



**INTERNATIONAL UNION OF GEOLOGICAL SCIENCES**

**February 24-28, 2003  
Geological Survey of Namibia  
Windhoek, Namibia**

**51<sup>st</sup> EXECUTIVE COMMITTEE MEETING**

**Minutes**

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## **0. WELCOMING ADDRESS.**

The President, de Mulder, welcomed those attending the 51<sup>st</sup> EC meeting. De Mulder thanked Namdeb and the Geological Survey of Namibia for hosting the superb excursion to the diamond mines in Oranjemund, and the meeting in the Survey building, in Windhoek. Attending the meeting were Ed de Mulder (President), Werner Janoschek (Secretary General), Attilio Boriani (past Secretary General and IGC President), Antonio Brambati (Treasurer), Robin Brett (Past-President), Peter Bobrowsky and Tadashi Sato (Vice-Presidents), Jean-Paul Cadet, Jane Plant and Alberto Riccardi (Councillors), Hanne Refsdal (IUGS Permanent Secretariat) and Hugh Rice (Assistant to Secretary General). Harsh Gupta (Councillor) sent his apologies for not being present.

Present as observers were Imasiku Nyambe and Fred Kamona (Geological Society of Africa), Bob Finkelman and Olle Selinus (Medical Geology Initiative), Tony Berger (Publications Committee and Geoinformatics Initiative), Wolfgang Eder (UNESCO), Lojomon Biwott (Kenya National Committee), Henk Schalke (IYPE), Zhang Hongren (*Episodes*), Gabi Schneider (Namibian National Committee), Evelina Giobbi (IGC), David Kerridge (IUGG representative) and Lindisizwe Magi (IGU representative).

The President asked for a minutes silence in memory of John Reinemund (IUGS Treasurer 1979-1989; [www.iugs.org/iugs/news/jar\\_memorium.htm](http://www.iugs.org/iugs/news/jar_memorium.htm)), who died on Dec. 8. On behalf of his widow, Robin Brett ([rbrett@usgs.gov](mailto:rbrett@usgs.gov)) is collecting money in John Reinemund's memory, for the Hutchison Fund.

On the second day, de Mulder noted that it was a year since Boriani resigned as Secretary General. De Mulder said that Boriani had been in IUGS since 1992, when he was Vice-President. He was involved in the IUGS review by the Strategic Planning Committee and in the subsequent Strategic Action Plan. A plaque was presented as a token of the appreciation of the EC. Boriani thanked the EC for their kindness, saying he has enjoyed being in IUGS, where he met many people. He noted that both Brett and Refsdal were always very supportive. Boriani stressed that although the number of geoscientists is small, their role, and thus IUGS' role, is very important. Boriani concluded by thanking his family, friends and colleagues for their support during his period in IUGS.

On the third day, De Mulder thanked Gabi Schneider, Director of the Namibian Geological Survey for its hospitality during the field trip and in the catering throughout the meeting. The official reception, in the Museum, had shown that the Survey is outstanding not just in Africa but in the world. De Mulder felt sure that EC members would look back on their visit with the greatest of pleasure and asked them to show their appreciation in the usual manner. A Cretaceous fossil fish from Brazil was presented; in pre-Atlantic rifting times the same species probably swam in palaeo-Namibian rivers. Schneider replied that although it had been a lot of work, she had enjoyed the visit and meeting the Executive Committee. De Mulder then wished her well in the upcoming annual geological survey surf-fishing contest at Henties Bay.

## **1. APPROVAL OF AGENDA.**

The Agenda was approved; some minor points were added to Section 14. Any Other Business.

## **2. MINUTES OF THE EXECUTIVE COMMITTEE MEETINGS IN LOWER HUTT; NEW ZEALAND, FEBRUARY 2002**

### **2.a Approval of the Executive Committee Minutes**

The Minutes were approved with minor corrections. These will now be put on the open website.

## 2.b Actions arising from the Minutes

Of the 53 actions, two are not done, two are obsolete and 44 have been done. The remaining five are pending.

The outstanding Actions are:

- Action four* **Not done.** Janoschek to write a letter to the National Groundwater Association for further clarification, before new information is presented to the Executive Committee for a decision on Affiliation.
- Action 5* **Not done.** Before making a decision, Brett will also contact Patrick Leahy (USGS) to find out how IAH stands in this matter and to inform the Bureau.
- Action 35* **Pending.** Janoschek to inform the review group about the Committee decision and forward the list of representatives and ask for comments.
- Action 36* **Pending.** Janoschek to inform SCOPE that Cendrero is no longer the IUGS representative and that SCOPE will be notified when another person is chosen.
- Action 43* **Pending.** Secretariat to improve the content and appearance of the portable poster.
- Action 47* **Pending.** Bureau to consult the National Committees on the problem of how to get a stronger influence of the developing countries. This should be done as soon as the Minutes have been distributed.
- Action 48* **Pending.** Boriani to send documents to Gupta concerning the adhering body in India.

De Mulder thanked Janoschek for his work for IUGS; he had had by far the most Actions to complete.

## 3. ADMINISTRATIVE AFFAIRS

### 3.a President's Report

De Mulder said that this is the third year in office for this EC. The first two were largely taken up by the Strategic Action Plan, but other things have been started now, such as the Mid-Term Vision document and IYPE.

Several things have been finished since the last EC meeting – a new logo has been introduced, Electronic Bulletins are being produced, the first Annual Report is available and the new ad hoc Review Committee was active. IUGS' visibility has been promoted – the joint booth with IGC was used in Denver and will be used again this year. Electronic voting was successfully used. Meetings with many National Committees and Affiliated Organizations have been made. It is also the 30<sup>th</sup> anniversary of IGCP, IUGS/UNESCO's flagship research programme. Finally, The Strategic Action Plan is mostly done - the last things should be finished this year. In summary, de Mulder thought that Union has made good progress, in visibility, science development and administration. De Mulder expressed confidence that the Council will be satisfied with the EC.

Activities undertaken between the 50<sup>th</sup> and the 51<sup>st</sup> Executive Committee, apart from Bureau meetings:

- April: Attended annual meeting IGCP 430 Met with the National Committee of Vietnam and then met UN ESCAP and CCOP Director Technical Secretariat in Thailand.
- April: Reviewed COMTEC, Villefranche-sur-Mer, France.
- June: Attended first meeting of the SPC of the International Year, The Netherlands.
- July: Met Councillor Plant to discuss the Vision/SAP paper, London.
- September: Attended meeting of IGCP 408, Kola, Russia.
- September: Gave an invited lecture to the Irish Academy of Science and met the National Committee of Ireland.
- September: Gave a speech on IUGS and the IYPE at the IAEG Congress in Durban, South-Africa.
- September: Attended the ICSU meeting in Rio de Janeiro and met Brett and Gupta..

- October: IGC Steering Committee, Italy.
- October: Attended Annual Session CCOP, in Indonesia. Gave a talk on IYPE and met several representatives of the National Committees.
- October: Met with AGI, Denver, USA.
- October: Meetings with GSA, SEG, AWG, IGEO, USGS, IAMG; presentations on IUGS, International Year, attended the booth with IGC, Denver, USA.
- November: Meeting with Geological Survey of Canada.
- December: Met the Indian National Committee.
- January: Met the Management Team International Year, UK.
- January: Met the ICS Chairman in Amsterdam.
- January: Keynote address at the International Arabic Congress, Cairo, Egypt and met the Egyptian National Committee.
- January: IYPE Science Programme Committee brainstorming meeting in Paris.
- February: In Paris: Attended annual meeting of IGCP. Met the Chinese delegation concerning IYPE; met the French National Committee; met Rosswall, ICSU about IYPE; met the Director General UNESCO; attended the CRD meeting.
- February: Met the Kenyan National Committee and presented the IUGS award to Past Vice-President Nyambok.

Finally, de Mulder expressed his thanks to all members of the EC and of the IUGS committees for their fine cooperation, to the Permanent Secretariat, and in particular to the Secretary-General.

### **3.b Past President's report**

Brett reported that he receives many strange emails which take time to answer. The Nominating Committee was active in finding a new Treasurer. Two ICSU meetings were attended; the General Assembly (Rio de Janeiro) and a meeting of the Executive Board in Paris.

### **3.c Secretary General**

Janoschek said that since the last Executive Committee meeting he had been very busy. A number of trips were made, apart from the Bureau meetings:

- Trondheim: Visited the Permanent Secretariat to introduce his assistant, Rice, to Hanne Refsdal and Anne Liinamaa-Dehls.
- Glasgow: Attended the Board Meeting of IGU. Gave a presentation about IUGS and announced IYPE.
- Albania: Participated in the Central European Initiative Meeting of the Geological Section. Met the Albanian IUGS representatives and made contact with representatives of central and east European countries (Slovakia, Czech Republic, Hungary). Gave a presentation about IUGS and IYPE.
- Urbino: Attended the first biennial meeting of ICS subcommission heads, as IUGS representative. Gave a presentation on IUGS and IYPE.
- Japan: Several meetings were made. The IUGS-IGC Merger Document was worked on with Sato. A meeting was held with the Geological Survey of Japan. The survey gave its support to IUGS and the reformulated COGEOINFO. A meeting was held with Ishihara, (new Secretary General of IGC in Kyoto. He essentially resigned his IGC Steering Committee membership, delegating Sato as his permanent representative. A meeting with Sassa was held to discuss ICL-IUGS relations. A meeting was arranged with the National Committee, but this fell through due to a typhoon.
- Washington DC: Attended the Publications Committee and Task Group Finances meetings. Planned meetings with the NSF and NAS and with Applegate (AGI) fell through.
- Bratislava: Attended the Carpathian-Balkan Geologists Association congress.

- Strasburg: Represented IUGS (and by default the Task Group on Geosites) at the Council of Europe meeting on the geological heritage of Europe. Geoparks (UNESCO) was also represented.
- Florence: Attended the IGC Steering Committee. Met the Italian National Committee for IUGS and had a brief meeting with Prof. Brambati, candidate for Treasurer.
- Hanover: Attended the kick-off meeting of the reformed COGEOINFO. Met the Vice-President of BGR, who affirmed BGR's support of IUGS.
- Eggenburg: Participated in the European Geoparks Group meeting in Austria, with Patzak (UNESCO/IGCP).
- Paris: Had meetings with Eder, Patzak and Missotten (UNESCO/IGCP), with Rao (ICSU), with Cadet and Rossi (CGMW), with Le Thomas (Internat. Palynological Association), with Sassa (ICL) and with Mucho (Peru).
- Vienna: Met Brambati and his team on their visit, after his election as Treasurer, to learn details of the work.
- Paris: In a busy week meetings were held with IGCP, the Executive Director of ICSU, the Director General of UNESCO's Water Division, with Odin, to discuss his proposal for a new Commission on Geochronology, with the IGC GEOHOST programme committee, with the Geoparks group, with the IUGS CRD and finally with various persons in connection with the preparation of submitting a grant proposals to ICSU.

### **3.d Acting Treasurer's Report**

Janoschek said that IUGS has US \$ 835,000 in the bank. The Hutchison Fund has US \$ 47,000 for the GEOHOST programme. Russia still pays its fees from the reserves established at IUGS some years ago. Bank interest rates fell from 6 % per annum, to less than 1 %. Nevertheless, bank charges were low (US \$ 2,000) and less than the interest accrued (US \$ 12,000). More Adhering Organisations are becoming inactive in Category 1 and now in Categories 2 and 3. However, Libya, Sri Lanka and Papua New Guinea (all Category 1) became active again.

Berger said that at the Washington Publications Committee meeting, it was agreed that the UNESCO money paid to *Episodes* for dissemination is really a bulk page contribution to *Episodes*, and so should be shown in the *Episodes* budget. Janoschek replied that the contract is between IUGS and UNESCO – and the latter say the money is for distribution.

Berger asked if money received by IUGS' bodies should be shown in the Treasurer's report. Janoschek replied that only money going through IUGS' accounts is dealt with. However, it would be interesting to see the total money flux for IUGS and its bodies, including IGCP. Berger added this would be an interesting sum for the Annual Report; it would help IUGS' image enormously.

De Mulder proposed that the Treasurer's Report be accepted. **All agreed.**

### **3.e Treasurer's Report**

Brambati said that he had opened accounts in Trieste. When the documents arrive from Vienna he will take over. He hoped that Janoschek will help him in the first months. Janoschek confirmed that he would be happy to do this.

### **3.f Past Secretary General's Report**

Borioni said that his IUGS material will be sent on CD to the archives. He participated in the National Committee, pushing Italian geologists to use IUGS recommendations. As IGC President he will remain in contact with IUGS.

### **3.g Vice-Presidents' and Councillors' reports**

**Sato** said he worked on the document concerned with the integration of IUGS and IGC, with Janoschek. The first draft was then improved with Janoschek and Plant and EC comments were then incorporated. He attended the IGC Steering Committee. He sent an article on IUGS to the Geological Society of Japan, to increase awareness, mentioning Geoindicators, Medical Geology and International Year of Planet Earth. The IUGS poster from Lower Hutt was hung up at the Geological Society of Japan meeting to promote awareness of the Union.

**Bobrowsky** said he represented IUGS at a NATO Advanced Study Workshop on Catastrophic Landslides (Italy, June 2003) and attended the Bureau meeting in Iceland. As IUGS representative, he gave a lecture on Geoindicators in Peru. Liaison with the affiliated organisations was made and two Electronic Bulletins were sent out. These were meant to be small, but the last was rather large. IGEO was contacted. He attended both the Publications and Finances Committee meetings in Washington. He tried to make the Canadian National Committee more active and he worked with Zhang Hongren on *Episodes*. A paper is being submitted to *Episodes*, together with Selinus.

