, Ultra-High Pressure Metamorphism)

*EMU restructured its homepage at a new site:
(<http://www.univie.ac.at/Mineralogie/EMU>)*

Publications: EMU Notes in Mineralogy, and European Journal of Mineralogy.

The Committee ACKNOWLEDGED the EMU report.

4.d.15 The Geochemical Society (GS)

Summary 2000

Membership: 1500 individuals (students comprise about 15%). GS is operated with a budget of USD 121,000 from publication royalties.

The Geochemical Society is a co-sponsor of the Geological Society of America Annual Meeting and the Spring American Geophysical Union Meeting.

GS sponsored the 10th V.M. Goldschmidt Conference in Oxford (UK) as well as symposia and theme sessions at GSA, AGU and the IGC in Rio.

GS established an agreement with the American Geophysical Union to co-publish a new, all-electronic journal. GS established a new publication series, Reviews in Mineralogy and Geochemistry, jointly with the Mineralogical Society of America, to supplant the highly successfully MSA Reviews in Mineralogy series.

GS reformed the Society's newsletter into a glossy, news-magazine format with pictures and articles, and appointed an editorial board to assist the editor in assembling timely and interesting scientific articles, meeting summaries and interviews with prominent geochemists.

GS provided USD10,000 for student travel grants to the V.M. Goldschmidt Conference.

Publications: "Geochimica et Cosmochimica Acta", "The Geochemical News" and series of "Special Publications".

The Committee ACKNOWLEDGED the GS report.

4.d.16. Geological Society of Africa (GSaf)

Summary 2000

GSaf is linked to international projects through IUGS and UNESCO. GSaf members participate actively in IGCP projects.

The Society supported the organization of the 'GeoLuanda 2000' International Conference held in Luanda, Angola, in May and co-organised (with the Austrian Geological Society and the Austrian Mineralogical Society) the '18th Colloquium of African Geology', which was held in Graz, Austria in July.

GSaf supported financially and co-organised a minerals forum, 'Africa Mineral Forum Conakry 2000', in Conakry, Guinea in November, was active in preparation of "GSaf12", the next international conference of the Society to be held in Yaounde (Cameroon) in March 2001.

GSaf maintained its efforts to establish closer co-operative links and exchanges with other societies, within Africa and beyond: the Geological Society of London, Geological Society of South Africa (GSSA) and the Geological Society of America (GSA).

GSaf assisted in the establishment of the Geological Society of Malawi and the Society of Eritrean Earth Scientists. Mozambique, Sudan and Uganda were also encouraged to launch geological societies.

GSaf promoted the exchange of geoscientists between African institutions. Working relationships were established with external organizations such as the Organization of African Unity, the Economic Commission for Africa, the United Nations Environment Programme and the German scientific exchange services programme, DAAD.

GSaf provided small grants to six Kenyan and Ugandan students to enable them to participate in an international field-training programme led by staff from the Universities of Dar-es-Salaam (Tanzania) and Graz (Austria). The Society also provided a grant

to a Ugandan MSc student to enable her to undertake laboratory training on her own material at the University of Botswana.

GSAf officers recruited almost one hundred new members, from within Africa and elsewhere, and approached corporate members drawn from industry and western geological surveys (Billiton International Development, BP, Delta Gold, Geological Survey of Denmark and Greenland (GEUS) and the Geological Survey of Norway (NGU)).

GSAf supported the Geological Society of Kenya (GSK) conference, on the role of geology in poverty reduction in the 21st Century and was instrumental in organising a successful workshop on Tertiary Geoscience Education in Southern and Eastern Africa in Maputo in November

The Committee ACKNOWLEDGED the GSAf report.

4.d.17. Geological Society of America (GSAm)

The Committee REGRETTED that no report had been submitted for the last two years.

4.d.18. International Association of Engineering Geology and the Environment (IAEG)

Summary 2000

Membership: 5,187 (as of July) from 65 countries and 2,262 associated members (mostly from the AEG in USA). Budget: USD 80,700.

The IAEG held its Council and Executive Committee during the 31st IGC, in addition to an informal meeting of the Executive Committee in Melbourne (Australia) in November.

IAEG sponsored several meetings including the GeoBen 2000 Congress, the 8th International Symposium on Landslides (co-sponsored by the BGS, ISRM, ISSMGE, etc.) and the International Workshop on Engineering Geology and Environment Planning.

IAEG published six issues of the Bulletin of Engineering Geology and the Environment, two issues of the IAEG Newsletter, and 72 scientific papers

The Committee ACKNOWLEDGED the IAEG report.

4.d.19. International Association of Geomorphologists (IAG)

Summary 2000

IAG organised a Thematic Conference on 'Monsoon Climate, Geomorphologic Processes and Human Activities' held in Nanjing, China, on 25-29 August. The conference gave Chinese geomorphologists the opportunity to meet, to encourage

development of geomorphology in their region and to present current geomorphological research in China and elsewhere, with particular focus on monsoonal countries. The conference was preceded and followed by field trips and was attended by c. 100 people from 13 countries.

IAG was active in the Joint IAG/IGU 'Sediment Budgets' Symposium organised in association with the 31st International Geographical Congress, Seoul, 14-18 August.

IAG extended the circulation of the IAG Newsletter through its publication in languages other than English, in national journals in France, Italy and Mexico.

Publications: "River management: The Australian Experience", "Geomorphology, Human Activity and Global Environment Change", "Weathering Soils", "Changing Times - Changing Rivers" and "Monsoon Climate, Geomorphologic Processes and Human Activities".

The Committee ACKNOWLEDGED the IAG report.

4.d.20. International Association of Geochemistry and Cosmochemistry (IAGC)

Summary 2000

The IAGC Working Group on Global Geochemical Mapping works closely with the IUGS Working Group on Global Geochemical Baselines. It has 750 members.

IAGC planned and/or held several international meetings and symposia through the IAGC's Working Groups' activities:

- 3rd IAGC Symposium on Sources, Transport, Fate and Toxicology of Trace Metals in the Environment at the Geological Society of America Annual Meeting, November 12-16, in Reno,
- Sixth International Symposium on Metal Ions in Biology and Medicine, May 7-10, San Juan, Puerto Rico.
- Sources, Transport, Fate and Toxicology of Trace Elements in the Environment, a Symposium as part of the 31st IGC, Aug. 7-17, Rio de Janeiro, plus the Ingerson Lecture by Prof. Umberto Cordani.

IAGC organized the 6th International Symposium on Hydrothermal Reactions, July 25-28, Kochi, Japan, the Symposium on Catastrophic Events and Mass Extinction - Impacts and Beyond, in July in Vienna.

Publications: "Applied Geochemistry" (the journal of the IAGC) and 99 papers.

The Committee ACKNOWLEDGED the IAGC report.

4.d.21. International Association of the Genesis of Ore Deposits (IAGOD)

Summary 2000

IAGOD promotes international co-operation in the study of the genesis of ore deposits and participates closely with other international bodies in a wide range of international programmes, including four IGCP projects. Current membership is >1000 economic geologists from 68 countries, including individual members and members in 11 National IAGOD Groups. IAGOD has six Commissions and twelve Working Groups, either independent or within IAGOD Commissions.

IAGOD co-convened special symposia G-1, G-2 and G-3 at the 31st IGC. IAGOD-WGTT/IGCP-373 jointly held a further symposium (G-6). Individual IAGOD Working Groups co-convened sessions 11-3, 11-4, 11-5 and 11-6. The IAGOD Council and General Assembly met during the Congress and a new IAGOD council was elected.

Several national groups and Working Groups were involved in the organization of scientific conferences and field workshops. Highlights included the IGCP-373 Field Conference in the Urals, co-organised by IAGOD-WGTT, and held in Jekaterinburg during July; a field trip in the Jiangxi province organised by the IAGOD Chinese Group and two international meetings co-organised by the Slovak IAGOD Group. The Mongolian National Group co-organized a symposium "Geology and Mineral Resources of Mongolia" in Ulaanbaatar during October and held a short course on fluid inclusion research during November. The Russian IAGOD National Group established a new Commission on Placer Deposits (COPD), which held a conference on the subject in September. The Russian Group also organized a new Working Group on Thermodynamics of Natural Ore-Forming Fluids (WGTOF). The first Russian conference on isotope geochronology was held in Moscow in November. The Russian Far-East IAGOD Group published a volume 'Ore Deposits of Continental Margins', co-sponsored by IAGOD.

IAGOD publications included 'Granitoids and Related Ore Deposits of the Urals', in the guidebook series and the monograph 'Ore-Bearing Granites of Russia and Adjacent Countries'.

IAGOD is planning to hold its 11th and 12th Quadrennial Symposia in Windhoek and St. Petersburg, respectively. An interim IAGOD meeting is set for Vladivostok in 2004.

The Committee ACKNOWLEDGED the IAGOD report.