**Plant** said that last year she had not been very active, due to health reasons. She had given very many lectures at meetings in the UK; IUGS was always mentioned in these.

**Cadet** said that he had participated in the review of COMTEC and had attended the Bureau meeting in Paris. His main concern had been the Joint Programmes Proposal with a focus on groundwater.

**Riccardi** reported that since August 2000, when elected as member of the IUGS EC, until August 2002, when formally installed as Councillor, he tried to follow the different actions taken by the EC. From now onwards, he expects to be active in IUGS affairs. In particular, he would like to improve IUGS' visibility in Argentina and Latin America and to help to improve IUGS organisation and efficiency. He gave a short résumé of his activities and responsibilities in the geological community.

Berger asked if there was a link between IUGS and the consortium of Latin American geological surveys. Riccardi said no. De Mulder informed the meeting that he attended a meeting of a consortium of Latin American surveys in Montevideo in November 2001.

**Gupta** was not present at the meeting, due to government work commitments.

### **3.h Permanent Secretariat's Report**

Refsdal said that the work load has increased, with brochures, booths, etc. to do and the Archive to keep up. Funding comes from the Ministry of Industry and Trade, who wants a report twice a year including a full annual report. This must give evidence that IUGS is also working in the environment, so Geoindicators, Medical Geology and Geosites are important. Plant suggested adding Geochemical Baselines to this list; it has important new data for Norway.

De Mulder said IUGS thanked Norway for its support and that the EC was particularly grateful to Hanne Refsdal and Anne Liinamaa-Dehls, for their work in the Secretariat. **All agreed.**

### **3.i Application for Affiliation of Organisations**

#### **3.i.1 Geologische Vereinigung (<http://www.g-v.de/>)**

This association was founded in 1910 in Germany and has >20 % non-German membership (385 of 1750; 51 countries). The council is represented by six nations; the President, Bernoulli, is Swiss. The Editorial Board of *The International Journal of Earth Sciences* has 11 nations in its 28 members.

Finances are from memberships, donations and the journal. They hold an annual congress, alternating on a in Germany/not in Germany basis.

De Mulder proposed that the Geologische Vereinigung should be accepted as an IUGS affiliated organisations. **All agreed.**

### **3.i.2 International Consortium on Landslides**

(<http://www.unesco.org/science/earthsciences/disaster/icl.htm>).

Janoschek said the organisation fulfils all requirements for Affiliate status; it promotes research into landslides for human safety, especially in the developing world. It has a budget of US \$ 90,000 and many important links.

Brett asked if it is non-governmental and if it might be better to wait and see how ICL develops. Bobrowsky said that it is not governmental. The Board members are comparable to IUGS Adhering Organisations. De Mulder said ICL is an exciting, societal-relevant organisation recognised by four UN bodies and many IUGS affiliated organisations support it. If ICL fails, IUGS can withdraw. The Strategic Action Plan would favour acceptance. Brett asked how many other organisations were involved with ICL. Janoschek replied 33 international organisations, and five government surveys. Italy, Canada and Japan are the main sponsors. Sato was in favour because landslides are an important issue. ICL is also important in engineering and geo-administration: It is good for IUGS to expand its horizons. Cadet asked how could IUGS *not* be involved, if UNESCO etc. already are? Janoschek added the outreach potential is huge; ICL will be bigger than IUGS. The scientific value of ICL is not in doubt. ICL don't need IUGS but are offering a loose contact. Berger added that scientific approaches change; new energetic bodies form. By accepting ICL, IUGS confirms its forward looking, dynamic intentions.

After a vote ICL was **accepted** as an IUGS affiliated organisation.

Bobrowsky commented that he had not taken part in the discussion or vote, except to clarify its structure, because he is on the board of ICL, causing a conflict of interest.

### **3.i.3 Association of Women Geoscientists** (<http://www.awg.org/>)

This was discussed at the last EC meeting. It is a lobby group with <25 % non-USA members. At the Denver GSA meeting de Mulder told Springer and Gillam that the Association was not eligible. If they form an international membership they can try again. De Mulder noted that the Strategic Action Plan says IUGS should give attention to minorities, including women.

Janoschek said such groups do not fit in IUGS' structure. A committee is needed for this 'family' of problems. Plant said there were two issues – women and youth; she was against special women's groups but supported the idea of a young scientists group. But it should be left to them to do, after initiation by the EC. Schneider agreed and said some action for developing countries would be good. Riccardi commented that the Strategic Action Plan says youth should be *involved* in IUGS, not *directing* it. Berger suggested meeting with the IGC GEOHOST participants; they would be a starting point.

De Mulder proposed that an informal task group with two EC members be set up to make recommendations on how to proceed. **All agreed.**

## **4. ANNUAL REPORTS AND FUTURE PLANS OF IUGS BODIES**

### **4.a Adhering Organisations**

There are currently 115 members, with Peru a new member. There were no applications for membership in 2002. 78 countries are active, with Sri Lanka, Papua New Guinea and Libya, all becoming active again. The number of inactive members rose. Most are Category 1 but some are Category 2 or 3, with a greater financial impact. Due to the scheme linking membership fees to the USA Consumer Price Index, the fee will rise by US \$ 9.33 per unit in 2003. Reports have been received from 26 countries. Two countries sending reports (Ukraine and Belarus) are inactive.

Plant said that there should be a summary of the National Committees' reports. Riccardi said most countries had nothing to report. IUGS should see what is going on next year – ie, look to the future. Also, National Committees should know what IUGS projects are meeting in their country. The Argentine National Committee knew nothing about the Geoindicators Initiative in Argentina last year. The national geological survey should also be informed. Berger, as one of the organiser's of that meeting, apologised. Cadet mentioned that National Committees are not receiving the Electronic Bulletin.

Brett noted that the French National Committee has complained that Europe has no effective role in IUGS – but all the Bureau is European. De Mulder added that the French want a 'Union' of European National Committees.

### **4.b Committees**

#### **4.b.1 Nominating Committee**

Brett reported. A Treasurer was needed after Janoschek became Secretary General. 36 Adhering Organisations voted in favour of the nominated person, with none against or abstaining. The scrutinisers were Fredrik Wolff and David Roberts (both Norway). As a result, Antonio Brambati (Trieste) was elected as Treasurer. De Mulder noted that part of the election was done electronically, saving two months, but the procedure is still long-winded. Brett said that the next elections will be for the EC officers of the next term of IUGS. Refsdal noted that the Call for Nominations for this must go out directly after the EC meeting.

#### **4.b.2 Committee for Research Directions (CRD)**

De Mulder said that the Committee identifies topics within IUGS policy which could be supported by IUGS. The Committee met on Feb 17, 2003, and needs to know if the EC is interested in the proposals:

- (1) Catastrophes, Human Society and Recovery.
- (2) Observing Earth Movements.
- (3) Rift Systems and Human Evolution.

The last needs more work, so (1) and (2) were proposed. A kick-off meeting would require 10 experts and cost ~US \$ 15,000. Maybe the EC's ideas are enough of a kick-off. If a project is taken on, IUGS could either invite a specialist group to do it or throw it open to the whole IUGS family and ask for detailed projects.

Bobrowsky wanted to know the role of the kick-off meeting and the general format of the project. The future development of the scheme in general terms should be discussed; why could they not be IGCP or IYPE projects? De Mulder replied that a kick-off group will establish the project aims and leader and specify how the project will be run. It would then find sponsors.

Eder said that the second project was to use space technologies to determine plate movements, landslides etc

Cadet said that IUGS has CRD, the Joint Programmes as well as the Science Programme Committee (SPC) under IYPE and Vision document options. Coherence to all this is needed. The EC must identify what IUGS wants, rather than spreading its efforts too widely. De Mulder said that resources should not be spread too thinly; the CRD and IYPE are competing. Berger added that the CRD options are in the provisional list for the Year, but the latter also includes other proposals. The CRD was created before IYPE was developed. Having two committees may lead to duplication. Even if IYPE fails, the IYPE projects are still good and should be discussed. De Mulder replied that CRD and SPC have the same chairman and merging the two would be an option. On the down-side, if the CRD merged into IYPE, it would have to be taken out again after IYPE finished. Janoschek countered that it would be better if the SPC was replaced by the CRD.

Bobrowsky said the topics sound great – the EC set up the CRD and should have faith in it. But now the EC must invite someone to create a project. De Mulder said that the system for implementing CRD proposals needs rules; the proposals discussed here are ‘top-down’ proposals, whilst IGCP is typically a ‘bottom-up’ proposal system. Janoschek added that the rules must be linked to the overall scheme for launching proposals as outlined in the report by the Task Group on Proposal Policy (see 8.b.2). Essentially, a body is required to evaluate the proposals. Brett said “blueprint special” top-down projects are good. But groups should also be able to propose independently. The Strategic Action Plan’s topics should be added to the CRD’s topics. The latter should have ideas like nuclear waste disposal – giving broad visibility with press involvement. Also, regional projects can have visibility. Brett then mentioned groundwater, desertification and urban geology as topics suggested by the Task Group on Proposal Policy.

All three of these would produce position papers relevant to governments. Plant said IUGS is a global body; its research should develop guidelines, giving a global outreach. They should have common ground, with major implications for governments and international agencies. The EC should go back to the major strategies. Brett noted that the Strategic Action Plan laid down research directions. Riccardi asked why the five topics in the Strategic Plan are not done. The CRD’s projects are clearly based on the interests of the CRD members.

Janoschek suggested looking at the CRD topics suggested in their first (2002) meeting:

- Geological processes and human evolution
- Deep Earth
- Geological databases

Riccardi thought they were all rather poor: Geological databases are not a *research* topic and Deep Earth is not part of the Strategic Action Plan. Only the Geological processes and human evolution topic fits. The CRD ideas should fit the Strategic Action Plan. Plant agreed and said the CRD needs far better guidelines – these ideas are neither original nor relevant to society. Bobrowsky commented that geological databases is an important topic and IUGS has a responsibility to work in the area. Janoschek said that the CRD decided in their second meeting (2003) that Geological databases is of less relevance to IUGS. Plant said databases is already ongoing - all surveys are interested in databases and are already working on them. Maybe it should be in CGI (Commission on the Management and Application of Geoscience Information).

Plant added that the public does not understand the relation between deep earth and climate - this should be done with IUGG. She and Cadet would develop a project to put forward as a proposal for next year.

De Mulder proposed selecting the Geological Processes and Human Evolution topic from the CRD proposals. Brett said it would look bad if IUGS had a purely anthropology project. Riccardi said that if modified it could be good, and suggested “How geological influences have, are and will influence human evolution and how they can be mitigated”. Plant suggested adding “Geochemical factors, such as salination, soil degradation because of nutrient depletion, and toxicity caused by locally and regionally high levels of heavy metals and radioactivity and their effects on human populations, will also be included”. De Mulder said the CRD should make the topic more geologically focused. Anthropology has a good public outreach. **All agreed** that this would then be the first ‘top-down’ project.

De Mulder summarised: the CRD sets out research directions for IUGS to follow – this is top-down, together with the Strategic Action Plan ideas. The directions should be given to the EC for approval and then forwarded to the IUGS bodies to implement. The topic proposed by the CRD during their first session (2002) on Geological processes and human evolution has been selected by the EC to be the first top-down proposal. Both top-down and bottom-up ideas should go through the Proposal Policy/IUGS Grant Programme route.

#### **4.b.3 Publications Committee**

Berger reported. Two new Committee members have been proposed. Subbarao from India (Mumbai) and Noland (Geoscience Canada editor). The Committee is keen to expand; if they are to attend Committee meeting, their addition must be approved here. Berger added that he will be standing down at the IGC. **All agreed** to the nominations.

Berger asked the EC to authorise the Committee to carry out its own Action List, except where this impinges on major policy decisions and finances. De Mulder agreed;. EC members in the Committee must decide what to send to the Bureau. **All agreed** with the Committee’s request.

##### **4.b.3.1 Non-serial publications**

Berger said some seventy books/monographs were produced by IUGS bodies in the last five years, including IGCP but excluding Stratigraphic Chart and *Episodes*. Only one is in the IUGS publication series. Thirty were produced by major publishing houses or through universities, surveys etc. Publishers contacted wanted to know what had been produced, what was on-line and what was coming up. The latter was unknown, making discussions difficult, with no idea of the scale of business.

Berger contacted six publishers and asked for plans for a co-publishing venture. It was stated that IUGS wanted:

- (1) the IUGS contribution acknowledged.
- (2) the IUGS logo on the front page.
- (3) no cost to the Union.
- (4) reasonable price.
- (5) IUGS to keep the copyright.

The publishers contacted were: the Geological Society of London (GSL), the Geological Society of America, John Wiley, Elsevier, Cambridge University Press, Oxford University Press. Only the first pursued the suggestion and remains a possible publisher.

Berger met the Executive Director/Publications Director of GSL en route to the EC meeting. In 2002, GSL published 28 books of local to world-wide appeal. Production is professional and of very high quality. The average print run is only 800; most go to members and so are cheaper. There could be a

similar relationship with IUGS. Distribution of GSL publications is excellent, via reciprocal marketing with other organisations (GSA, AAPG etc). Thus advertising is not limited to Society members.