4.d.22. International Association of Hydrogeologists (IAH)

Summary 2000

Membership: 3,500 including 400 who joined during 2000.

IAH held its 2000 Congress in Cape Town, where the election of the new Council to serve until 2004 was held. A major outcome of the Congress was that IAH became a charitable company limited by guarantee and registered in the UK, a new statute that gives IAH greater commercial freedom to expand its activities. IAH fully or

partly financed the attendance of 55 African scientists at the Congress.

The IAH Web page <http://www.iah.org> has become popular after it was reorganised and is now being used to recruit new members.

Publications: Hydrogeology Journal, and its listing to SCI.

The Committee ACKNOWLEDGED the IAH report.

4.d.23. International Association of Mathematical Geology (IAMG)

Summary 2000

Membership: 574 individual members from 49 countries. IAMG has, since 1996, established a Working Group on Quantitative Methods in Environmental Geology jointly with COGEOENVIRONMENT, and is affiliated with AAPG. Expenditure budget: USD 59,400.

IAMG held its 10th General Assembly, elected new officers, organised four special symposia and twelve general symposia in conjunction with the 31st IGC and cosponsored two meetings, in Oklahoma City and Arezzo.

The IAMG Student Grant Programme was developed due in part to the generosity of the society of Mathematical Geologists of the United States (MGUS).

A single compilation of computer programmes published in "Computers & Geosciences" since 1975 -the "Silver CD Project"- was created in co-operation with Elsevier.

An online membership directory was established for IAMG members.

Publications: "Nonrenewable Resources", "Mathematical Geology", "Computers & Geoscience", IAMG Newsletter, and "Studies in Mathematical Geology No 6" (an IAMG monograph).

The Committee ACKNOWLEDGED the IAMG report.

4.d.24. International Association of Sedimentologists (IAS)

Summary 2000

IAS held its 20th Meeting of Sedimentology in Dublin, Ireland (September 13-15). Furthermore, IAS co-sponsored:

- The 2nd Latin American Sedimentological Congress in Mar del Plata (March 14-17),*
- The Research Conference on Permo-Carboniferous Carbonate Platforms and Reefs in El Paso, (12-19 May),*
- The Third International Congress on Geofluids in Barcelona (July 12-14),*
- The SEPM/IAS Environmental Research Conference on the Hydrogeology of Sedimentary Aquifers in Santa Fe, (September 24-27),*

- *The GSGP-WG 4 Meeting on Quantitative Models on Cretaceous Carbonates in Gargano, Italy (September 25-28).*

151 individuals and 36 libraries benefited from the IAS friendship scheme for scientists and libraries in developing countries.

IAS published 6 issues of Sedimentology, comprising 1,248 pages. A millennium issue with invited papers was published in February (256 pages) and given free to all the members. IAS continues to support the journal Basin Research. A Special Publication on quartz cementation in sandstones has been produced. A Newsletter in which the IAS National Correspondents report on sedimentological activities in their respective countries accompanied the journal "Sedimentology".

The Committee ACKNOWLEDGED the IAS report.

4.d.25. International Association of Structural/Tectonic Geologists (IASTG)

Summary 2000

IASTG encourages international communication among structural and tectonic geologists.

IASTG is run by Dr Susan H. Treagus, the IASTG co-ordinator who is now looking for a successor. IASTG has 1,270 members from 72 countries. Sponsorships and donations from companies, regional structural/tectonic groups and private individuals cover its running costs.

IASTG reached its 10th birthday in 2000. It participated in the 31st IGC and continued to be active in numerous conferences, symposia, courses, field trips, etc. on issues relevant to structural/tectonic geology.

Publications: The Journal of Structural Geology, International Newsletter 19 and 20

The Committee ACKNOWLEDGED the IAS report.

4.d.26. International Federation of Palynological Societies (IFPS)

Speden (commentator) reported that IFPS is tending to drift apart from the geoscience world even though it should be involved, particularly with stratigraphy. IUGS should have the same type of approach as will be taken with IPA (personal contact with the leaders of IFPS).

Conclusion: De Mulder will contact IFPS after his meeting with IPA.

The Committee REGRETTED that no report had been submitted.

4.d.27. International Mineralogical Association (IMA)

Summary 2000

IMA, continued to hold symposia with IUGS as a supporting body. IMA held its Council Meeting and sponsored 28 symposia during the 31st IGC, prepared the conference of the second largest international IMA-related conference, Mineralogy and Museum 4 held in Melbourne in December, and continued the preparation of its next General Meeting to be held in Edinburgh in 2002.

IMA Commissions and Working Groups sponsored conferences, symposia, workshops, short courses and field trips around the world.

Publications: Programme and Abstracts volumes of the Mineralogy and Museum 4 conference and field trips.

The Committee ACKNOWLEDGED the IMA report.

4.d.28. International Palaeontological Association (IPA)

Summary 1999 (no report for 2000 was submitted)

IPA promotes and co-ordinates international co-operation in palaeontology, and encourages the integration and synthesis of all palaeontological knowledge. It holds a Special International Palaeontological Congress (IPC) every two years.

During 1999, IPA agreed to sponsor the First International Symposium of Palaeontology to be held in Sydney, Australia in 2002, and began to organise the electronic publication of the "Directory of Palaeontologists of the World".

Members of the IPA Executive Committee have voiced opinions that participation of palaeontologists in the IGC has been disappointing, and that their science would be better served at meetings where palaeontology was more in focus. Therefore, the Secretary General had proposed to cancel an IPA meeting in Rio in 2000 and to extend the terms of reference of the current Executive Committee until the planned meeting in Australia.

IPA funded two projects in 1999:

- *The session on "History of Biodiversity" that had to be held at the Geoscience 2000, organised by the Geological Society of London at the University of Manchester, and*
- *The Third international Conference on Trilobites and their relatives at the University of Oxford*

IPA Published " The Directory of Palaeontologists of the World", "Fossil Collections of the World", and the journal "Lethaia".

There was a consensus that a serious effort must be made to encourage the palaeontological community to integrate with the rest of the IUGS family and to participate at future IGCs.

Conclusion: De Mulder will arrange a meeting with the IPA Secretary General in Oslo in order to try to increase co-operation.

The Committee ACKNOWLEDGED the IPA report for 1999.

4.d.29. International Permafrost Association (IPA)

Summary 2000

The IPA Executive Committee met in Puschchino, Russia, in May to review current and future activities.

The EU-sponsored "Permafrost and Climate in Europe (PACE) Programme completed its three-year drilling programme and instrumented boreholes through Europe from Spain to Svalbard, to monitor changes in ground temperatures.

The Joint WMO-IPA Global Terrestrial Network- Permafrost (GTN-P) participated in and convened several workshops.

IPA Working Groups and Task Forces undertook numerous activities, including:

- The Engineering Working Group sponsored a workshop on Svalbard, Norway*
- The South Hemisphere Working Group participated in the SCAR workshop on Global Change*
- The Global Change Working Group assisted in the preparation of the IPCC 3rd Assessment Report*
- The Cryosol Working Group met to complete the Soil Monograph, database and the forthcoming Conference.*
- Task Forces on Rock Glaciers and Mapping and Distribution Mountain Permafrost developed plans for reviews, approaches and recommendations.*
- The Coastal Erosion Sub-group prepared a Science and Implementation Plan for Arctic Coastal Dynamics at a meeting in Potsdam.*

Publications: "Frozen Ground"

The Committee ACKNOWLEDGED the IPA report for 2000.

4.d.30. International Society for Rock Mechanics (ISRM)

Summary 2000

ISRM maintained contacts with IAEG and ISSMGE and envisages sharing an interest in planning and undertaking certain scientific activities, such as the study of geological problems, with IUGS.

ISRM held the International Symposium GeoEng2000 in Melbourne in November, the annual meetings in Melbourne (Board, Council and Commissions), and ISRM Regional Symposia.

ISRM awarded the Rocha Medal 2000

Publications: Proceedings of ISRM Regional and International Symposia, ISRM News Journal, ISRM Directory and ISRM Commission Reports.

The Committee ACKNOWLEDGED the ISRM report for 2000.

4.d.31. International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)

Summary 2000:

The Society promotes 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 major event was the International Conference GeoEng2000 held in Melbourne. This conference received active and substantial support from the three "Sister Societies": International Society for Soil Mechanics and Geotechnical Engineering, International Society for Rock Mechanics and International Association for Engineering Geology and the Environment. The conference provided an excellent forum for discussion and debate on topics of mutual interest to the societies. A Joint Meeting was held at which it was resolved to continue the co-operation and to hold further joint meetings. A decision was taken to respond positively to a proposal from Canada to hold a second "GeoEng" conference in 2004 with topics of common interest but with a narrower overall scope compared to the conference in Melbourne.

The Committee ACKNOWLEDGED the ISRM report for 2000.

4.d.32. International Union of Quaternary Research (INQUA)

Summary 2000:

INQUA had 40 national and regional members and three additional countries (Belarus, Ukraine and Yugoslavia) applied for membership. 23 new scientific projects distributed among INQUA's 12 scientific commissions were started with INQUA's own funding. INQUA's Scientific Commissions and Committees arranged around 20 meetings, some of the meetings being held in co-operation with other organizations.

The Programme Committee and Organising Committee for XVI INQUA Congress to be held in Reno (USA) in 2003 were appointed. The Congress's tentative theme "Frontiers in Quaternary Research" is available on the website: <http://www.dri.edu/projects/INQUA/index.html>. The INQUA home

page <<http://inqua.nlh.no/>> is updated monthly and is visited by an average of 1300 people each month.

Publications: Quaternary Perspectives (2 issues), Quaternary International (8 issues).

Speden (commentator) reminded the Committee that INQUA had applied to ICSU to be a full union but the application was declined. It was expected that INQUA would bid again. INQUA has asked for advice on what should be added to their application to ICSU. Brett stated that IUGS, IUGG and IGU voted against the INQUA application. Certain countries had refused to pay their membership dues to INQUA if it did not become a full union. The main IUGG/IUGS argument was that it would be very unfortunate to set a precedent for each period of time having its own union. INQUA feels they have been encouraged to continue and that the IUGS will support them. Speden recalled that the Minutes of the IUGS Executive Committee meeting in Cairo had encouraged them to apply again. Bobrowsky and Brett were against this: INQUA should not be in a position to apply. INQUA should remain a member of IUGS which should work closely with it. Brett believes that INQUA had most of the advantages they sought, as an associate of IUGS.

Conclusion: IUGS should write to INQUA indicating that it does not now support INQUA's application to ICSU for the reasons given, but apologising for misunderstandings due to earlier statements and indicating that IUGS would like to have closer cooperation with INQUA.

The Committee ACKNOWLEDGED the INQUA report for 2000.

4.d.33. The Meteoritical Society

Summary 2000

This is an international society of c. 950 members in 36 countries; they study meteorites, asteroids, comets, moons, planets, meteors, impact craters, interplanetary dust, stardust, nucleosynthesis, etc. for further understanding of the origin and history of the solar system.

A 5-day Annual Meeting was held in Chicago. Travel awards were given to 19 students from 10 countries.

The "Meteoritical Bulletin" (the world catalogue of all new meteorites) expanded its broad coverage of planetary science topics.

Publications: Meteoritics and Planetary Science (MAPS), a journal co-sponsored by "Geochimica et Cosmochimica Acta" of the Geochemical Society.

The Committee ACKNOWLEDGED the Society's report for 2000.

4.d.34. Society of Economic Geologists Inc. (SEG)

Summary 2000

The Society has 3,479 members from 71 countries: about a third work in industry and the remainder in academic and governmental organizations.

The Society continued to sponsor the activities of SEG Student Chapters as a means to compensate for reduced support by nations in the field of economic geology education and research. Over USD 80,000 was awarded to support 57 graduate students pursuing field-oriented research topics in economic geology.

SEG sponsored meetings, symposia, short courses, and field conferences, as follows:

- *Exhibit Booth at the January 25-28 BCYCM Cordillera Round-up in Vancouver.*
- *Four technical sessions covering silver, ore deposits related to major structures, regional metallogenesis and exploration, and development and production activities in Alaska were organised in Salt Lake City February 28 - March 1.*
- *A Short course, "Ore Reserve Estimates in the Real World" was organised by the Geological Society of Nevada (GSN) in Reno, May 15-18.*
- *Curso Postgrado en Metalogènia in Quito, (June 12-20), jointly supported by UNESCO*
- *Sessions on skarns and porphyry deposits at the 15th Australian Geological Convention in Sydney in early July.*
- *The 10th Peruvian Geocongress in Lima (July 17-22).*
- *SEG collaborated with Sociedad Minera Cerro Verde, S.A.A., in running an ore deposits mapping workshop at the Cerro Verde porphyry copper deposit in southern Peru (August 13-16).*
- *SEG sponsored the All-Russian Congress of Geologists meeting in October 2000, in St. Petersburg.*
- *"Gold in 2000", a two-day short course, was held in Lake Tahoe, Nevada, immediately prior to the GSA Annual Meeting in Reno.*
- *GSA Annual Meeting in November: symposium, "Janus II: Mineral Exploration for the 21st Century"; thematic sessions on "Gold Deposits of the Great Basin" and "Deep Crustal Controls on Mineral Trends - Evidence from the Subsurface"; three regular half-day economic geology sessions; an economic geology poster session; and co-sponsored sessions on "Sulfate Minerals: Hydrothermal Systems (A Tribute to Robert O. Rye)" and "Sulfate Minerals: Low-Temperature Environments".*

The Committee ACKNOWLEDGED the SEG report for 2000.

4.d.35. Society for Geology Applied to Mineral Deposits (SGA)

Summary 2000

SGA with its 856 members in 68 countries continued to facilitate the exchange of knowledge and experience amongst its members and continued co-operating with other scientific societies.

SGA co-sponsored the following scientific meetings:

- Geocongress 2000- the 27th Earth Science Congress of the GSSA (July 4-6) in South Africa.
- IGCP-373 Field Conference in the Urals (July 18-30)
- 31st IGC (August 6-17) in Brazil, including the following sessions:
 - C7 Symposium on the Organics in Major Environmental Issues.
 - G-5 Ore Deposits of the Andes
 - 11-1 Pre-Atlantic Metallogeny of West Africa and Eastern South America
 - 11-3 Mineral Deposits Associated with Black Shales
 - 11-4 Mineral Deposits associated with Laterites and Related Environments.
 - 11-6 Mineralization Associated with Mafic and Ultramafic Igneous Rocks
 - 13-1 Mineral Resources and Development
 - 13-3 Earth Minerals

Publications: *Mineralium Deposite* (7 issues), *SGA News* (8 issues),

The Committee ACKNOWLEDGED the SGA report for 2000.

4.d.36. Society of Sedimentary Geology (SEPM)

Summary 2000

SEPM held its 74th Annual Meeting on April 16-19 in New Orleans; the SEPM Department of Continuing Education held courses on 3-D Seismic Interpretation, on Applied Sandstone Diagenesis, and on Well Cutting Analysis. Two field trips and three Research Conferences were also successfully held.

Two new Funds were initiated in addition to the Robert and Ruth Weimer Fund:

- The John Sanders Fund initiated to support students studying Coastal or Environmental Geology
- The NAMS Fund initiated to support student research in Micropaleontology.

SEPM is moving towards web-based electronic publishing.
Publications:

- *Geological Framework of the Capitan Reef,*
- *Marine Authigenesis: From Global to Microbial,*
- *Carbonate Sedimentation and Diagenesis in the Evolving Precambrian World,*
- *Fine-grained Turbidite Systems*
- *SEPM Field Guide #9: Permian Platforms and Reefs in the Guadeloupe and Hueco Mountains*
- *Short Course Notes 50: Applied Sandstone Diagenesis*

The Committee ACKNOWLEDGED the SEPM report for 2000.

5. REPORTS ON CO-OPERATIVE ENTERPRISES

5.a.1. IUGS/UNESCO International Correlation Programme (IGCP)

Janoschek reported that the following new Board members had been appointed - Group One: none, Group Two: Prof. Zhenyu G. Yang, Group Three: Dr. J. Teller, Group Four: Prof. S.M. Muhongo. There are now 37 IGCP projects; six are new - 443, 448, 449, 450, 453 and 454 (the last is Medical Geology). They are supported with USD 285,000 of which 20,000 from IUGS and 75,000 from the National Science Foundation (US). They are graded as follows: 11 H (high) projects, 6 M+, 13 M (medium) (all new ones automatically M), 5 M- and 2 L (low). W. Eder had informed him that the UNESCO budget had been approved and that IUGS and project leaders will be informed.

Janoschek reminded the Committee that the full name is now the International Geoscience Programme (the acronym to be used is still IGCP) not International Geological Correlation Programme. Boriani stated that the name could not be changed without IUGS permission (as it is a joint UNESCO - IUGS programme) Voting was 9 for, 4 against and 3 abstentions in UNESCO. Boriani and Al-Hashimi opposed the change. De Mulder said that the reasoning is political - so that non-geologists will understand the name better.

The Executive Committee voted as follows: For the name change: 7, against: 1, abstentions: 1.

The Committee thanked W. Janoschek for his oral report.

5.b. IUGS/UNESCO Programme on Geological Application of Remote Sensing (GARS)

Summary 2000

A large effort was put into transferring the project-oriented GARS-Program into a network, affiliating institutes all over the world. In Asia, Europe and South-America new members joined, as well as in Canada and the Near- and Middle East. Australia and Africa are still not represented, although in Africa several institutes benefited from the GARS follow-up program GARS-DBM (Data Base Management) and PANGIS.