There are two options for IUGS:

- (1) GSL prints *anything* IUGS wants to publish, charging £ 80–150 per page. GSL is simply printer and distributor.
- (2) IUGS submits titles to GSL, which selects those suitable

For example, an IUGS body has a conference book coming up; it sends a four page summary to GSL. If approved, GSL would do the rest. The conditions would be:

- (1) *Joint* copyright.
- (2) IUGS logo would be on the cover and the title page.
- (3) Reduced rates to specified 'persons'.
- (4) Royalties are not normally paid, but maybe 5 % could be paid. On an 800 copy run, each costing about £ 100, this would yield £ 4000.

In summary, GSL is interested. The EC must now decide whether to go with GSL or to look further.

Berger raised two points:

- (1) At the Committee meeting in 2002, it was said a new Publication Policy would be made. This is in Appendix 3, Paragraph 2 of the Publications Committee report.
- (2) There will be many publications that GSL are not interested in. These can go to another publisher with the proviso that the IUGS (and IGCP where relevant) logo be on the cover and title page.

Berger then stated that if IUGS wants to keep all publications in IUGS control, then a new policy must be developed.

De Mulder thanked and complimented Berger warmly for his considerable efforts on the behalf of IUGS. **All agreed.**

Sato favoured following up the links with GSL. Janoschek said paying is out of the question. Plant agreed, but added that IUGS must have a numbered series. Editorial control must be given to the publisher to ensure professional results. Bobrowsky said option (2) should be pursued. Royalties are not important. IUGS must have first refusal for all works stemming from its bodies. If the EC or GSL rejects the book, the body can look elsewhere. Boriani raised the question of where the royalties would go. Some IUGS bodies have 'lived' off their royalties. De Mulder said that royalties were not a big winner financially and so were not so important. Plant wondered whether royalties could be paid if a profit was made, but no royalty if no profit made. Berger said they could go to the body or to the Union. Brett replied that the former would encourage the bodies. Boriani asked for UNESCO's viewpoint. Eder stated that no publishing guidelines are given to IGCP projects. UNESCO wants the best publicity possible.

De Mulder asked Berger for his opinion. Berger replied that GSL is a very professional organisation but they may not be interested in non-technical material. However, this avenue should be explored further.

Plant proposed to continue with the Society; Boriani seconded the proposal. **All agreed.** Berger then clarified the situation. A Memorandum of Understanding will be written and signed between IUGS

and GSL. However, even if this goes ahead, it may be some time before the first publication comes out.

Janoschek asked if IUGS bodies should be informed. Bobrowsky said that they could be sent the relevant Appendix of the Publications Committee report. Berger agreed, saying that if sent now, it could take two years to get into action. Who the publisher can be disclosed later; this does not alter how the Publication Policy affects the bodies. The guidelines are simple and should be sent out every year by the Secretary General. **All agreed.**

Berger added that the final two paragraphs, on responsibilities, need discussing here. These should be deleted and brought in later, after being read by the EC (Berger suggested removing Page 7 Responsibilities, in the Appendix 3 document).

Berger then turned to page one, points 1 and 2 of the Publications Committee Report. The Committee needed to know what the EC want from it. Draft Terms of Reference have been written, but if the EC wants the Publications Committee to oversee publications (the actual production thereof, through a publishing house), then the Terms of Reference must be changed. Berger proposed that this be left until a publisher has been agreed on. **All agreed.**

The new Publications Policy document was presented by Berger and discussed. If agreed on, the new document sets out the terms for future publications (excluding *Episodes*). It covers royalties, copyrights, logo placement, promotion, etc – in a new numbered series. De Mulder proposed that the EC approves the document with the modifications suggested included. **All agreed.** Appendix 1 of the minutes shows the *final* Publication Policy document.

#### **4.b.3.2 Episodes**

Berger reported that the editorial team in China has done a superb job. The problem is getting enough good (peer reviewed) articles – EC members must be pro-active in this. There are enough book reviews and conference reports; scientific articles are required. This problem may always remain. Similar journals have this difficulty.

The Publications Committee suggested putting articles on the *Episodes* website, for free downloading, one year after publication. Plant said this was an excellent idea for developing countries. Nyambe agreed. Brett added that this might promote subscriptions. **All agreed** that this should be implemented.

There will be a Special Issue of *Episodes*, in September, with an ‘Italian’ theme, leading up to the IGC. Boriani said that another issue will be published in time for IGC, with texts from keynote speakers. Janoschek said that the Agra Bureau meeting suggested that speakers submit extended abstracts only. This special issue will also have the newest IUGS-ICS Stratigraphic Chart. 5,000 copies will be printed for distribution.

Berger then said that the Committee also suggested that *Episodes* authors be permitted to post their articles as .pdf files on private/institute homepages. Plant concurred. **All agreed.**

Zhang Hongren also made a short presentation concerning *Episodes*. A new website ([www.episodes.org](http://www.episodes.org)) has just come on line. This has links to the IUGS website and the Chinese Ministry of Land and Resources. Back issues of *Episodes* can be downloaded; all the issues published in China are already on-line. A guestbook is present for visitors to sign.

Berger said the EC should be very appreciative of what the Ministry in China does for *Episodes* and IUGS. *Episodes* continues to be published at a very high standard and very punctually. **All agreed.** De Mulder concurred and asked for a round of applause for *Episodes*. **All agreed.**

#### **4.b.3.3 IUGS Homepage**

Brett read the report from Aaron, who was absent due to family illness. This is summarised here: Aaron stated that the website had been updated with the newest reports from IUGS bodies, the list of IGCP and ICSU Projects, the E-Bulletins and the 'Presidential Perspectives'. Further, information on the 32<sup>nd</sup> IGC has been updated. The statistics for the site show a continued growth – average visits per month (5,546) are up 22 % and the number of countries visiting the site (86) is up 8 % per month. Netizens from over 150 countries have now visited the site. Relations with *Episodes* continued to be very good; the contents and abstracts of upcoming issues are posted on the site a few weeks in advance, with the new cover shown. Covers, contents and abstracts for the past six years are archived on the site. The 'Guidance for Authors' is also displayed on the website.

The Forum remains a miserable failure; the traffic is most irrelevant, although nothing can be done about this. It seems that the Forum can only be effective if discussion of articles and scientific issues raised in *Episodes* or by the work of IUGS scientific bodies is actively promoted by authors or other relevant persons. This must be advertised in *Episodes* by the article.

Although it was planned to redesign the website, this has not been done yet as the new logo, which must be properly incorporated in the site, was not available. Now it is available, redesigning will commence, but this takes time – one cannot simply put the new logo in. The entire site will have to be redesigned.

Plans and hopes for 2003 include a partial or complete redesign of the web site, with a more contemporary look and effective use of the logo; to make the site more user active; to show links to other Earth-science organisations, especially those with an educational or public-sector perspective; to invigorate the IUGS on-line Forum by linking it to the content of *Episodes* or the work of IUGS scientific bodies, or, if this fails, to close it down. Any plan to invigorate it must necessarily involve IUGS scientific bodies and *Episodes* working in concert with the web site; to acquire and freely disseminate more information and scientific and education data resulting from IUGS activities.

Brett commented that more information for the website was needed from Commissions; their activities are not advertised on the website. Plant thought discussing *Episodes* articles on the website was a good idea. Berger noted that the potential for on-line discussion would only be seen by regular *Episodes* subscribers; this might increase subscriptions. **All agreed** to the proposals suggested by Aaron for improving the website. Plant also suggested that the websites should have position statements, which can then be quoted in political/pressure group texts, enhancing IUGS.

**All agreed** that the homepage is excellent and improving all the time, as its scope broadens.

#### **4.b.4 Finance Committee**

De Mulder said that the Finance Committee met in August 12-13, 2002 and made suggestions similar to those of previous Committees. Bureau meetings (Iceland 2002, Agra 2002, Paris 2003) concluded that to increase funding IUGS needs more 'deliverables' than at present and exciting projects. Increasing Membership Fees might raise the income, but more countries might become inactive. The Committee is dormant until deliverables have been produced.

Plant noted that many mining companies are talking to the World Wildlife Fund, a very wealthy charity. Could IUGS also make contact with charities? This links to having projects that everyone can identify with and are globally important. De Mulder agreed it was a promising idea, but deliverables would still be needed; the EC can only get the ball rolling on this. **All agreed.** De Mulder added that real potential for deliverables may be found through the International Year of Planet Earth.

#### **4.b.5 Ad hoc Review Committees (ARC)**

De Mulder said the committee regularly reviews the IUGS bodies. Last year, COMTEC was reviewed (section 4.c. ). Janoschek added that three bodies are proposed to be reviewed in 2003:

- (1) COPSCE – led by Arndt, will be reviewed at the EGS-AGU-EUG Joint meeting in Nice.
- (2) INHIGEO – led by Pinto, will be reviewed at their meeting in Dublin.
- (3) Task Group Geosites – led by Wimbledon, is also on the agenda for a review.

Cadet added that CGSG would in that case not be reviewed before 2004 and would thus be dormant for two more years. This is unacceptable; it must be reviewed urgently.

Bobrowsky interjected that reviews should be done annually. IUGS gets an annual report from a body, which is delegated to an EC member. The EC relies on the five minute summary and then gives or does not give money. More time should be dedicated to evaluating the reports. Janoschek replied that an in-depth review takes a day. If the EC is not satisfied by the report from a body, it can do a full review. This decision is the job of the reviewer. De Mulder added that a full review once every four years is what IUGS can afford. Bobrowsky said the four year rule is irrelevant; the financial aspect is also a moot point. Email is a viable option – cheap and giving continuity. De Mulder suggested rapporteurs could make annual checks in more detail than presently but face-to-face meetings can be held every four years. Riccardi said that the reports are received too late for any follow-up by the rapporteur. Essentially, the rapporteur must be involved with the body all year.

Riccardi added that EC members should look into the bodies in depth and each should get the same bodies every year, developing a relationship between the body and reviewer. Janoschek said a new rapporteur list was formed this year, since four Vice-Presidents left the EC and only two Councillors were added. The list of rapporteurs was finalised so that the EC could tell the constituent bodies who their rapporteur/EC link-man is (see Appendices 1, 2).

#### **4. Commissions**

##### **4.c.1 Commission on the Management and Application of Geoscience Information (CGI; formerly COGEOINFO)**

Janoschek said this was considered dormant in the 50<sup>th</sup> EC meeting so the EC decided to reactivate it; Asch (BGR) and Jackson (BGS) are doing this. Terms of Reference have been agreed. The kick-off meeting was in Hannover (May, 2002). The Commission changed its acronym to CGI; the Bureau supported this. CGI want to get S. America/Latin America and Asia into the group. It is unclear if the group must be adopted by the Council or whether it is just the old Commission, revamped. They got some money from the old COGEOINFO and a US \$ 5,000 grant from ICSU. In conclusion, it is a good group and worth supporting.

Cadet noted that Asch is the leader of CGMW's geo-information group, so there will be no mixing of methods. De Mulder agreed that the group was now active and complimented it on its initial efforts.

##### **4.c.2 International Commission on Stratigraphy (ICS)**

Janoschek noted that ICS' report is 157 pages long.

Strategic plan – ICS has started to define a role for itself after 2008, when all GSSPs will have been defined, at a meeting (“*Future Directions in Stratigraphy*”) in Urbino, June 2002, attended by voting members of ICS and Janoschek. Minutes of the meeting were appended to the ICS report. This document outlined several proposals:

Completion of standards (GSSPs, including Quaternary; see below).

Increased visibility and publications.

Coordination of a comprehensive stratigraphic database (see CHRONOS, below).

An ‘Urbino-style’ meeting every two years.

Quaternary – the merger of the Subcommissions on Neogene and Quaternary Stratigraphy was abandoned as people were unhappy with the idea. A new SQS was established, with an SNS member on the committee. SQS is now an IUGS/ICS Subcommission, with links to INQUA. Disagreements on the representation of marine stratigraphers in the commission hindered set-up, but this has been resolved. The level of financial support by INQUA is still under discussion.

Boundary Stratotypes – three GSSPs were submitted to IUGS for ratification or are in the voting stage. five more are near completion. The task of completing all 94 GSSPs by 2008 is on course. Ratified or awaiting ratification are:

base Cenomanian Stage (Late Cretaceous) – ratified.

base Paibian Stage (Late Cambrian) – submitted to this EC meeting.

base Ypresian Stage (base Eocene Series) – submitted in theory, but no documentation sent.

*CHRONOS* – ([www.eas.purdue.edu/chronos/](http://www.eas.purdue.edu/chronos/)) this is a multi-million dollar, six-year developmental programme being considered by the NSF. It aims to create a global network of databases of Earth System history. This would link Life-through-Time, Climate-through-Time, Radiometric Ages, Palaeomagnetism, and the standard Geological Time Scale. The project will be run under the auspices of ICS.

Geological Time Scale – preparation for IGC is on schedule. An educational poster is also being prepared.

E-strata journal – the website will include an electronic journal on education in Earth System history and geological time.

Links – ICS is linked with the NSF and INQUA and also the ODP, where ICS members are involved in subduction zone and Arctic drilling. ICS Subcommissions are linked with IUGS and IGCP activities.

Statutes – these were modified to be in-line with the updated IUGS statutes.

Website - a central website has been established ([www.stratigraphy.org](http://www.stratigraphy.org)) with a wealth of data. Only the Quaternary, Cretaceous, Jurassic, Carboniferous and Terminal Proterozoic subcommissions lack websites.

### **Subcommissions**

*Quaternary Subcommission* – ‘Quaternary’ encompasses the glaciation-dominated past ~2.5 Ma (part Pliocene, the Pleistocene and Holocene) of the Neogene. Three GSSPs will be established – base Holocene, base Upper Pleistocene and base Middle Pleistocene.

*Neogene Subcommittee* – progress made in formalizing the base of the Tortonian Stage (Miocene) GSSP at Monte dei Corvi, Ancona (Italy). A Maltese sequence is the most promising for the Serravallian GSSP.

*Palaeogene Subcommittee* – base Carbon Isotope Excursion approved as base Eocene Epoch (and Ypresian Stage) in the Dababiya Section, Luxor (Egypt). Preliminary decision taken to place the Danian-Selandian and Selandian-Thonetian GSSPs in the Zumaya Section, northern Spain.

*Cretaceous Subcommittee* – GSSP for base Cenomanian was ratified in 2002. Santonian: Olazagutia section, Bilbao (Spain) is the leading candidate for the GSSP section. Turonian: Final proposal for both base-Turonian and base Middle Turonian was approved and will be submitted to ICS in 2002. Berriasian: A Task Group was formed to define the base of the Berriasian Stage and the base of the Cretaceous.

*Jurassic Subcommittee* - Pliensbachian: A GSSP at Robin Hood's Bay, Yorkshire, England is now in approval stage.

*Triassic Subcommittee* - GSSP for base Anisian was informally agreed to be at Desli Caira, in Dobrogea, Romania. A formal vote is expected by mid-2003.

*Permian Subcommittee* - the proposed GSSP of the Lopingian passed by vote and is being readied for the full subcommittee vote.

*Carboniferous Subcommittee* – Task Groups exist for dealing with all Stage and Series boundaries. A ballot decided that the biostratigraphic criterion for the base Viséan would utilize the *Eoparastaffella* lineage.

*Devonian Subcommittee* – a vote favoured a Lower and Upper Emsian substage, with a preference given to a boundary in connection with the Daleje Event. Givetian: Proposal for the base of the *hermanni* conodont zone as the base of an Upper Givetian substage, corresponding to the Upper Taghanic Onlap. A vote favoured Lower, Middle and Upper Frasnian substages. There was an equal vote as to whether the Fammenian will have three or four substages.

*Silurian Subcommittee* – the GSSPs of the base of Silurian (established 1985) and base of the Wenlock (1982) will be re-examined. Task groups for these have been initiated.

*Ordovician Subcommittee* – IUGS ratified the GSSPs for the base Second Stage, in the Diabasbrottet section and for the base of the Upper Ordovician Series and the Third Stage in the Fågelsång section, in Sweden.

*Cambrian Subcommittee* – Paibian: The ICS ratified a Paibian Stage and Furongian Series (as a synonym of the revised upper Cambrian series). The GSSP is defined in the Huaqiao Formation, Paibi section NW Hunan, China.

*Terminal Proterozoic Subcommittee* – A ballot for proposed type areas for the GSSP was distributed in December 2002. It is becoming clear that there were three major Neoproterozoic glaciations.

*Geochronology Subcommission* – was dissolved in late 2001.

*International Stratigraphic Classification Subcommission* – the Working Group on Sequence Stratigraphy concluded it should disband: this is under consideration. The Working Group on Cyclostratigraphy produced a final report “*Concept and Definitions in Cyclostratigraphy*”.

*Stratigraphic Information System Subcommission* – this group will generate new educational stratigraphic products, focused on specific areas of the Geological Timescale, and launch *E-Strata*.

Establishing Precambrian subcommissions was recommended, but such work is poorly funded because it lacks ‘glamour’.

The developing world is being marginalized scientifically by a lack of funding for travel. This was exacerbated in 2002 by diverting ~14 % of ICS’ money to the Strategic Planning meeting in Urbino.

Products from subcommissions could give financial benefit to ICS, if proper business methods were used.

Janoschek then listed various other items mentioned in the IGC report:

IGC meeting: All commissions are preparing for the 32<sup>nd</sup> IGC, where the Hedberg and Steno prizes will be awarded. A Geological Time Scale is being finalised for publication at the IGC and an educational wall-chart and a book on all the GSSPs is being prepared. These should be ready by the IGC. Next year, 12-15 GSSPs will be submitted for voting/ratification or will be close to this stage. The website will be improved in conjunction with the CHRONOS project. A special fund for sponsoring the travel costs of scientists from developing countries will be established.

Janoschek added that ICS plans to have a Subcommission heads meeting every two years, with an EC member. These should be supported (financially) by IUGS.

De Mulder thanked Janoschek for his report.

Berger was unclear about the stratigraphic chart. De Mulder summarised the plans:.

- (1) Gradstein is co-authoring a monograph, with IUGS’ logo. This has a wall poster stratigraphic chart.
- (2) A new chart is being prepared for *Episodes*. If CGMW contribute, then their logo can go on it as well.
- (3) The IGC issue of *Episodes* will have the chart as a centrefold with the CGMW colours.
- (4) A small plasticized chart, for field use, will be included in the Florence IGC ‘bag of goodies’.

Berger said that for (1) they must be instructed to put the IUGS logo on the chart. For (2), this is typical of the confusion in publishing policy, hopefully soon a thing of the past. For (3) this will raise *Episodes* profile enormously. Brett said the EC must see products before IUGS’ logo goes on. Cadet said that this is fine with CGMW but a meeting is needed with Gradstein to confirm that at least one form of chart will be finalised by the IGC meeting. De Mulder confirmed that both the wall chart and the *Episodes* centrefold version will be finished on time. Interaction with ICS has been excellent, but a CGMW-ICS-Publications Committee meeting is needed.

Zhang Hongren said that *Episodes* will publish anything the EC needs. However, the EC must stick to its commitments. In 1998 it was agreed that *Episodes* should publish the chart with a booklet, but this decision was later reversed, without *Episodes* being informed.

De Mulder proposed that an updated stratigraphic chart should be prepared for the IGC and printed in *Episodes*. **All agreed.** He further proposed that the Publications Committee, *Episodes*, CGMW and ICS should have a meeting. **All agreed.**

De Mulder spoke next about a proposal by Odin to create a new Commission on Geochronology, saying this development was not known by Gradstein. IUGS has a Task Group on Decay Constants; would these be competing? Boriani said decay constants are essentially a physics matter. They wanted the IUGS logo to raise their prestige for financial support. Cadet warned against mixing the concepts of the Decay Constant Task Group with those of Odin's proposed Geochronology group. Brett questioned if IUGS needs Geochronology Commission – an affiliated organisation can do this sort of thing. IUGS tries to get into areas where there is a gap in the 'market'. Plant noted there must be a body covering time, but non-geochronological isotopic work should not be part of IUGS. De Mulder said that if IUGS does not have a group, a 'Standards' group might be set up outside IUGS. Riccardi said IUGS should have a body on Geochronology; it is irrelevant if it is in ICS.

De Mulder said the options are (1) a new body on Geochronology, (2) incorporate it with Task Force on Decay Constants, (3) invite an affiliated organisation to cover this issue, (4) reconstitute the group in ICS, (5) do nothing. Janoschek noted that no affiliated organisation deals with 'time' so (3) is not possible. Riccardi said that Gradstein would be unhappy with (4) and the EC would be reversing its own decision. De Mulder proposed a meeting be set up to get advice. Riccardi added that an impartial stratigrapher is needed.

Janoschek then brought the discussion to the stratigraphic Stages to be ratified. The Paibian (top Cambrian) GSSP is in China. ICS voting resulted in 14 votes for, two against, one abstention and two no replies. No reason given for the 'against' votes. De Mulder said that without reasons for voting against being given, the EC has to accept the decision and ratify it – but reasons for voting against should be given. **All agreed.**

For the Ypresian Stage, information will be posted on the IUGS homepage for electronic voting later in 2003.

De Mulder said that the EC must confirm the creation of the new Subcommittee on Quaternary Stratigraphy. This is an IUGS/ICS subcommittee, created with the compliance of INQUA, who must be thanked. **All agreed.**

#### **4.c.3 Commission on Geological Sciences for Environmental Planning (COGEOENVIRONMENT)**

Bobrowsky (rapporteur) said the Commission sent a detailed report. They have increased the number of officers, developed a new set of Terms of Reference and set up some new working groups.

Selinus gave a presentation. There are 15 officers (one new), from 12 countries, and 250 Corresponding Members, from 85 countries. Inactive members were deleted. There is an active Japanese branch of COGEO-ENVIRONMENT.

Several workshops were held in 2002 and the Annual Meeting was in Japan. The website has moved to the Geological Survey of Sweden; the number of hits is doubling every 12 months. There are also

newsletters and a brochure. A registry is being developed – primarily as a reference for medical practitioners.

Two working groups from the Commission have been elevated to Initiatives (Medical Geology and Geoindicators). The Working Group on Urban Geology has a new website. The Working Group on Geology and Ecosystems has been newly created and will produce a 400 page book based on a meeting.

The following Working Groups have either started or are proposed:

International Borders – this looks at how geological factors can ease tensions at national borders.

Land use and sustainable development.

Geological Heritage and Tourism (proposed).

Sustainable Subsurface Management (proposed).

In conclusion, Selinus asked the EC for US \$ 10,000 for 2003, to support the Commission's projects.

De Mulder thanked Selinus for his report. Bobrowsky added the new working groups cover societal issues; the International Borders and the Registry sound exciting. COGEOENVIRONMENT is one of the IUGS bodies that publishes in *Episodes*. The problem of no Treasurer has been resolved and the Secretary General is back from pregnancy leave. Plant asked if COGEOENVIRONMENT was involved in water issues, a world problem. Selinus replied that the Geology and Ecosystems group is chaired by a hydrologist. Plant added that geochemical maps of the USA and Europe are nearly complete – a group is needed to ensure the data is used; interaction is possible here. Further, the WWF has asked for the samples collected to be re-analysed, looking this time for man-made chemicals. Finkelman said that the Medical Geology Initiative does not get involved in human waste source issues. Selinus said that a book *Medical Geology*, with maps linking health with environmental factors will be published later in 2003 (Academic Press, USA., ed. O. Selinus).

Janoschek noted that IUGS has a Task Group on Geosites and UNESCO and the EU have initiatives in this direction. Is it wise to have another group dealing with geotourism? The EC, at a previous meeting, had said it was unhappy with the idea. Selinus replied that this was only a proposal – no decision had been made yet.

Bobrowsky said that this Commission is often present at EC meetings so the EC does not need to look into it at greater depth. De Mulder added that EC members could get electronic updates from the Commission. He suggested that the EC should appoint some new Commissioners – Selinus should send some names.

#### **4.c.4 Commission on the Physics and Chemistry of the Earth (COPCSE)**

Plant said that no report had been received. Bobrowsky and Riccardi both said COPCSE should be terminated. Boriani agreed; COPCSE was reviewed in 1999, but nothing improved afterwards. Janoschek commented that Arndt, the Chairman, will be at the EGS-AGU-EUG Joint Assembly in Nice, for a review. Arndt has a successor who is ready to do the job. Bobrowsky reiterated that it should be closed, even if it is reviewed. A new leader does not mean the Commission should be kept. Brett said it was suggested to COPCSE that they form an International Petrological Society. He added that they should be asked why they should *not* be closed. De Mulder proposed that COPCSE should be closed down. **All agreed.**

#### **4.c.5 Commission on Global Sedimentary Geology (CGSG)**

Cadet reported that the Commission is running down. Two meetings of the working group on Carbonate Platform Development occurred and editorial work for two Pangaea Symposia (Wuhan 1999 and Oman, 2001) were done. However, two planned projects failed. For 2003, no precise project or budgetary request was sent. The letter from the Secretary General, following the Lower Hutt EC meeting, was interpreted to mean that CGSG had been terminated. With a review of the Commission being planned only for 2004, it might be better for IUGS to leave aside the global aspects of sediments, sedimentology and sedimentary geology and to launch a new task force or commission, with a new vision and new team, sooner. A review in 2003 would be better. Janoschek said that last year CGSG was asked to submit a plan. This has not been done, so it should be closed. Boriani agreed; it was reviewed in 1999, but nothing improved. Further, sedimentology is in 'good health' world-wide and IUGS does not need a Commission in all branches of geology. Riccardi agreed.

De Mulder proposed that Cadet and Brambati should represent IUGS in a review in 2003. Independent reviewers should be sought from an affiliated organisation. **All agreed.**

#### **4.c.6 Commission on Systematics in Petrology (CSP)**

Brett reported. The Commission continued work on systematics, classification and nomenclature. The Subcommittee on the Systematics of Igneous Rocks (SSIR) published the second edition of Le Maitre, R. W. (ed.) (2002) *Igneous rocks. A classification and glossary of terms. Recommendations of the International Union of Geological Sciences, Subcommittee on the Systematics of Igneous Rocks.* The Subcommittee on the Systematics of Metamorphic Rocks (SSMR) continued working on the 12 papers reporting the recommendations of the SSMR. The core paper ('How to name a metamorphic rock') was finished. That, and eight other preliminary papers are on the SSMR website. The Subcommittee on Data Bases in Petrology (SDBP) has been successful up to now, but has difficulties continuing the development of the databases. The Subcommittee manages the global petrologic database and is establishing the principles of petrologic databases. SDBP will propose a new commission to establish standards for geological databases. The commission should cover all geological branches to generalize the exchange of all kinds of information. The Subcommittee on Systematics in Sedimentary Rocks (SSSR) is still inactive. Niichi Nishiwaki will form a discussion group to re-establish it. The new Secretary is Raffaele Sassi. Financial Request: US \$ 5,193.