The GARS-DBM projects in Africa were finalised and the research results are available in CD-ROM format. The PANGIS geodata-handling program is now operational in 30 countries and training in the use of the new data processing software is being organised.

The 31st IGC, held in Rio de Janeiro in August, included five GARS-sponsored symposia on Geological Remote Sensing.

In September, GARS participated in an Expert Meeting, organised by NOAA in UNESCO HQ, on the preparation of a Geo-Hazard Theme

Study in the framework of CEOS-IGOS. In this study the specifications for future space-borne sensors for hazard monitoring will be defined.

In Morocco, GARS participated in October in the Middle East and African Remote Sensing International Symposium (MARISY III) and started consultations with the Arab Region on research priorities in Remote Sensing-GIS. The GDTA and BRGM conducted, in co-operation with GARS, a training course in Remote Sensing for applied geomorphologic studies.

GARS sponsored five symposia at the 31st IGC: Remote Sensing applied to Basin Analysis and Environmental Problems, Remote Sensing and Geological Applications: Case Histories, Remote Sensing in Mineral and Petroleum Exploration, Hyperspectral Remote Sensing, and Microwave Remote Sensing.

GARS held the 11th International Symposium: Receiving and Establishing of Remote Sensing and GIS Techniques in the Arab World: A special case: The General Organization of Remote Sensing in Syria - GORS - Damascus November 20 - 23.

Publications: GARS brochure

Boriani reported that the chairman of GARS is Dr. Bannert formerly of BGR, now in Yemen. It is largely run by agencies in Holland, France, Belgium and Germany. The question is whether it needed IUGS. IUGS wanted it to be more global. Bannert agreed and this was tried in 1999 and 2000 - with a move to more general applications, e.g. reduction of natural hazards. A new global network was established with new partners outside Europe - in Asia, S. America, Canada, the Near- and Middle East. They have asked for USD 50,000 from UNESCO and IUGS but have not specified how much from each: this is a problem. GARS plans to hold a conference on desertification and deep groundwater aquifers in the Arab World in 2001 and a symposium in the Far East on the use of radar in remote sensing, with Canadian support.

Gupta feels this is a very important programme - especially the focus on changes preceding natural hazards Boriani said that IUGS had wanted an evaluation of GARS but Bannert asked for this to be postponed until after reorganization of the programme. GARS should be allowed to do this.

The Committee ACCEPTED the GARS report and complimented the programme on its achievements.

5.c. IUGS/UNESCO Programme on Mineral and Energy Deposits Modelling (DMP)

Summary 2000

The DMP sponsored a workshop "Deposit Modelling, Mineral Resource Assessment, and Their Role in Sustainable Development" at the 31st International Geological Congress in Rio de Janeiro, August 18-

19. DMP also participated in GEOEXPO at Rio, exhibiting with both UNESCO and IUGS.

Gaál (commentator) is a member of the DMP Steering Committee. The Committee will meet in Paris on April 5 - 6 to discuss a planned review of the Programme. It intended preparing a vision statement and action plan for four years and to complete the vision statement in Paris. No workshop was planned for 2001, but there were plans to have one in China in 2002. Gaál was concerned at the low level of activity. USGS has had the leadership two periods in succession. K. Johnson (Chairperson) has asked for nominations for the office of Secretary General, preferably from Europe. At the last meeting there were no participants from developing countries. All the instructors were from the USGS.

De Mulder and Boriani have discussed the Programme with UNESCO, which is very happy with the workshops held. Communication from the Chairperson to UNESCO should be increased. UNESCO puts great weight on the planned review. (There are two separate issues, the action plan and the review). Boriani has written to DMP saying that the Steering Committee should make a vision statement and carry out the review within half a year. The review panel should include external experts and an IUGS representative. Brett: This is an excellent programme when it is active. He believed DMP needed new directions. Boriani said the general composition of the review panel had been determined - how many, from where but not whom. Caldwell felt IUGS wanted action not a vision statement. De Mulder viewed this as a difficult situation that should be handled in partnership with UNESCO; there is much potential and interest - CCOP would like to have a workshop.

Conclusion: IUGS will nominate an Executive Committee member as representative and approach IAGOD, SEG and SGA for proposals as external experts.

The Committee ACCEPTED the DMP report and thanked G. Gaál for his supplementary oral report.

5.d. Proposed IUGS/UNESCO Programme on Landslides

De Mulder and Bobrowsky had attended a meeting in Tokyo in IGCP project 425, which is led by Professor Sassa. A proposal had been made for a joint UNESCO-IUGS initiative: International Consortium for Landslides, focused on mitigative research. Sassa could, based on approval of the initiative, get funding from the Japanese government. Sassa asked for IUGS approval. W. Eder had visited the Ministry of External Affairs, which had provided USD 50,000 this year, and intended to provide USD 500,000 - 1 million/year. The consortium must have a management - including an advisory board with IUGS and UNESCO representatives. Sassa would run the secretariat. The scientific programme is to be defined by the advisory board. The Programme will be involved in its first year in a project at Machu Picchu. Arrangements had been made for a journal on the basis of 3,000 subscribers in

Japan alone. De Mulder proposed that IUGS and UNESCO agree to back this. He had drafted a declaration entitled: Geoscientists tame landslides, 2001 Tokyo Declaration, which was signed by all the participants. De Mulder pointed to the benefits of a new major programme involving engineering geologists and hydrogeologists, among others, and giving recognition and visibility. Bobrowsky: The UNESCO and IUGS contributions will be minor. Boriani and Janoschek expressed concern about possible financial implications.

Conclusion: The Committee was, in principle, positive to the new joint IUGS-UNESCO programme but several questions about the organization of the proposed International Consortium on landslides (ICL) remained to be solved. These concern the composition of the Board, the position of IUGS and UNESCO on the Board and the relationship between the Board and the ICL Secretariat. De Mulder will approach Sassa and Eder for clarification of these questions. He will also approach UNESCO to find out what UNESCO's annual contribution to funding the consortium will be and whether this will have any effect on UNESCO funding for IUGS programmes. The Committee will be consulted again after clarification of these questions.

The Committee thanked P. Bobrowsky for his oral report

6. INTERNATIONAL GEOLOGICAL CONGRESS (IGC)

6.a. 31st IGC – Rio de Janeiro (Brazil)

There was a consensus that many organizational aspects of the Congress were unsatisfactory but that much of the scientific content had been of good quality. IUGS must take more responsibility for the congresses.

6.b. 32nd IGC- Florence (Italy)

6.b.1. Status of Planning

Abbate (Secretary general of the 32nd IGC) reported that the Italian community is very enthusiastic about the IGC. An open meeting had been held in Rome for research institutes and companies, and another meeting for engineering geologists. There is now an organizational chart. Among the elements are:

- Coordination manager, with a profound knowledge of Italian research organizations.
- Inter-agency coordinator: a function with both national and international roles.
- A Mediterranean Consortium, with national coordinators from 25 countries in the Mediterranean, Alpine and Middle East areas: it will provide subjects and convenors for sessions and arrange field trips and reviews on certain regions or themes.
- Operations committee: responsible for registration, the geohost programme, logistics and the exhibition.
- Fund-raising committee.

- News, publicity, publications committee: responsible for guides, program publication, the web site, etc.
- Scientific Programme Committee including Field Trips Committee: responsible for scientific sessions and field trips.

The Organizing Committee has a provisional time schedule, shortening the Congress by 1-2 days, August 20th -28th. The Geoexpo will have the same length as the congress with free entrance on the last two days. There will be no mid-Congress field trips and nine days of scientific sessions. The opening ceremony will be in the Pitti Palace. Many hotels are within easy walking distance of the congress centre. Most hotels have web pages and one can compare the conference price with their normal rates. The main hall has 2,500 seats, eight have 2-300 seats and one has 1,000 seats. 6,000 hotel rooms have been reserved. The Organizing Committee has budgeted on income from 4 - 4,500 participants and has planned for 5 - 6,000.

Abbate said the registration fee had yet to be decided but the Organizing Committee will comply with the commitment to contribute USD 20 to IUGS and will try to keep the registration fee below that in Rio (USD 350). A discussion on the USD 20 led to the conclusion that this should be explained in the registration material in a motivating manner. Cadet asked how IUGS would be involved. Boriani answered that there would be continuous communication. All IUGS bodies and affiliates would be invited and would get rooms for meetings. The Organizing Committee would like to have a formal link between IUGS and the Scientific Committee. De Mulder said the IUGS-IGC merger would take place after 2004. Abbate indicated that the first circular would be distributed in the spring of 2002. The Organizing Committee expects the meeting to be attended by 5,000 delegates. This will give a total income of USD 25.3 million. Ten percent (10%) of the expected income (between USD 250,000 and 300,000) will be earmarked for the Geohost Programme: 250 will receive higher support while 1,000 participants will be given partial support and reduced registration fee.

6.c. 33rd IGC

De Mulder reminded the Committee that there were three proposals in Rio - Oslo, London and Cairo. London has indicated that it will withdraw its application but IUGS has not yet received any formal information. He will visit the UK on March 14 and expects to be given more information. H. Refsdal reported that the Norwegian National Committee had held a planning meeting in Oslo with Nordic representation. A Preparatory Committee will be formed to function from 2002, with a master plan, suggestions for funding and institutional backing. A congress centre of appropriate size is being built. AAPG will use it for a major meeting in 2003.

7. INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)

7.a. Relations with ICSU

Brett (ICSU Council member) stated that IUGS has a better relationship with ICSU and more knowledge of it than before. ICSU' has a significant problem in that a group of national academies of science has formed the International Academy Panel, which aims at some of the same kind of tasks as ICSU. ICSU is concerned. There are moves to streamline ICSU. Our representatives often don't get advance information about meetings. The Committee should encourage participation in ICSU activities and reporting on these to the IUGS Bureau.

7.b. ICSU General Assembly

Brett said the last General Assembly had been held in October 1999 in Cairo; the next one will be late next year in Brazil.

7.c. ICSU Committees and IUGS Representatives

7.c.1. Scientific Committee on the Lithosphere (SCL)

Boriani (commentator) reminded the Committee that SCL had been founded by IUGS and IUGG. It has four main themes:

- Geoscience of global change
- Continental dynamics and deep processes
- Continental lithosphere
- Oceanic lithosphere

Each project approved gets USD 5,000/a. IUGS give USD 20,000. IUGS should maintain a good relationship with SCL. Their leader should attend the Executive Committee meetings. De Mulder had met Professor Taira, president of the SCL in Japan. They had discussed directions for ILP, some parallel to IUGS; there should be a friendly overlap. He will have a further meeting later this year with Professor Kono from IUGG, to discuss co-operation. Gupta is an important link in this respect. Gupta suggested that de Mulder attend the next IUGG Bureau meeting in Sapporo.

7.c.2. IUGS Representatives on ICSU Committees.

International Council of Scientific Union (ICSU): Robin Brett
Programme on Capacity Building in Science (PCBS) William S. Fyfe
Committee on Data for Science and Technology (CODATA) Fabbri
Committee on Science & Technology in Developing Countries (COSTED): Harsh Gupta
Committee on Space Research (COSPAR): Vernon Singhrov
Scientific Committee on Water Research (SCOW) Jean Margat
Co-ordinating Committee for the Moon and Planets (CCMP) W. Head III
Scientific Committee on Antarctic Research (SCAR): Carlo A. Ricci

Scientific Committee on Oceanic Research: Enrico Bonatti
Scientific Committee on Problems of the Environment (SCOPE):
Antonio Cendrero
Scientific Committee for the International Geosphere-Biosphere Programme (SC-IGBP): Nicole Petit-Maire
Standing Committee on Freedom in the Conduct of Science (SCFCS):

Boriani pointed out that IUGS does not now have a representative on SCFCS. The representative on SCAR has been asked if he could attend at his own expense (?). Task Group Three should consider this problem - should IUGS pay the expenses involved so as to ensure production of a report? De Mulder stated that ICSU is important for IUGS and that Brett's central role gives IUGS access to UNCED and other international bodies at a higher level.

7.d. Relations with other Unions of the ICSU Family

7.d.1. International Union of Geodesy and Geophysics (IUGG)

Brett reported that IUGS has fostered relationships with IUGG and should continue to do so. The attitude is reciprocated. The same applies to the ICL. Gupta stated that there was support for Brett's involvement in ICSU at the last IUGG Bureau meeting. He discussed IGY+50 and the Year of the Planet Earth: one possibility is to have volumes on the state of e.g. water in 2007. There could be volumes from IUGS and other unions as well. He will discuss this with IUGG.

7.d.2. International Union of Geography (IGU)

Brett indicated that the relationship with IGU is less close than that with IUGG. IUGS invites IGU to meetings and should try to build contacts especially in view of some of the new interests in IUGS (e.g. landslides). IGU has a new president, Dr. A. Buttner, from Ireland.

7.e. ICSU Grants.

Brett stated that ICSU had established many interdisciplinary groups (e.g. SCOPE, IGBP), which do good work but that they require ICSU funding. The grants programme has been changed so that grants can be up to USD 50,000 - 100,000. It is difficult to make this fair (proposals were made by the Finance Committee but ICSU now has a new Scientific Committee which will look at this problem.). ICSU funding for analyses and fieldwork has been stopped (as is the case for IUGS). Unions are asked to submit multidisciplinary proposals but if they do this, does it count against proposals to the proposer's own union even though it doesn't get much of the multidisciplinary funding? ICSU has also introduced disqualification for members when proposals in which they have a direct interest are being discussed.

A meeting of Union Presidents had been held in Paris in February 2001. All except one of the thirty-two were present. Matters discussed included:

- Education
- What can be done in the developing world? Answer: Access to the web which will give scientists in developing countries access to much new data, enabling them to compete more easily.
- IGY + 50 (2007-2008). Brett approached IUGG, IGU and the Soil Science Union. One cannot hope to match the original IGY in impact: IUGG should be the main sponsor and is not willing at present. There should be a celebration of the anniversary of the IGY. Gupta suggested that each field should turn out fundamental papers - 7-8 volumes giving the state-of-the-art in each field. The field of disciplines is so wide that this isn't so monumental and it was agreed that Brett should propose this to ICSU.

Brett chaired a meeting of earth and space science unions. The main problems are that these sciences felt left out in relation to the life sciences and that there was a lack of dialogue about the needs of the unions.

The Committee thanked R. Brett for his oral report. De Mulder stated that Brett was a major asset for IUGS in this area.

8. IUGS POLICY AND STRATEGY MATTERS

8.a. IUGS Statutes

Brett said that IUGS should have a statutes committee appointed by the Bureau or the Executive Committee, to look at matters such as voting by electronic media as well as by regular mail; IUGS Nominations to the Bureau and Executive Committee should include a minimum of two alternatives where possible, both from the same geographical region. Boriani felt that there is a problem related to the Bureau. Candidates should have financial support and can they get this before their election? Janoschek maintained that this should be clarified before the election. Brett suggested ballots for changing the statutes be sent out soon, possibly to get two candidates for the office of Secretary General. Boriani maintained that the Strategic Action Plan should be examined carefully to see if it involves changes in the statutes. Brett asked for candidates for the Statutes Committee.

The Committee APPROVED the following composition for the Statutes Committee:

Janoschek (Chairman), Brett, Plant

8.b. IUGS Nominating Committee

- 1- Robin Brett (Chairman)
- 2- W.G.E Caldwell
- 3- Wissam S. Al-Hashimi
- 4- Martha Mantovani
- 5- Isabelle Niang-Diop
- 6- Michael Schmidt-Thomé

7- Zhang Hongren

Brett stated that the Committee must find a candidate for the office of Secretary General. Boriani said the Committee would have a minimum of nine months for the process (after delivery of his resignation). Brett confirmed that the members of the Nominating Committee would sign their decisions.

8.c. IUGS Strategic Action Plan

De Mulder opened the discussion by referring to the approval of the Council at Rio for: International Earth Science in the 21st Century (the report of the Strategic Planning Committee - SPC). A task group had met in Catania in December to consider how the recommendations could be translated into actions, in a Strategic Action Plan (SAP). Members of the Executive Committee had then commented on the draft. The document should be considered prior to being sent to the Council for approval. All 32 recommendations in the SPC report were discussed at Catania and unanimous agreement reached on 30 of them. He proposed to go rapidly through the recommendations on which there were few comments. Eleven task groups had been proposed: the Executive Committee should not do their work but should make suggestions though not in great detail. There had been criticism about the small size of the task groups: their composition is open for discussion.

Gupta asked whether the Bureau was unanimous in its views on the draft SAP prepared. De Mulder: The draft represents an agreed position but there were differing views on certain matters.

Recommendation 3, goal 2:

Boriani maintained that the Committee could interpret the SPC report, but not change it. Speden believed the Committee should be free to refine the document: he would like "environment" mentioned.

The Committee ACCEPTED the recommendations of the Catania Task Group, with the proposed change.

Recommendation 4:

The Task Group wanted to interpret the 4th statement as understanding biodiversity, and to add a 6th statement: understanding the relationship between geological factors and health.

Al-Hashimi wanted an addition to the first point relating to managing hazards. Brett wanted to add mention of health in point 1. Gupta wanted points 1 and 3 combined. De Mulder felt that these were factors on different scales. De Mulder agreed to include mention of health and man-induced hazards but postponed the decision on exactly where to make the additions.

The Committee ACCEPTED the recommendations of the Catania Task Group, with the changes proposed by the Task Group.