In summary, the Commission is good, but is winding down. However, there is not a wide enough range of people with too many Europeans. Kamona was concerned that there is no African representative; this is true for many commissions. Positions must be better advertised and less 'secretive'. Boriani said that the Commission is trying to get rid of the database (decided at the 44<sup>th</sup> EC meeting in Vienna in 1998). De Mulder concluded by complimenting the Commission on its work, but it needs a global membership.

#### **4.c.7 International Commission on the History of Geological Sciences (INHIGEO)**

Sato reported: The Commission has 169 members, from 41 countries. It held an International Conference to commemorate d'Orbigny in Paris, with exhibitions and excursions. Books, CD-ROMs, radio programmes and postal stamps were produced. Conference proceedings are now in preparation. It published Newsletter No. 34 and an English version of the Japanese JAHIGEO Newsletter. Classic Papers were sent to *Episodes*; on Inge Lehmann, Alfred Wegener and John Joly. Four books were published on geoscience history. Finally, it sponsored a conference (Vilnius University) commemorating the 200th year of the chair of mineralogy. In 2003, INHIGEO plans to convene a meeting in Dublin on Geological Travellers; to edit and publish the remainder of d'Orbigny's work; to discuss the EC suggestion on the history of IUGS and/or IGC with work starting in 2004, at the IGC; to publish Newsletter No.35 and to submit "Classic Papers" to *Episodes*. Sato concluded that

INHIGEO has a high level of activity and anticipated that the project on the history of IUGS and/or IGC will take shape in near future. Sato recommended continuing to support INHIGEO, which requested US \$ 4,000 for the work outlined.

Plant commented that the recent book on William Smith is a best-seller. Maybe the author would write a summary for *Episodes*. Riccardi commented that Hugh Torrens, an expert, could be asked. Plant said a woman should feature in the Classic Paper series; she would write one about Janet Watson. Brett noted that Inge Lehmann, featured in *Episodes* 24(4), was a woman.

De Mulder complimented the Commission, thanking it for its excellent work.

#### **4.c.8 Commission on Tectonics (COMTEC)**

De Mulder said the Ad hoc Review Committee decided to close COMTEC and develop a new group on Tectonics and Structural Geology. The EC agreed by electronic voting. There is a list of 20 names so far for the new group. Passchier, who was on the ad hoc Review Committee, agreed to develop the new group. A meeting will take place during the EGS-AGU-EUG Joint meeting in Nice. Dewey (Oxford), Kay (Cornell) and Taira, were proposed as other names. Janoschek added that the IASTG closed in 2002 and sent US \$ ~5,000 to IUGS. This will be given to the new group.

#### **4.c.9 Commissions to be reviewed**

See section 4.b.2 Ad hoc Review Committees (ARC), above.

#### **4.d Task Groups**

##### **4.d.1 Task Group on Fossil Fuels (TGFF)**

Brambati reported: Despite organisational difficulties in arranging the Iranian Conference and some conflicts in Central Africa, the Group achieved the objectives planned. It has softened relationships between neighbouring countries in the management of natural resources. TGFF has promoted and organised seminars on discovered and undiscovered hydrocarbons resources, and has set out a new way of thinking in the acquisition of new members for IUGS. For 2003, effort will be devoted to developing countries, helping them correctly develop and manage natural resources using scientific methods. For this, workshops in Central Africa have been planned, as well as during IGC. The main goals for 2002 were, therefore, fully achieved.

Brambati added that the group seemed political. Brambati added that the group comprises very few people; two of the three members are French; they need Africans if they are in Africa. Finkelman asked about representatives in the coal field. Brambati replied this was not clear. Plant added that coal will become important – coal bed methane/in situ gasification/clean coal technology are the future.

De Mulder thanked Brambati for his summary and complimented the Task Group on its work, but it must geographically broaden its leadership. It must also note modern trends in coal technology. The EC **agreed**.

##### **4.d.2 Task Group on Global Geosites**

Janoschek reported. No annual report was submitted, again. However, there is plenty happening in this field. The Council of Europe invited experts to a meeting in September. The Council is happy to have IUGS in the group and UNESCO was represented, but Wimbledon did not go because there were no geologists in the group. The EC concluded that the Task Group is not performing properly in an upcoming field. A very strong review is needed

De Mulder thanked Janoschek. IUGS must bring together all the diverse parties interested – including IGU. A review was necessary. Brett recalled meeting the Task Group in Zurich, 1999; these problems were present then. Bobrowsky said the EC must act now and reformulate the group; why wait longer. Eder agreed.

Eder added that UNESCO has a program on natural and cultural heritage - a number of World Heritage Sites are geological. WHS is a star programme. IUCN (The World Conservation Union) is a partner with UNESCO in this, as is IUGS. IUGS should not lose the chance of contributing to the WHS scheme. Interest in geotourism/heritage has increased enormously. The possibility of increasing the public knowledge through parks is appreciated at the national/international level. IUGS/UNESCO/IGU can give guidelines on such parks. UNESCO is very interested in having IUGS' input.

Berger said that at the *Natural and Cultural Landscapes* meeting (Dublin, 2002) many young people were present. PROGEO (the European Association for the Conservation of the Geological Heritage) is also active. Wimbledon was at the meeting, but IUGS was not mentioned. Refsdal said the IUGS database on Geosites was available at the IUGS website.

De Mulder said IUGS could either review the Group or completely reformulate it in a new group with (1) COGEOENVIRONMENT (planning a geotourism group), (2) UNESCO and (3) IGU. **All agreed.** Plant suggested Schneider to be involved in the new group.

Boriani said that one IGC Plenary session was devoted to Geotourism – but this must not just cover 'soft rock' aspects.

#### **4.d.3 Task Group on Public Affairs**

Brett reported for Applegate. There was an article in *Episodes*, based on a poll of member organisations. Presently, the group is assembling Position Statements on *Climate Change* and on *Creationism and Evolution*. Brett suggested that the EC should ask for more information. Plant said position statements were important for IUGS; she agreed to write one on nuclear waste. Brett said statements should be published in *Episodes* initially. Plant added they should then go on the website, so they can be found by search engines.

#### **4.d.4. Task Group on Decay Constants**

Cadet reported. No report was received from the group and attempts to reach it failed. De Mulder said he was dismayed. Janoschek wondered if the group was necessary to IUGS. Boriani replied that they asked for the IUGS logo to give them more prestige – the group cost nothing. Brett added that about twenty years ago IUGS was asked to standardise decay constants, because at that time several different constants were used for the same element. With new isotopic systems on line, the work needs to be updated. It was agreed that the Task Group should be reviewed in connection with Odin's proposal to create a new Commission on Geochronology (see 4.c.2).

#### **4.d.5 Task Group on Geochemical Baselines**

Plant reported. This is an active group with a large membership. Few people realise that the Earth's surface is decaying, killing many people. The data from the group helps countries assess such factors. China was the first country to try this large-scale approach. Plant added that she was initially sceptical about the method, but has been amazed by the results; As and Se patterns in Europe clearly relate to geology and agricultural practices. Major companies have been asked to provide funding for post-doctoral workers to interpret the results. Water is affected by man-made drugs, such as viagra, anti-depressants, hormones. The World Wildlife Fund plans to extend the survey to include man-made

compounds. The data are freely available to the developing world, where they help in health studies. The group asked for US \$ 3,500.

De Mulder thanked Plant for the report. The group should be thanked and commended for their good work.

#### **4.e Initiatives**

##### **4.e.1 Geoindicators**

Riccardi reported. Geoindicators held conferences and workshops in several continents. They also published several papers. The main goal was to refine and disseminate the Geoindicators approach. The project is a cross-roads for many other disciplines – the checklist should be sent to geological surveys and to national committees. IUGS should give full support to this initiative and funds provided should match its importance.

Berger (Geoindicators leader) added that the Geoindicators checklist has been on-line since 1996 – since then, effort was devoted to promoting and refining it. The initial list/concept has proved to be robust, and is used by the US Park Service. Through this five year programme, the word ‘Geoindicators’ is becoming well known to the US public and geosciences. The Initiative was very active, through Cathleen May’s support (US \$ 25,000). Although planned as an annual contribution, this level of support could not be maintained. The October issue of *Environmental Geology* (ed. Berger & Satkunas) was about Geoindicators. In April, there will be the first ‘dry lands’ workshop, in Egypt. The Initiative is collecting images showing the geoindicators ‘in action’. Finally, the project proposal *Dark Nature – Rapid Natural Changes and Human Response* was submitted to ICSU. IUGS, IUGG, IGU, PAGES are involved. Geoindicators is asking for US \$ 5,000, plus what is in the project proposal given to Janoschek.

De Mulder thanked and complimented the initiative for its excellent work.

##### **4.e.2 Medical Geology Initiative**

Finkelman gave a report. Medical Geology is an opportunity for IUGS to interface with medicine/healthcare, with an impact on human welfare. The vision is to build a Foundation for a Global Medical Geology Network – to improve health around the world. Websites, short courses and distribution of products will encourage participants. Presently, there are 400 affiliated organisations from 60 countries; Selinus and Finkelman are co-directors. The website in Sweden receives 1000 visitors per month. Many short courses have been run by the initiative; people ask for it to come to their country. The 2003-2004 courses will be in New Zealand, Lithuania, China, Brazil, Scotland, Peru/Chile, Australia/Fiji, India, Romania, Nigeria, Tanzania/Kenya, Italy/IGC and Indonesia. A 900 page textbook will be published in 2003 and proceedings of a workshop are out. A short course CD is in preparation. A poster was made, a newsletter is running, and there is a quarterly newsletter within USGS on medical geology. Also, non-technical texts are coming out, for the public. AGI is keen to produce a full colour glossy brochure. The Initiative is asked to run sessions at many medical congresses. This year, the initiative is focussing on developing national and regional bodies. In the US, the NRC wants to pursue medical geology – via the USGS and NSF. A Medical Geology Registry is present at AFIP (Armed Forces Institute of Pathology). An course is being developed at George Washington University and the initiative is trying to get Congressional funding for a Medical Geology Centre, to monitor environmental health around the world. IUGS is in the lead here; this can put IUGS in the forefront of the scientific community. The initiative needs US \$ 100,000 for two years to achieve what it wants to do – after that, a lesser sum is required, as the Medical Geology Society develops.

De Mulder complimented the Initiative for its excellent work.

Bobrowsky said that this should be used as a template for success and visibility; it takes time to prepare workshops. The costs are borne by the home institute after the first visit. IUGS pays little for a lot of visibility. The public relevance is enormous – the project is bigger than ever imagined. But better communications are needed. Plant wondered if it was worth trying to extend this into veterinary fields. Finkelman agreed that his was an important way to go.

#### **4.f Affiliated Organisations**

De Mulder said that only those affiliated organisations represented at the meeting, or with a special interest will be discussed in detail.

##### **4.f.1 American Association of Petroleum Geologists**

No report had been received as of 16 February 2003

##### **4.f.2 American Geological Institute (AGI)**

Brett reported. Subscriptions to GEOTIMES grew as did visitors to the web site. Earth Science Week kits were distributed to the public. The AGI/USGS Global GIS Database will be made available to educators and the public in DVD World Atlas form. The GEOREF database now has 2.4 million geoscience citations. AGI's expansion of GIS will include the Cold Regions Bibliography Project. AGI will begin development of a National Geoscience Meta Data Online Catalogue. Brett stated that AGI is not a political organisation; the Agra Bureau meeting minutes are incorrect in stating this.

##### **4.f.3 American Geophysical Union (AGU)**

Gupta reported (in absentia). There are 41,000 AGU members: 9,500 scientists gathered at the San Francisco meeting. The AGU's budget should grow to 30 million US \$ in 2003. In 2002, publication became electronic. The weekly *EOS* is also available digitally. AGU plans to raise funds to endow the education, public information and governmental affairs activities of AGU, so that income from publications and meetings is not required for these programs, keeping prices at a minimum.

##### **4.f.4 Arab Geologists Association (AGA)**

Brambati reported. In 2002, AGA sponsored the 5<sup>th</sup> International Conference in the Middle East, in Cairo and the Gypcreeet meeting, to be held in Baghdad. The presence of AGA was significant at several exhibitions, especially those on water technology and the impact on ecosystems. AGA promoted IUGS' image in the Arabian countries.

##### **4.f.5 Association of Exploration Geochemists (AEG)**

Plant reported. AEG sponsored a workshop titled "Exploration Technology: Discovery through Innovation" at a SEG conference, and co-sponsored a symposium titled *Distribution of Metals in the Environment around Smelters* at a meeting in Canada. AEG will co-sponsor the 6th International Symposium on Environmental Geochemistry in Scotland, in 2003. The 21st IGES will be held in Dublin, Ireland. The Association sponsors the journal *Geochemistry: Exploration, Environment, Analysis*, and publishes the newsletter, *EXPLORE*. The Association produces special publications and conducts courses in exploration and environmental geochemistry.

##### **4.f.6 Association of European Geological Societies (AEGS)**

Cadet reported. The 30 members strengthen links between European geological societies through meetings of the European Geological Society (MAEGS) held every two years since 1975. The Executive Committee of AEGS has realised it has to find a better fit in geological sciences and science policy. This will be realised for MAEGS-13 (Hanover; September), under the theme *Geosciences and*

*the European Water Framework Directive*. The Committee was strengthened by representatives from Germany, Greece and Italy.

#### **4.f.7 Association of Geoscientists for International Development (AGID)**

Cadet reported. AGID has two objectives: 1) encouraging communication individuals, societies, agencies and corporations interested in applying geosciences to sustainable development; 2) promoting geoscientific activities related to the needs of developing countries. It faces two difficulties: 1) Role: AGID's role has been taken up by others by the plethora of NGOs in developing countries. However, regionalizing its organization might enable it to make a contribution. This will be decided at General Assembly at the Florence IGC. 2) Funding: Falling contributions from the developed world debilitates the organisation's activities, in a vicious circle. Activities included workshop organisation in Africa (with UNESCO), books and journal distribution, a Bangaldeshi conference about sustainable development. For 2003, AGID plans to further develop ongoing projects and the AGID Book and Journal Service. Encouragement by IUGS, through financial support is recommended. The EC should advise AGID to clarify its role and structure. Financial Request: USD 1000.

De Mulder said Tony Reedman agreed that no direction for AGID had been defined. Bobrowsky said AGID is active; it distributes second hand books and gives seminars etc. The group is better than many things IUGS supports and they are not asking for much money. IUGS should encourage the group.

#### **4.f.8 Association Internationale pour l'Etude des Argiles (AIPEA)**

Cadet stated that no report had been received as of 16 February 2003

#### **4.f.9 Carpathian Balkan Geological Association (CBGA)**

Janoschek stated that no report had been received as of 16 February 2003. Janoschek added that CBGA is old fashioned in organisation; until the 'younger' members come through, nothing will change. They run a congress once every four years. A proposed collaboration with CGMW has fallen through due to inactivity by CBGA.

Bobrowsky asked if younger members can be encouraged in some way. Janoschek replied this is not possible, due to the restrictive organisational structure.

#### **4.f.10 Centre Internationale pour la Formation et les Echanges Géologiques (CIFEG)**

Cadet reported. CIFEG's staff operates through a network of more than seventy geoscientists. CIFEG's activities are slowed down by financial support problems (80 % French Government, 7 % from UNESCO; total budget of € 351,000, with € 86,000 for publications, training and exchanges). PANGIS (Pan African Network for a Geological Information System) has been upgraded with data for Tunisia, Mauritania and Mozambique. SANGIS (Southeast Asian Network) has organized training sessions in CCOP member's countries. *Pangaea* numbers 37 and 38 were published and are bilingual (French/English). The web site is now open and devoted to training and exchange of data in geosciences for developing countries. In addition, CIFEG is promoting for 2003 a project on water management in Western Africa.

#### **4.f.11 Commission for the Geological Map of the World (CGMW)**

Cadet reported. CGMW has been active, but has difficulties getting fees from subscribing countries; only 40 in the commission (42 last year). Balanced loss in funds by a 50 % sales increase – aiming for high schools, with smaller-scale maps making them easier to handle. Popular are the Geological Map of the World, the Climex maps and the booklet "The Changing Face of the Earth". CGMW contributes regularly to *Episodes*; it is good advertising for the products. CGMW has pursued its standardization efforts with two meetings of the DIMAS (Digital Map Standards) group.

De Mulder thanked Cadet for his report and commented that CGMW certainly seemed very busy.

Brett wondered if the distribution had improved – the increased sales suggest so. Cadet replied that sales are an important income now, reflecting a better sales policy.

#### **4.f.12 Circum-Pacific Council for Energy and Mineral Resources (CPCEMR)**

Gupta reported (in absentia). CPCEMR increases knowledge on resources and environmental factors, including natural hazards, effecting resource development in the Pacific countries, it encourages collaboration in the Pacific region and disseminates Earth science information. Activities following the *Crowding the Rim* project include the digital database on hazards, demographics and infrastructure (HAZPAC) and the simulation (RIMSIM), illustrating the ripple effects of disasters and the importance of collaborative problem solving among nations, and an Educational Module for secondary-school students and adults. The Council started a new project, the *Pacific Energy Inventory Project* to understand energy flow within the Pacific Region; CCOP, USGS and Stanford University are cooperating on this. We regret that Executive Director, John Reinemund, passed away in 2002. His dedicated guidance and invaluable contributions to the Council will be missed.

#### **4.f.13 European Association of Science Editors (EASE)**

Brambati reported. The growing number of member countries (up to 55) results from the active work carried out by EASE. The annual and three-year conference at Bath, UK, was organised and the Association strongly promoted. The journal was redesigned and the chapters of the *Science Editors' Handbook* will be available from June 2003.

#### **4.f.14 European Mineralogical Union (EMU)**

Brambati reported. The union organised a range of activities in science, administration, editing and, above all, in workshops. A similar range of activities is planned for 2003, and up to 2006. The union takes a very broad view in promoting, planning and scientific sponsorship of international congresses and symposia.

#### **4.f.15 Geochemical Society (GS)**

Plant reported. Last year *Geochimica et Cosmochimica Acta* was published in 24 issues and grew to nearly 6000 printed pages. Symposia and sessions were sponsored at GSA and AGU. The 12th Goldschmidt Conference was held in Davos, Switzerland. The GS continued development of the Society's newsletter into a glossy format. The Society provided US \$ 10,000 US for student travel grants to the Goldschmidt Conference. A new publication series, *Reviews in Mineralogy and Geochemistry*, was established jointly with the Mineralogical Society of America.

#### **4.f.16 Geological Society of Africa (GSAfrica)**

Nyambe gave an extended report on the Geological Society of Africa. The Society exists to (1) promote understanding and quality research in Earth sciences in Africa; (2) assist African states to develop their human resources, including the encouragement of women, in the pursuit of careers and interests in the Earth sciences; (3) promote the sustainable development of mineral, energy and water resources for the socio-economic development of the peoples of the African continent and (4) protect the environment in Africa.

GSAfrica addresses regional issues that involve the Earth sciences and pursues objectives, as stated above, that are pertinent to the goals of the IUGS set out by the Strategic Planning Committee.

The Society operates through an Executive Committee comprising M. Abdulsalam (Sudan/USA), Nyambe (Zambia), Njila (Cameroon) and Bennet (UK), with Vice-Presidents from Zimbabwe (Mapani), Cameroon (Toteu), Guinea (Coulibaly), Egypt (Abdeen) and Eritrea (Woldehaimanot) and councillors from S. Africa (De Witt), Morocco (Ennih), Senegal (Siby) Congo Brazzaville (Elenga) and Uganda (Tiberindwa). Note that this executive covers all of Africa. IUGS should utilise this network to reach all of Africa, given the many inactive adhering organisations and could also use GSAf in its work and decision making.

A considerable list of accomplishments was presented, including conferences organised, sponsoring participation at conferences, maintaining/developing a homepage, publishing a newsletter etc. Similar work is planned for the future, for which the Society requests US \$ 5,000 from IUGS.

De Mulder thanked Nyambe for his report, and complimented the Society on its work. A key question is “How does IUGS see the role of the Society?” Nyambe replied that if GSAfrica members are targeted, they could apply pressure on their governments to become active IUGS members.

Bobrowsky asked about the IUGS electronic bulletin – to how many GSAfrica members was it forwarded, and by whom? Nyambe replied that it was forwarded to 300 members by the assistant secretary general. Bobrowsky said that it would be useful to get a response to the bulletin – to hear what the members think of it and its contents.

Janoschek noted that only persons from active countries could be members of IUGS Commissions/Task Groups etc. De Mulder said that IUGS should consult with the Society more, but the Society can, of its own accord, send ideas to IUGS. Eder noted that GSAfrica is working with the UNESCO office in Nairobi – organising workshops on disasters, women’s activities and promoting Geoparks/conservation in Africa.

Brambati (rapporteur) said that GSAf reports on a difficult financial situation and, consequently, the difficulties in successfully promoting the Society. For this reason GSAf continues to rely on the support of IUGS. Obviously, this situation limits the desired development of the Society. Nevertheless, there is appreciable international linking with IUGS and UNESCO, BRGM and a strong contact with IGCP. Several sponsorships are in place and GSAf members are often present at conferences. The estimated budget for the year 2003 shows a slight decrease; thus, any improvement of the system is not foreseeable. The financial request: US \$ 4,000 is strongly supported. (Note that the request for US \$ 5,000 made verbally by Nyambe, was higher than that requested in the written report.)

#### **4.f.17 Geological Society of America (GSA)**

Brett reported. GSA membership grew to 16,719 and submissions to *Geology* were up 30 %. A journal archive for *Geology* and the *Bulletin* was established and fourteen volumes were published in 2002 by the reorganized books division. GSA continued planning a journal aggregate with a group of six other geoscience societies. In the area of education and outreach, thirty-four GeoCorps America participants worked in 18 national parks and 12 national forests. A total of \$ 450,000 was awarded to 243 graduate students. GSA adopted a new logo, expanded the GSA Web site (more than 20,000 visits per month), built and begun operation of a Geology and Public Policy list server, conducted member research and surveys in support of informed decision-making. The IUGS President met with several U.S.A. based affiliated organizations in conjunction with the GSA annual meeting *Science at the Highest Level* Oct. 27-30, 2002, to inform them of IUGS plans for the IYPE.

Berger noted that the Society had given US \$ 5,000 to Geoinicators; this should be properly acknowledged by IUGS. **All agreed.**

#### **4.f.18 International Association for Engineering Geology and the Environment (IAEG)**

De Mulder reported. The Association held its council meeting at the International Congress in Durban, September 2002. The IUGS President gave a welcoming address at the Congress, attended by some 250 participants. Dr. Niek Rengers was elected as President. Dr. Rengers pleaded for a more cooperation between ISSMGE, ISRM and IAEG (all IUGS affiliated organizations). As a result, an Inter-Association Commission on Landslides was developed, unrelated to ICL.

#### **4.f.19 International Association of Geomorphologists (IAG)**

Bobrowsky reported. The IAG is the primary organizational body in geomorphology. Currently consisting of almost 60 member countries, IAG attracted three new members. Financial viability mostly comes from book royalties. The members of IAG are active in several affiliated projects, working groups etc. The IAG is best known for its thematic publications through Wiley Inter Science, and its electronic newsletter. The V<sup>th</sup> *International Conference on Geomorphology* was held in Japan, with about 800 delegates. IUGS recognizes the importance of IAG as a link to the International Geographical Union. The IAG also represents the primary focal organization for all geomorphologists in the IUGS network.

#### **4.f.20 International Association of Geochemistry and Cosmochemistry (IAGC)**

Plant reported. Several meetings and symposia were held through the IAGC's Working Groups. 1) the *6th International Symposium on the Geochemistry of the Earth's Surface* (GES-6) in Hawaii, May. 2) A session on *Stars, Discs and Planetary Growth* in the 12th Annual Goldschmidt Meeting, Davos, Switzerland, August. 3) *Water Quality and Conservation for Sustainable Development*, Hyderabad, India, December. 4) *6th IAGC Symposium on Sources, Transport, Fate and Toxicology of Trace Metals in the Environment*, Geological Society of America Annual Meeting, Denver, Colorado, October. A Business Office was established for day-to-day affairs. The new Secretary is Dr. Attila Demeny (Hungary). Financial request US \$ 4,000.

Brett noted that the Association had never asked for money before – most of the geochemists are from the developed world.

#### **4.f.21 International Association on the Genesis of Ore Deposits (IAGOD)**

Sato reported. The 11<sup>th</sup> Quadrennial Symposium was held in Windhoek, Namibia, in September 2002. They produced an excursion guidebook, monographs and maps. They have seven Commissions and two Working Groups for scientific work. Several Working Groups convened sessions at the SGA-SEG Annual Meeting. The IAGOD Newsletter 2002 was published. IAGOD is suffering from falling public interest, causing a shortage of funds. Financial Request: US \$ 2,500 to support activities of post-Soviet and developing countries and to assist individuals attending workshops.

De Mulder wondered if IUGS was mentioned and got any visibility during the IAGOD meeting in Namibia. Schneider replied that the meeting was excellent – over 400 people attended. The group certainly seemed very independent.

#### **4.f.22. International Association of Hydrogeologists (IAH)**

Sato reported. IAH published the *Hydrogeology Journal*, partly supported by GSA. IAH convened its 2002 Congress in Mar del Plata, Argentina, in October, and participated in a joint meeting with ALHSUD (Latin American Association for Ground Hydrology). Thematic volumes of IAH book series are published. News and information is distributed three times electronically. The IAH Presidential Award was conferred to A. Skinner. A special Council Meeting was held in Stana de

Vale, Romania. IAH has 10 Commissions working on specific topics, the outputs of which are used for better water management world-wide.

#### **4.f.23. International Association for Mathematical Geology (IAMG)**

Gupta reported (in absentia). The International Association of Mathematical Geology promotes international cooperation in the application of mathematics in geological research and technology. IAMG has 532 members from 49 countries. IAMG has three Journals, *Mathematical Geology*, *Computers and Geosciences* and *Natural Resources Research*. IAMG co-sponsored meetings with the NATO Advanced Study Institute, the American Statistical Association, the International Statistical Institute and the 7<sup>th</sup> *Conference of the Baltic Geologists*. IAMG now has a permanent home office. The annual conference was in Berlin in September with over 200 scientists. IAMG has submitted proposals for symposia, workshop and short courses during IGC 2004.

#### **4.f.24. International Association of Sedimentologists (IAS)**

Riccardi reported. IAS has 2,120 members, who fund all IAS activities. IAS held the 16<sup>th</sup> *International Sedimentological Congress* in Johannesburg, July, with 350 participants. Ten field-trips were run. IAS co-sponsored conferences/workshops in Bulgaria, Hong-Kong, Argentina and the USA. Six issues of *Sedimentology* were published. Three special publications, a field guide and a reprint volume are under preparation. The IAS friendship scheme for scientists and libraries in developing countries benefited 165 individuals and 36 libraries, and a new grant scheme offered 20 grants of US \$ 1,000 each to young researchers.