Recommendations 5, 16 and 17:

De Mulder said that the former ABRD had two roles. The Catania Task Group said that they should be split - the ABRD taking the strategic role and the Executive Committee handling follow-up of existing commissions and projects. No comments had been received on this. Brett felt it was a good idea to lighten the burden on the ABRD but that the evaluation process is demanding and the Executive Committee may not have the expertise to evaluate all the fields involved. The Executive Committee might have to use ad hoc committees to do this. Bobrowsky stated that the latter was the intention of the Catania Task Group though not expressed precisely in the draft SAP. Boriani expressed the view that the new definition of the ABRD would not give it all the expertise needed either. Gupta said that these bodies should co-opt specific persons as needed. De Mulder described the actions proposed; he wanted *"including individuals invited to participate in specific reviews tasks"* included. The term ABRD could be used for the group on new directions in science and development pending further discussion at a later date.

The Committee ACCEPTED the conclusions of the Catania Task Group, with the proposed split in tasks between the ABRD and the Ad-hoc Review Committees and APPROVED the membership of Task Group 1 as: De Mulder, Plant and Al-Hashimi.

Recommendation 6:

The Catania Task Group suggested six actions. USD 50,000 had been set aside for projects. Brett and Speden asked why the Group had set a limitation of five proposals to be funded annually. De Mulder answered that this was because of the limited funds available. Boriani reminded the Committee that ILP also limits the number of projects approved. Brett's main concern (and Bobrowsky's) was how these proposals would differ from IGCP proposals. The difference should be related to high-profile problems of interest to the public and governments, and not necessarily including basic research. The Executive Committee should involve itself in this. De Mulder referred to the SAP, which stated that the projects should include basic and applied research. The projects should lead to public debate in which IUGS should be visible. Bobrowsky said that IUGS should have policy statements emerging from these projects. Janoschek supported Brett and Bobrowsky: This isn't easy because politicians look for local issues. The new programme should not be seen to have a negative impact, financially, on IGCP. Boriani referred to the IGCP rules - there are four broad objectives and several requirements. We are changing the profile of IUGS by creating a new group of projects, which will also represent IUGS. Sato believed there should be a wider spread in the task group. Gaál said it was important to have a clear profile. Environmental issues and social significance are now very important. Janoschek pointed out that IUGS is independent from IGCP. This program should focus on IUGS interests with projects lasting maximum 3-4 years. Boriani disagrees with Janoschek. We appoint the scientific board of IGCP and can influence it. Brett: UNESCO also

influences IGCP. Brett asked who could apply for projects. De Mulder replied that Affiliates could apply - and also other organizations. The discussion has pointed to a need for flexibility. *Episodes* could also be a source of constructive ideas. Cadet asked how the review procedure would function. Brett suggested selection of reviewers internationally. De Mulder closed the discussion by suggesting the Task Group should build on the discussion. The projects should be different from IGCP projects and should be identifiable and visible. The key words are: Excellence, relevance and visibility.

The Committee ACCEPTED the recommendations of the Catania Task Group, with the proposed addition of a time frame specified as six months, and APPROVED the membership of the Task Group 2 as: Brett (Chairman), Gaál, Sato and Speden.

Recommendations. 7, 22 and 24:

De Mulder asked for comments to the Task Group's conclusion; there were none. Speden had proposed involvement of the ABRD in the actions proposed. Al-Hashimi had proposed that others, not only EC members, should be allowed to make proposals. Gaál maintained that geological surveys world-wide should be mentioned, FOREGS and ICOGS, not just Eurogeosurveys. Gupta asked if projects on the state of the planet should be discussed here? He discussed links, which would make this possible. De Mulder suggested that IUGS should have a feasibility study for the Planet Earth project. Al-Hashimi said that the first action (generation of a list of potential projects and partners) should be open to IUGS organizations and others and not limited to Executive Committee members. De Mulder and Bobrowsky indicated that IUGS should have a long list of proposals and focus on the best, while Brett added that multi-union proposals should be favoured.

The Committee ACCEPTED the recommendations of the Catania Task Group, with the additions of FOREGS and ICOGS under action g and the Task Group taking Janoschek's role in action f, and APPROVED the membership of Task Group 3 as: De Mulder (Chairman), Cadet and Nyambok. The Task Group will invite proposals and select 3-4 of these and will contact ICSU.

Recommendation 8:

Brett introduced this topic by saying that it was inserted by the SPC because there was a threat to remove the commissions as permanent bodies. The proposed actions were unclear. Boriani, Bobrowsky and Speden maintained that the setting and communication of standards is an important IUGS function. Speden added that the Commissions are already working on this independently of IUGS. De Mulder emphasised the importance of linking this work to IUGS. Brett agreed but referred to the original recommendation in the SPC report, which has a more modest goal. Brett commented that affiliated organizations might react to this. Sato reminded the Committee that the very first

IGC was established for the purpose of forming standards. Only IUGS can handle this. Boriani asked why the IUGS Classification of Igneous Rocks was not on the web. Gaál said the question also applied to the Geotheraurus. Brett asked who would approve the new standards and links to be made. De Mulder replied that this had not yet been decided but approval should come from within the Executive Committee. De Mulder concluded that this is a very important activity; IUGS should have a field on its web site for standards with links but the matter must be discussed with Aaron.

The Committee ACCEPTED the recommendations of the Catania Task Group.

Recommendation 9:

De Mulder reminded the Committee that the Council has approved this recommendation. The profile for the leader etc. was developed in Catania. Bobrowsky pointed out that an international group, led by C. King, is already working on this topic, with wide membership and regular meetings. IUGS should welcome them as affiliates rather than compete with them. Brett, Janoschek and Speden supported Bobrowsky. Gupta stated that it is important that IUGS is involved in a dialogue with governments on this topic. The issue should also be on the agenda in other activities, e.g. at the IGC. Boriani wanted more focus on the tertiary level and professional training. IUGS could play an important role in this.

The Committee AGREED that Bobrowsky should report on contacts with the group led by C. King before further deliberation of the recommendation and APPROVED the composition of Task Group 4 as: de Mulder (Chairman), Plant and Speden..

Recommendation 10:

The Committee ACCEPTED the recommendations of the Catania Task Group,

Recommendation 11:

The Committee ACCEPTED the recommendations of the Catania Task Group and APPROVED the composition of Task Group 5 as: Bobrowsky (Chairman), Cadet, Gaál and Plant.

Recommendation 12:

The Committee ACCEPTED the recommendations of the Catania Task Group, noting that it should apply to all IUGS activities.

Recommendation 13:

The Committee ACCEPTED the recommendations of the Catania Task Group and AGREED to submit the necessary change in the Statutes to the Council for approval.

Recommendation 14:

De Mulder commended the Geological Survey of Norway for its support to the Secretariat. There was a general desire for speedier production of the action lists and minutes and approval for briefer minutes. De Mulder asked the Secretariat to make a proposal for adjustment of their routines.

The Committee ACCEPTED the conclusions of the Catania Task Group.

Recommendation. 15, 27 and 28:

De Mulder stated that there are problems in getting good papers for *Episodes*. The non-serial publications should be outsourced to an external publisher assuming that they handle the editorial process with input from IUGS.

Gupta suggested *Episodes* be converted to an earth science "Nature" - with news, top articles and letters and six issues/year. This could be self-funding. IUGS should perhaps not compete with Nature and Science - they have too little space for earth sciences anyway. Bobrowsky felt *Episodes* should not compete with the main-line journals. It is a one-stop source for reviews and information. Four issues annually is sufficient. Any activity supported by IUGS should involve a commitment to publish something in *Episodes*, e.g. a conference report, article, etc. Caldwell reminded the Committee that there was no response three years ago to an appeal for views on the aims of *Episodes*. It is unrealistic to try to take leading geoscience papers from Nature or Science. The journal is improving and we should acknowledge the efforts of the current editors. Frequent changes in policy do not enhance the journal's credibility. F. Spilhaus, AGU, has developed their publications into an operation with an annual turnover of almost USD 20 million - he felt IUGS could not match this. We should emphasize review papers as recommended by the SAP and the Catania Task Group. Caldwell said that *Episodes*/IUGS would have to work hard to get good review papers, this being a different approach from the present one. De Mulder agreed that the change would not be easy or quickly done. Brett proposed that the Committee on Publications consider this over a year and report back to the Executive Committee. Caldwell did not feel that it was the CP's role but he would be happy to report back with a detailed consideration of SPC's recommendations in a year. Bobrowsky said IUGS did not need another report - simply a gradual change to emphasize review papers. *Episodes* should take opportunities, which arise, e.g. top papers and IUGS should place conditions on projects that it supported, requiring that they publish appropriate material in *Episodes*. Boriani said the Affiliated organizations are unhappy about publication of original papers in *Episodes*. De Mulder stated that there are two alternatives - as suggested by SPC and the status quo. Caldwell

informed the Committee that *Episodes'* impact factor has gone from 0.5 to 0.9 in the last three years and that circulation has increased. Needed improvements include

- Better English
- More topical content
- Adjustments in the balance of material
- Higher subscription rates
- Technical matters

There followed a long discussion ending with a vote of 7 for the SPC recommendation, with 3 abstentions. The actions were then discussed individually

Action a: Approved

Action b: Caldwell said the ABP had considered this in some detail, including use of special volume editors. They feel they know how the new policy should be implemented. They decided to await the SPC recommendations, not anticipating changes. Brett asked for proposals in writing to Boriani who should discuss membership of the CP with the Bureau and with Caldwell. There was a general discussion about how many Executive Committee members should be involved (1, 2 or 3). Janoschek suggested the matter should be considered in relation to the Statutes.