#### **4.f.25. International Association of Structural/Tectonic Geologists (IASTG)**

De Mulder reported that IASTG was affiliated to IUGS for a long time but decided its activities could be handled on the internet. The remaining budget on the bank was handed over to IUGS to support Tectonic activities. Refsdal noted that closing IASTG must be approved by the Council.

#### **4.f.26. International Federation of Palynological Societies (IFPS)**

Riccardi reported. IFPS has 20 affiliated societies as members; four member societies left in 2002. This is attributed to lack of commitment within the countries, although problems with payment of annual dues (US \$ 1.50 per member) are also mentioned. An affiliate, the Russian Palynological Commission, held its 10<sup>th</sup> Conference in Moscow (October), with financial help from IUGS. IFPS published two issues of its *Newsletter*, now online at IFPS' website. IFPS is organising the 11<sup>th</sup> *International Palynological Congress* (Granada, 2004) and a new edition of the *Directory of Palynological Societies*. Expenditure of about £1,300 in 2002 was for printing and mailing the newsletter PALYNOS.

Janoschek added that the leader, Annick Le Thomas, a botanist, regrets the separation between palaeontology/palynology and geology. However, a return towards the geosciences could be developing. The group asked for US \$ 1,500 from IUGS, to cover printing costs.

#### **4.f.27. International Geological Education Organisation (IGEO)**

Bobrowsky reported. Unofficially active for several years, IGEO formed a body in 2000 and affiliated with IUGS in 2002. IGEO represents a "grass-roots" movement to further Earth sciences in education; they fulfil a much needed niche in IUGS. IGEO consists of five officers and 22 member country councillors. The organization operates on voluntary efforts by its members. Funding is minimal and depends on profits from preceding conferences. The highlight is a quadrennial international conference - the fourth will be in Calgary, 2003. A minimal contribution from IUGS in 2002 permitted the development and maintenance of their website. They request US \$ 5,000 for 2003, to ensure participation of 10 individuals from Developing Countries at the meeting. Funding can then be

reduced if IGEO does not develop a broader prospectus. The group has proven itself to be a worthy addition to the IUGS affiliated organisations. IUGS appreciates the collective hard work of its volunteers and strongly encourages the group to become more involved in the activities of other affiliated organisations and to expand its goals, ambitions and outputs to better serve the global geoscience education community. Financial request: US \$ 5,000.

Bobrowsky added that at the 2002 EC meeting, it was decided to form an IUGS commission on education (COGEOETT), but when the Bureau realised this would compete with IGEO, IGEO was invited to become an affiliated organisation and to take over the work.

#### **4.f.28. International Mineralogical Association (IMA)**

Brambati reported. The report of IMA, which runs from 1998 up to 2004, is very detailed and outlines the past and future activities in a impressive way. The large amount of work carried out by the working groups gives an view of the intense activity of the IMA. It illustrates the activity of the years 2000-2002 and the planning for 2003-2004, as well as specifying the congresses, symposia and sessions sponsored and the links with other scientific groups.

#### **4.f.29. International Palaeontological Association (IPA)**

Janoschek reported. The new President is Richard Aldridge (UK) and the Secretary-General is Rosalie Maddocks (USA). IPA was represented by Vice-President Goujet (France) on an ad-hoc group considering the steps needed to set up the Scientific Programme Committee of IYPE. The President or another member of the Executive Council will represent IPA in a workshop at the 2004 International Geological Congress on the protection of geological sites. Financial Request: None. IPA has repeated the complaint that the IUGS funding was withdrawn in 1990. It has never subsequently tried to obtain funding.

Brett said that they asked for funding for inapplicable reasons. Janoschek said he hoped to meet Aldridge in 2003, to develop a better understanding.

#### **4.f.30. International Permafrost Association (IPA)**

Bobrowsky reported. The International Permafrost Association remains one of the most active and productive affiliated organisations. The IPA is governed by six officers and 23 councillors. Finances are generated by membership dues but are sufficient to support a wide variety of scientific endeavours. The IPA secretariat is supported by the Norwegian government. The most significant activity for IPA is their international conference, the next being scheduled for July, 2003, as well as publication of its journal *Frozen Ground*. IPA is incredibly active in its joint/cooperative efforts in the international arena, especially through its various committees and working groups. The IPA will publish a volume from the 8<sup>th</sup> ICOP conference and will participate in IGC in 2004. The IUGS commends the high calibre of science maintained by IPA and appreciates the efforts this organization has exhibited to keep IUGS abreast of its activities.

IUGS strongly encourages IPA to contribute to *Episodes* and to broaden awareness of its numerous activities.

#### **4.f.31. International Society for Rock Mechanics (ISRM)**

Sato reported. ISRM maintained its activity at a high level. They convened the International Symposium *EUROCK 2002* in Madeira, and also held their annual meeting in Madeira. They granted the Rocha Medal 2002 and the Muller Award and published the *ISRM News Journal* and Commission Reports. The creation of Interest Groups is in progress. ISRM moved to the Internet for providing

electronically versions of the *News Journal* and for internal communication. Financial request US \$ 5,000.

Sato added that this is an important society, making a good contribution to geo-engineering. Janoschek said that they have a budget of US \$ 157,000. De Mulder noted that the money was requested for distributing educational material in the developing world.

#### **4.f.32. International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)**

Sato reported. ISSMGE has 75 member societies. The society had two board meetings in which key issues were deliberated and seven Task Forces were established to solve upcoming problems. ISSMGE also organized 37 Technical Committees, each of which provides developments in geotechnical engineering and which are publicised via their website. No request for funds.

#### **4.f.33. International Union for Quaternary Research (INQUA)**

De Mulder reported. In 2002, INQUA was very cooperative in finding an appropriate solution for the position of the Quaternary within the framework of the IUGS International Commission of Stratigraphy. INQUA's Secretary-General served both as a member of the Scientific Board of IGCP and as a member of the new IUGS' CRD. This demonstrates the improved relationship between both Unions. In addition, there have been many positive interactions between of the Bureau members with INQUA officers in 2002.

#### **4.f.34. The Meteoritical Society**

Brett reported. The Society held its annual meeting in Los Angeles, in July. Travel awards were given to 22 students from eight countries. Twelve issues and two supplements of the Society's journal *Meteoritics and Planetary Science* were published. Ten subscriptions of MAPS are given yearly to libraries in countries where meteorite researchers are active but unable to afford the journal. Electronic access to MAPS papers is available to journal subscribers. One volume of the *Meteoritical Bulletin* was published with descriptions of 1154 meteorites, including seven from the Mars and four from the Moon. A new website has been set up for the Society, which offers expanded services for members. Publications include 2000 pages plus two supplements of meeting abstracts, new meteorite data in the *Meteoritical Bulletin*, and historical papers. The Society cosponsors the bimonthly *Geochimica et Cosmochimica Acta*.

#### **4.f.35. Society of Economic Geologists (SEG)**

Plant reported. SEG cosponsored workshops at numerous meetings in North America. SEG sponsored student and instructor participation at the *XXI International Metallogeny Course* in Quito, Ecuador. SEG was a major sponsor of the *11<sup>th</sup> Quadrennial IAGOD Symposium and Geocongress 2002* in Windhoek. In addition to funding three keynote speakers and supporting 21 students, SEG manned an exhibit booth. SEG collaborated with Compañía Minera Cerro Colorado Ltda. (BHP-Billiton) in running a mapping course at the Cerro Colorado porphyry copper deposit in Chile. In 2002, over US \$ 68,000 was awarded to support 46 graduate students from universities in 12 countries. SEG released several special publications.

#### **4.f.36. Society for Geology Applied to Mineral Deposits (SGA)**

Gupta reported (in absentia). SGA advances the application of scientific knowledge to the study and development of mineral resources and their environment. It organizes scientific meetings, publishes the Society journal *Mineralium Deposita* and co-operates with other scientific societies. Over the past seven years the number of members grew from 450 to about 1000. During 2002, the Society held business meetings, co-sponsored scientific meetings and had a meeting on *Integrated Methods for*

*Discovery* at Denver, USA. The most important achievement has been that the Science Impact Factor of *Mineralium Deposita* has gone up to 1.303. Issues 12 and 13 of the newsletter were published.

#### **4.f.37. Society for Sedimentary Geology (SEPM)**

Riccardi reported. SEPM held its Annual Meeting in Houston, with AAPG in March. Three short courses were held and four field trips were also organised. Two SEPM Research Conferences were sponsored. SEPM continued publishing the *Journal of Sedimentary Petrology (JSR)* and *PALAIOS*. Both journals have web pages and current issues were available to SEPM members during 2002 and will be online soon. SEPM is also working in founding a geoscience online journal aggregate, starting in 2004. SEPM has reprinted several Special Publications on CD-ROM and printed two new ones. SEPM formally accepted the new Central European Section.

### **5. REPORTS ON COOPERATIVE ENTERPRISES**

#### **5.a IUGS/UNESCO: IGCP**

Eder, as IGCP's Executive Secretary, reported. IGCP is in excellent condition but the return of the US into UNESCO in 2004 may be financially disadvantageous to IGCP. A record 27 project applications were received in 2002 and were assessed by the Scientific Board. 14 projects were approved and 13 set up (two merged). The projects range from fundamental to applied science. 37 projects will be funded this year. five projects are on extended term, a period often used to develop new projects.

IGCP is being evaluated, following UNESCO's and IUGS' rules. five geoscientists have been selected to support an external evaluation which will be finished in June/July. This support team met with UNESCO during the Scientific Board meeting. UNESCO gave some financial support to persons attending the meeting.

UNESCO/IUGS declared that groundwater is important to IGCP. It is still pending as to whether a separate 5<sup>th</sup> working group will be established or whether the existing four can be adapted.

The future of IGCP is good. A mid-term strategy for 2004-2005 has been prepared for UNESCO, highlighting the role of IGCP. Eder quoted from the draft work plan "*As UNESCO is the only UN agency dealing with geological and geophysical research and training activities, it is in a privileged position to include Earth science activities into its recognised goal to treat the Earth's environment as a single system that must be observed globally – not least as a contribution to the organisation's strategic objectives in improving human security through better management of the environment. The International Geoscience Programme (IGCP) remains UNESCO's major instrument for comparative research, elaboration and dissemination of data in the Earth sciences, run in close cooperation with the International Union of Geological Sciences (IUGS). More than 330 projects, involving several thousands of scientist from all over the world, have contributed to the 'real world' problems related to hydro-geology, global geodynamic processes and ecosystems, biogeography, medical geology and natural hazards, modelling and forecasting of environmental and climate change, as well as the assessment of natural resources.*"

The political importance is highlighted in UNESCO's work plan; IGCP builds platforms across political boundaries for dialogue.

IGCP, which ensures quality through annual project evaluation, is becoming more applied, although fundamental research is considered as 'not yet applied' geoscience. IGCP will offer its expertise to other sectors, such as fossil groundwater. Education and popularisation are also important, through museums, in teaching respect for the landscape. IUGG and IGU are anticipated to play a larger role in IGCP in the future.

The budget is uncertain for 2004-2005 as the impact of the USA returning to UNESCO is unknown. In the worst-case-scenario, USA's return will result in some members reducing contributions, so no net budget increase will occur. Brett, as Past-President and ICSU Executive Board member wrote a letter to UNESCO' Director General, stating that IGCP would suffer if funding was not maintained. Responsible persons in UNESCO accept this. However, the probability of having a realistic financial budget is high. Negotiations suggest that the budget of the Earth Sciences Division will rise by US \$ 200,000, a slight increase. The increase will go to water and related ecosystems. Thus the Earth Science Division is in good shape, due to the Water Division, which is very willing to contribute to projects.

De Mulder thanked Eder for his report and commented that it was excellent that IGCP was healthy.

Janoschek said relations between IUGS and UNESCO could not be better. The 2002 budget was:

US \$ 76,000	– from UNESCO
75,000	– from USA
20,000	– from IUGS
<b>171,000</b>	<b>– total</b>
94,000	– UNESCO, for decentralized projects.

All projects have been paid except N° 459, which is not running.

IUGS pays projects at the start of the year and recoups this when the money from UNESCO arrives. The information required from leaders has been simplified. In new contracts, projects must submit at least one paper to *Episodes* – giving c. 10 articles per year.

Due to the problem of the USA rejoining UNESCO, a letter will be sent to the National Committees and IGCP Committees stating the problem. Attached, will be a draft of a letter which they should send to their UNESCO representatives. Thus diplomats will be informed about the situation in advance, when it arises in discussions.

Plant asked whether 'water' included 'water quality'. Many hydrological groups ignore this aspect. Contracts concerning water should have a control that the World Health Organisation checklist is followed. Janoschek said that if groundwater is the 5<sup>th</sup> group there will be a water expert on the project evaluation, who can ensure this.

Boriani asked if space was needed at IGC for new IGCP projects. Eder suggested having a half-day IGCP open session, which should cover their needs. Boriani agreed.

De Mulder proposed to the EC that IGCP be expanded, to include 'groundwater'. **All agreed** that expansion was good.

### **5.b IUGS-UNESCO Geological Application of Remote Sensing (GARS)**

De Mulder, as rapporteur, said that the new chairman is Stuart Marsh (BGS). Further, GARS is involved with Integrated Global Observing Strategy (IGOS).