Action c: Brett suggested the Publication Committee handle this on the basis of a proposal from Zhang. Caldwell said that the Committee should bear in mind that *Episodes* may need different kinds of associate editors. Brett maintained that the Chairman of the Publications Committee should not be on the *Episodes* Board. Caldwell should be chairman of the new committee.

Action d: Caldwell said that the Committee on Publications should obtain four-five estimates for this and make a recommendation to the Executive Committee for decision. Action "d" is subject to action "f".

Action e: Brett asked all Committee members to make constructive suggestions. The ABP has often asked for suggestions but has received very few. It is important to get commissions to use the IUGS publication system.

Action f: Approved.

The Committee ACCEPTED the recommendations of the Catania Task Group and the actions proposed for implementing them, and APPROVED the composition of Task Group 6 as: Caldwell (Chairman), Bobrowsky, Janoschek and others according to the IUGS Statutes..

De Mulder was indisposed during discussion of the remainder of item 8.c. Brett took over chairmanship of the meeting,

Recommendation 18 (+ 28, 31,32):

Brett (and Janoschek) stated that the Treasurer should not be chairman. Janoschek expected to supply information to the ABF.

The Committee ACCEPTED the recommendations of the Catania Task Group and APPROVED the composition of Task Group 7 as Bobrowsky (Chairman), Janoschek, Speden and external members.

Recommendation 19:

There are two opinions in the Bureau:

1: The Bureau rules the day-to-day business of the Union and consults the other members

of the Executive Committee during the Executive Committee annual meetings (only). The Bureau speaks with one voice and the newly elected Vice-Presidents (only) are allowed to attend one Bureau meeting per year at the expense of IUGS.

2. The Bureau rules the day-to-day business of the Union in open communication with the

Committee, the members of which have an equal input in discussing all Union matters and should voice their opinions openly to each other. The newly elected Vice-Presidents are encouraged to participate in as many Bureau meetings as they consider appropriate although only one trip per year can be covered by the IUGS. Other members of the Executive Committee are also invited to attend such meetings if they should wish so.

A long discussion on the two positions ensued, including a "straw" vote, which revealed the general view of the Committee. The discussion continued on the following day, then with de Mulder present. De Mulder said he felt it was necessary to have clarity on:

- Openness of the Bureau to members of the Executive Committee
- Openness of communication between the Bureau and non-Bureau members of the Executive Committee.

A revised version of alternative 2 was submitted by de Mulder: The Executive Committee shall carry out the administration of the IUGS as defined by the Council and shall hold at least one full meeting of the Executive Committee each year. The Bureau is responsible for the day-to-day operations and will consult the Executive Committee members on other issues, and will circulate agendas and minutes of Bureau meetings to all Executive Committee members. All members of the Executive Committee should be entitled to participate in Bureau meetings at their own expense. Vice-Presidents (under the new statutes) shall be entitled to attend one Bureau meeting/year at IUGS expense in addition to the annual Executive Committee meeting. The Bureau shall meet formally at least four times a year to administer the business of the Union and implementation of the decisions of the Council and the Executive Committee.

Boriani maintained that this position modified bylaw 18 and should be submitted to the Council for approval.

The Committee ACCEPTED the organizational roles of the Executive Committee and the Bureau as defined in the revised version of alternative 2.

Recommendations 20 & 21:

Brett stated that there is a need to systematize the rules and bylaws of the commissions and working groups. Commissions have been reviewed every 3-4 years by the ABRD. Working groups have been reviewed more rarely. Brett supported the actions proposed, but preferred that the task group should develop rules not Terms of Reference (ToRs). The Executive Committee doesn't have the expertise needed to work out ToRs for all the commissions. Brett asked if all could agree if "rules" replaced "ToRs" in the actions recommended.

The Committee ACCEPTED the recommendations of the Catania Task Group, with the replacement of "ToRs" by "rules" and APPROVED the membership of Task Group 8 as: Gaál (Chairman), Boriani, Nyambok and Speden.

Recommendation 23:

De Mulder is in favour of a continued relationship with UNESCO but IUGS does not get adequate recognition. This matter was postponed for later discussion.

Recommendation 25:

Brett is positive to IUGS receiving a part of the registration fee but there are risks - the linkage could involve economic responsibility for IUGS. The IGC Statutes were changed after Rio removing responsibility for inviting all the Past Presidents. Sato said he supported the merger - there have been many difficulties because of the separation. The Japanese government had wanted to know what the parent body (for the IGC) was. Janoschek indicated that the next congress would operate with the existing rules. Boriani stated that the Organising Committee in Florence would ensure payment of USD 20/delegate to IUGS. Sato read a letter that he had written to Cordani and Cordani's response, supporting the Task Group recommendation.

The Committee ACCEPTED the recommendations of the Catania Task Group and APPROVED the membership of the Task Group 9 as: Sato (Chairman), Boriani, de Mulder, Cordani and Zhang.

Recommendation 26:

Boriani had distributed the minutes from the relevant meeting at Rio. Brett reported speculation about what the point of the relationship was.

The Committee ACCEPTED the recommendations of the Catania Task Group and

APPROVED the membership of Task Group 10 as: Brett (Chairman), Bobrowsky and representatives of IUGS Affiliated bodies whom they will select.

Recommendation 29:

The Committee ACCEPTED the recommendations of the Catania Task Group.

Recommendation 30:

Brett suggested that IUGS should look at the strategic plan questionnaires and responses. Meetings with National Committees have always been arranged. Bobrowsky stated that the National Committees and affiliated bodies should have a quick update after meetings such as this. Cadet added that information could also be distributed at regional meetings.

The Committee ACCEPTED the recommendations of the Catania Task Group and APPROVED the membership of the Task Group 11 as: De Mulder (Chairman) and Refsdal.

The final list of task groups, their fields of responsibility and membership is thus as shown in the following table:

TASK GROUP	FIELD OF RESPONSIBILITY	MEMBERSHIP (leader first)
1	Advisory Board on Research Development - recs. 5,16,17	De Mulder, Al-Hashimi, Plant
2	Proposal policy - rec. 6	Brett, Gaál, Sato, Speden
3	Involvement in joint programmes - recs. 7, 22, 24	De Mulder, Cadet, Nyambok
4	Technology transfer and education - rec. 9	De Mulder, Plant, Speden
5	Public awareness - rec. 11	Bobrowsky, Cadet, Gaál, Plant
6	Publications and Episodes - recs. 15, 27, 28	Caldwell, Bobrowsky, Janoschek + external members
7	Finances - recs. 18, 28, 31, 32	Bobrowsky, Janoschek, Speden + external members
8	Rules for commissions and working groups - recs. 20, 21	Gaál, Boriani, Nyambok, Speden
9	IUGS-IGC link	Sato, Boriani, Cordani, De Mulder, Zhang
10	Affiliated organizations	Brett, Bobrowsky + affiliate representatives
11	National committees	De Mulder, Refsdal

Section 3: Priorities & Planning

The Committee ACCEPTED Section 3.

Section 4: Performance

The Committee ACCEPTED Section 4.

Section 5: Finances

Janoschek made a slight clarification of the budget table: fund-raising has been budgeted as USD 6,000/ year in 2001 and 2002, not USD 12,000 in 2001.

With this clarification, the Committee ACCEPTED Section 5.

8.c.1. Tasks of Officers

Integration IUGS-IGC:	Sato
Visibility and image:	Bobrowsky
Affiliates:	Bobrowsky
ICSU:	Brett
IGBP:	De Mulder
Fund-raising:	Janoschek
Strategic Action Plan:	De Mulder
IUGG:	Gupta
Statutes, bylaws:	Nyambok
National committees:	De Mulder
ABRD:	De Mulder
Rules for Commissions and Working Groups:	Boriani
Developing countries:	Plant
Liaison to geological surveys:	Gaál
Proposal policy:	Brett
Web site	Brett

8.d. Proposal Policy

De Mulder said that this concerned IUGS projects for which the Executive Committee wanted to develop an overall policy. The Committee has not yet discussed how to spend the 2001 funds. Boriani has a proposal. The Bureau has selected Working Groups and affiliates who have been sent a circular in which they are invited to send proposals. IMA, IMG, Cogeoenvironment, etc. The deadline is March 15. Requests will go to ICSU and the response should come in June. The sum at stake is USD 50,000. The proposal is to use IUGS money in relation to ICSU grants. Boriani asked who should determine which projects are to be chosen and how much support each should receive. IUGS could use individuals on the IGCP Scientific Board to make such decisions. Brett and Bobrowsky suggested the use of other experts. De Mulder felt that IUGS should ask members of the Scientific Board if they are willing and if they are prepared to do this on an individual basis. There is also the question of criteria for the assessment.

8.e. Priorities

De Mulder stated that IUGS must have a focus on key goals and measure performance (see SAP). De Mulder had sent a questionnaire in November asking for suggestions on priorities. The highest priority should be given to:

1. Visibility
- 2-4: Strategic Action Plan, *Episodes*, National Committees
5. Geology for Society
- 6-8. Improved internal communication, affiliated organizations, increased income.

Activity leading to integration of IUGS and IGC should also have priority.

Speden believed communications, *Episodes* and increased funding should have a higher priority.

The Committee ACCEPTED the suggested priorities.

9. EXTERNAL RELATIONS

9.a CCOP

De Mulder informed the Committee that CCOP consists of eleven countries in Southeast Asia, including Japan, mainly represented by the geological surveys. It was first sponsored by the UN, but is now independent of the UN and gets support from Norway and Japan. Their activities focus on offshore and near-coastal areas. CCOP is interested in deposit modelling, education and databases. It is an active body with external programmes. The director is Dr. Pei from Malaysia, who is based in Bangkok. De Mulder has met him, and they agreed to make a MoU. De Mulder will draft a MoU and distribute it to the Executive Committee for comment using e-mail. We should aim for signature at the end of the year and that CCOP should be an Associate Member. Speden pointed out that SOPAC is similar organization in the Southwest Pacific; it is also concerned with geological information. IUGS could have a similar relationship with SOPAC.

9.b ESCAP

De Mulder had visited ESCAP and will try to develop a MoU with the organization.

9.c Eurogeosurveys

De Mulder would also like to have a MoU with Eurogeosurveys; they have a directors' meeting in Orleans in June and he will try to arrange to have a presentation. The French National Committee will have a reception. Gaál will take care of coordinating contacts. He asked for a note to be sent to Eurogeosurveys. Janoschek suggested that IUGS should keep the contact informal until after the Orleans meeting. De Mulder agreed.

9.d FOREGS

FOREGS has a meeting in September.

10. REQUESTS FOR FUNDS AND BUDGET FOR 2000 (Appendix 1)

Janoschek presented the budget for 2001. He specified certain adjustments. Boriani asked if IUGS should inform the DMP of the availability of funding. The DMP has not made a clear funding request. The same applies to GARS. De Mulder stated that IUGS should not send such letters until a specific request has been made. The EC agreed to a budget of USD 2,000 for the Web. Brett asked why IUGS paid Wimbledon to advise UNESCO. Boriani pointed out that Wimbledon also arranges workshops and advertises IUGS via publications; we should support him. He, Boriani, felt IUGS should inform the ICS that their allocation is exceptionally high and that it would be reduced in later years. The Global Sedimentary Commission has moved from Canada (GSC) to Switzerland (Lausanne), COGEOED expect this activity to expand - thus USD 2,000. The budget was approved unanimously. De Mulder, after some discussion, agreed provisionally to allocate USD 5,000 to the Working group on Fossil Fuels but with its release conditional on receipt of a work plan. Boriani stated that GSAf needs support. De Mulder reminded the Committeere of the need to cover the possible cost of an extraordinary Executive Committee meeting in China. Sato: The budget is low - we should try to arrange higher funding.

The Committee APPROVED the 2001 budget and thanked Janoschek for his presentation.

Boriani, at this point, presented his official letter of intention to resign to De Mulder.

11. UPDATE

11.a. Directory

H. Refsdal reported that the Secretariat continually updates the Directory and can send copies in electronic form. They would like to receive corrections in electronic form and will send a new version with any corrections obtained. The Secretariat doesn't want to print a new edition because of the rapidity of changes. The addresses are on the web site.

11.b. Brochure

Boriani said IUGS has a Task Group, which should take care of this. 500 examples of the present pamphlet will be taken to EUG and will be used. De Mulder agreed.

12. VENUE AND DATE OF 49th EXECUTIVE COMMITTEE MEETING

De Mulder returned to the proposal to hold an extraordinary Committee meeting to be focused on implementation of the Strategic Action Plan. IUGS had been invited to hold a meeting in China last year, and has been invited to hold its ordinary meeting in February 2002 in New Zealand. He proposed that the Executive Committee meeting on the Strategic Action Plan be held in September in China and the regular meeting in late February 2002 in New Zealand. Zhang informed the Committee that a possible location for the meeting would be the region of the Three Gorges on the Chang Jiang River; he will try to achieve this (it had not been raised prior to his departure for India). He suggested the meeting start with a field trip beginning in Chongqing, which has an international airport. The party would travel by boat on the Chang Jiang to the Three Gorges, taking 2-3 days and would see many interesting geological phenomena. Part of the meeting could be held during this journey and the meeting, in total, would last one week. De Mulder thanked him for the offer and asked for the approval of the meeting. All agreed. De Mulder proposed the period 24th-30th September. He wanted all necessary reports for presentation at the meeting to be sent to the Secretariat by late August. All those present agreed.

Speden has canvassed contacts in New Zealand and got 100% support from the Institute for Nuclear and Geological Sciences for hosting a meeting there; costs for ten members would be covered. Arrival should be in Auckland by a Wednesday, followed by a four-day field trip then travelling to Wanganui and Wellington (arrival on Sunday) where the meeting and various other events would be held. The dates suggested were late February - early March, Feb. 20th - March 1st or March 6th - 15th. De Mulder thanked Speden for the generous offer. A decision was made to stay in Wellington during the meeting (rather than Lower Hutt). Janoschek indicated strong reasons for choosing the first period because of various deadlines in Europe. Gupta cannot attend during the first period. De Mulder suggested the Bureau decide after contact with J. Plant and I. Nyambok. Boriani reminded the Committee that IUGS also had an offer to arrange an executive Committee meeting in Namibia for 2002. We must now ask if we could visit Namibia in 2003. De Mulder agreed.

De Mulder indicated that Boriani's impending departure from the Bureau and the Executive Committee and his great contribution to them would be recognised in an appropriate manner at a later date.

13. OTHER BUSINESS

13.a Nomination for prizes and awards:

Boriani reminded the Committee that IUGS is invited annually to make nominations for the Asahi, Tiger and Blue Planet prizes - recipients must be scientists who have done important research for the environment. We don't usually have much time to discuss this matter. He asked for suggestions and CVs to be sent to the Bureau. De Mulder suggested IUGS should ask the chairman of COGEOENVIRONMENT. Boriani was asked to distribute information on this matter by e-mail to the members of the Executive Committee. Brett pointed out that the prizes are large and recipients tend to be household names. Caldwell added that much work is involved in preparing nominations if they are to be successful.

13.b International Year of the Planet Earth:

Janoschek proposed this gently at ICSU; reactions were positive to very positive. The astronomers then responded with a year for space, so we have to work fast to keep motivation. Speden said the idea was too vague and grandiose. If we wanted to have an impact we should have something better defined. The project should not include the atmosphere. De Mulder stated that broadness is aimed to provide appeal for as many groups as possible. Society needed to know more about whole planet but the project would have to have defined target areas. Boriani said IUGS should ask the commissions, affiliates, etc. using a position paper or pre-feasibility study. IUGS must have their support. Gupta has sent a mail to Professor Kono, Chairman of IUGG. IUGG is prepared to produce seven state-of-the-art volumes. We should start working. (This is IGY+50, not IYPE). De Mulder asked for support from one Executive Committee member in the practical work. Gaál said the half-year feasibility study was a good idea. Sato and Gupta volunteered to participate in the preparations.

13.c Working Group for Fossil Fuels: Terms of Reference

De Mulder asked for comments. Al-Hashimi said the objectives were rather limited. He will make some comments and send them to the Secretariat. De Mulder felt the document was reasonable but could be improved. The Group must also submit a work plan.

13.d IUGS award

De Mulder pointed out that IUGS has the Hutchison Fund but no honorary award or medal. He proposed to install a medal of honour for distinguished servants of IUGS so that we can show our appreciation. Gaál/Sato/Al-Hashimi/Boriani agreed. Speden/Brett agreed if the majority wanted this but were uncertain of the need. De Mulder felt there was moderate enthusiasm in the Committee and committed himself to making a proposal.

13.e Acknowledgement to H. Gupta

De Mulder expressed the warm thanks of the Executive Committee to Gupta and his family for their hospitality, for the excursion,

the facilities of NGRI, food and accommodation. He presented Gupta with a beautiful specimen of almandine from the Tauern Window in Austria as a token of the Executive Committee's appreciation.

The 48th session of the Executive Committee closed at 13:00 on Friday March 2, 2001.

May 2000
Secretariat
International Union of Geological Sciences
Trondheim
Norway