Eder noted that GARS is a 20 year old outgrowth of IGCP. The trend now in surveys and universities is to use space technologies. GARS has selected geohazards as its speciality within IGOS. The main activity for 2002-2003 is the preparation of the IGOS Geohazard Theme Proposal; this will influence the selection of space-born sensors to be launched in the years to come. It will also enhance, optimize

and strengthen the terrestrial networks for geohazard observation. The IGOS Theme Study is an opportunity for geoscientists to cooperate with the space agencies on the study of natural hazards.

The UNESCO funds for GARS will assist scientists from developing countries to participate in the IGOS Geohazard Theme team work. ITC of Netherlands is handling the logistic arrangements for the scientific participation in the IGOS network by scientists from developing countries. Exceptionally, the UNESCO contribution of US \$ 14,000 was paid directly to ITC and not to IUGS. The IUGS contribution of US \$ 7,000 for 2002 was paid to the GARS treasurer, who is transferring the funds to ITC. Eder added that the impact of GARS will increase through its inclusion within IGOS and the visibility of GARS/IUGS will increase.

Cadet said that last year the EC discussed reviewing GARS. Is it now necessary? Eder replied that a new approach is developing under the new leadership; a review now would be premature.

De Mulder thanked GARS for the report and expressed confidence in the new leadership.

### **5.c IUGS-UNESCO Mineral Resources Sustainability Program (MRSP - ex DMP)**

De Mulder said MRSP is a UNESCO/IUGS project, under Kathleen Johnson (USA), doing good work in the developing world. Recently, the EC has been concerned about poor communications. At Lower Hutt, the EC urged MRSP to be more dynamic and asked that they:

1. include environmental and sustainability aspects into the programme.
2. develop a more international profile.
3. improve communication with IUGS/UNESCO

Eight months later a new concept and name was received. This looks exciting, with emphasis on environmental aspects and sustainability. The Committee is updated, but communication is no better. The report arrived on February 12.

Eder said that UNESCO is happy with MRSP's re-orientation; it is a positive step and takes sustainable development into account. Details of the MRSP Steering Committee can be finalised in a meeting later this year. This meeting must propose concrete actions to be undertaken. Due to expenditure for the WSSD in Johannesburg, UNESCO cannot contribute to MRSP in 2003. UNESCO hopes to resume support in 2004. Berger commented that MRSP is also asking for US \$ 2,000 held back from last year

Brett asked if they had a workshop last year and what is planned for 2003. Berger said they had a workshop in Namibia. De Mulder said MRSP is using 2003 to develop new programmes, to start in 2004. Eder said UNESCO is unhappy to give funds if no actions are detailed.

Brett said MRSP is, in principle, good; world experts help local geologists to learn the characteristics of different types of mineral deposits. Maybe it has been in IUGS for too long. Janoschek noted that MRSP is not regulated by IUGS' bye-laws; geological surveys nominate new people. Brett said that all members are from surveys, which provide the money. The survey heads must be told of the problems and asked to change the personnel in MRSP. De Mulder said that Deborah Shields was in MRSP in the last phase – but is not in the future programme and someone like this is needed to address sustainability issues.

### **5.d Geoparks Initiative**

Eder reported that geological sites and features were to be used to promote Earth sciences/tourism. The Geosites programme was started to protect and utilise outstanding sites. World Heritage Sites has

taken on the major sites – so the Earth Science Division has been told not to develop Geoparks. However, educationally and environmentally slanted national initiatives could be helped. Geoparks can give guidelines on how an international network of Geoparks should be founded. The existing 15 European Geoparks were asked to act as a base for Europe. China will be the Pacific and Asian Region centre. Ramos (Argentina) is the focus for Latin/Central America and contacts have been made in Africa. Consequently, the visibility of the parks will increase. A new IUGS leader of the Geosites Task Group could be the IUGS representative in this.

De Mulder thanked Eder for his comments. Cadet said he was impressed by the two Geoparks he had visited. Lots of information given, with museums and ongoing research activities. There are two types of parks in Europe – the European Geoparks and the national Geoparks. Eder said national Geoparks should be on the European board. De Mulder proposed that the two types of parks should be brought together. **All agreed.**

## **6. INTERNATIONAL GEOLOGICAL CONGRESS (IGC)**

### **6.a 32<sup>nd</sup> IGC – Florence**

Boriani reported on the 32<sup>nd</sup> IGC. The Congress title is *“From the Mediterranean Area towards a Global Geological Renaissance. Geology, Natural Hazards and Cultural Heritage”*. The Congress will be held in the Fortzo da Basso; the Palazzo di Congressi will be available if needed. The objective is to give a positive image of the geosciences in society. This is being done partly through a consortium of the 31 Mediterranean countries which will present a series of mostly N-S oriented geological profiles.

The congress and related events run from August 15 to September 8. From August 20 to 28, 2004, scientific talks and workshops will be held. Field trips will be mostly run in the pre- and post-congress periods. There will be: seven Plenary Lectures; 12 Special Symposia (invited speakers); 40 Topical and 24 General Symposia. The plenary lectures will be for press conferences and releases. Titles so far are Hazard mitigation; Geotourism; Cultural issues in geology; Wise uses of resources. More ideas are needed. Workshops – 25 % pre-conference, 50 % syn-conference and 25 % post-conference. Short courses – 55 % pre-, 20 % syn- and 25 % post-conference. C. 90 field trips. Posters will run all day. 10,000 square metres will be available for exhibitors. There will be a kindergarten and many social activities. 50,000 1<sup>st</sup> circulars were distributed; 2,860 responses were received. The second circular will be sent out in April. GEOHOST received €200,000 from the EC and €70,000 from UNESCO; the Hutchison Fund will be important as well. c. 1,000 people will be subsidised – the registration is € 430. The total cost will be c. €four million – with an income of €two million. The shortfall will have to be taken up by sponsorship and government grants.

De Mulder thanked Boriani for the presentation and complimented the IGC organisers for a superb effort.

### **6.b 33<sup>rd</sup> IGC – Norway or Egypt?**

De Mulder said the proposed venues were Norway and Egypt. Norway presented a plan at the Steering Committee in October 2002. De Mulder met with the Egyptian National Committee in January. More will be heard of their application at the next EC meeting, in Oslo. The Egyptians were invited to the Florence meeting, but the leader of the Egyptian National Committee had been ill. They have prepared a CD-rom outlining the set-up which they will send to Cordani. They will soon have a website.

### **6.c Long term plans and rotation**

De Mulder said that Frick’s plan for rotating the IGC was discussed by the Steering Committee, which was unhappy with the proposed rigid frame. IGC must go for a good congress as a priority before

following any such plan. Thus, the Steering Committee did not approve of the plan. Boriani said that this issue should be raised at the Florence IGC Council meeting. Rotation could be accepted under quite rigid conditions.

Brett said it was strange to rotate from one continent to another; Europe, having many countries, should run the congress more often. Also it is rich and can afford to do it. Boriani felt that the IGC must try for a wide geographic spread. Plant suggested a partner relationship – the congress is in a developing country, but has a developed country in support. She warned against hard and fast rules – the situation should not be prejudged. Janoschek commented that it cannot be; the Council decides; there is much politics behind the scenes. De Mulder summarised the discussion by saying that no conclusion had been reached. **All agreed.**

#### **6.d Merger of IUGS and IGC**

Sato said Task Group 9 was set up in Catania. It presented results to the Executive Committee meeting in Lower Hutt, where the general line was accepted, but the details left open. Janoschek and Sato met in 2002, in Japan, to update the document. This version was sent to the EC for comments in July. Quick responses were received and the final version made on July 31. This was sent to Cordani, who distributed it to the Steering Committee, which preferred the word integration to merger.

The proposals discussed were 1. The numbering of the congresses - these will NOT be reset to number one; 2. The autonomy of IGC - this was assured; 3. The merger of the councils of IUGS and IGC; 4. The establishment of a Congress Committee. Within the new committee, the status of observers is undecided – whether professional organisers should have a vote; 5. The abolishment of the General Assembly. After the Steering Committee meeting, the November 29 version of the minutes was made and posted on the homepage. According to the Procedure and Deadline section in this, Step five has been reached – new statutes are required. As the letter accompanying the document shows, differences exist between IUGS' proposals and IGC' suggestions. Sato said that concerning the procedure and deadlines, Step five - has been started; Step six - the draft is not finished; Step seven - adoption is not possible; Step eight - this should be done in May. Sato added that he would visit Vienna to finish this off. A Joint New Statutes Committee should be established; so far, only two EC members (Sato and Janoschek) are directly involved. The draft statutes must be taken to the IGC Steering Committee.

Janoschek said that at the Steering Committee meeting, both IUGS and IGC representatives wanted to merge the Councils; only two of the responding countries were negative about this. The problem is the Statutes – great care must be taken not to offend IGC. A difficulty is that on the IGC Council, each country has the same number of votes as their IUGS membership category, whilst on the IUGS Council, each active country has only one vote. Another problem was the position of the new Congress Committee in the merge IGC-IUGS structure. IUGS feels this should be placed under the Executive Committee whilst the IGC want to place it directly under the Council, at the same level as the Executive Committee. Riccardi said that the Congress Committee needs special statutes, allowing some independence. The Steering Committee must retain independence. Cadet said that the French National Committee had said yes to the three comments in the letter, but insists that the revision of the Statutes should not be IUGS biased. There were still major disagreements. If the merger fails, it will look bad to the National Committees. Maybe it will take several congresses to get a full merger. Plant said short term compromises were needed; a full merger will come in the end. De Mulder noted that the merger is very important to IUGS, but great care must be taken not to speed-up this process too fast. De Mulder proposed that Sato should proceed as he had outlined. **All agreed.**

Riccardi asked about the status of professional congress organisers. De Mulder said this was a matter for the Council to decide on, as IUGS and IGC disagreed on it. Janoschek said that the idea was to ask

the big affiliated organisations, who organise a major congress every year, for their help. Brett agreed; IGC reinvents the wheel every four years.

Brambati's written contribution was read out. 1) IUGS and IGC must be at the same level. 2) The Congress Committee must include the President and Secretary General of the incoming IGC. They take the risk and must have the right to vote, whilst keeping their full autonomy. 3) The word merger must be left out – integration was approved in Florence. 4) He would suggest the wording “*the IGC is recognized by IUGS and by the whole geological community as the quadrennial scientific convention*” rather than “*is the quadrennial scientific convention of the IUGS*”. We need to preserve the prestige of IGC (125 years old) and its autonomy. For the chair of the Congress Committee a rotation system could be used.

## **7. INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)**

### **7.a Relations with ICSU**

Brett reported. The ICSU Executive Board now has Union representatives stating the Union's views. For the mostly bureaucratic General Assembly in Rio de Janeiro (2002), Brett, de Mulder and Gupta were present. IUGS nominated Gupta for Treasurer; this was not accepted, as one of the candidates for the position of President was Indian as well. Many committees have no Earth sciences representative; ICSU did not take up the names suggested.

De Mulder asked if this will improve. Brett confirmed it will. There is a meeting of the Unions' Secretaries General every year and ICSU talks to the Unions more. The interdisciplinary committees should have representatives of all relevant Unions.

Janoschek commented that, when in Paris, he visits ICSU to exchange information and establish relationships. He has been invited to give a presentation on IGCP in 2004; Rosswall (ICSU Executive Director) asked if IUGS could provide specific aspects for projects. The main problem with ICSU was that correspondence requiring an answer often came too late and to different persons, with deadlines a short time away. There is often not enough time to distribute information and get feedback. Brett said that he had spoken to Rosswall about this – he needs examples from Janoschek.

### **7.b Other proposed programs with ICSU**

No comments.

### **7.c Scientific Committee on the Lithosphere (SCL-ILP)**

De Mulder said SCL-ILP is an IUGG/IUGS enterprise. Scientifically it is good, but since Green became Past-President three years ago, there has been little contact. De Mulder said he met Taira (ILP President) in 2001, but never heard from him again. Attempts were made to contact Shedlock (Secretary General). IUGS is asked for names for positions, but these are never accepted and IUGS is not properly informed why. The Bureau is disappointed; Gupta says IUGG is similarly disappointed. The ILP Annual Report was received late. This situation cannot be allowed to continue; IUGS pays US \$ 20,000 annually – almost automatically. Brett asked if the lack is of a report or of work. Janoschek replied that it was lack of communication – ILP is very active. Bobrowsky commented that the EC gives hard rules to the Commissions, but throws money at ILP. Is IUGS credited? Many ILP Projects do not know that ILP is an IUGS/IUGG enterprise. Bobrowsky suggested a warning is sent to ILP.

Riccardi (rapporteur) said that several changes had occurred in ILP's Bureau: President Taira and Secretary General Shedlock changed positions and agencies; three members completed their terms; two new members were named. Two remain to be named. Gupta was awarded lifetime membership.

There are five co-ordinating committees: Cooperative Earth Sciences in the Andes and the Himalayas: EUROPROBE: Continental Drilling: ICESA: COILS: LEGENDS. Projects concluded in 2002 are Earthquake recurrence through time: Mantle Plumes, Hot spots, and Geodynamics of Continental Rifting and Break-up: Earthquakes and Megacities: Origin of Sedimentary Basins: Global Strain Rate Map: Hydrology of the Oceanic Lithosphere. Projects continuing are Global Impact Studies: Process and Geodynamics in the Formation and Exhumation of Ultrahigh-Pressure Metamorphic Terrains: Global Earthquake Potential: Methane Hydrates: Global Distribution and Geological Processes. The ILP Bureau will meet at the IUGG Sapporo meeting.

The SCL/ILP Report indicates that administrative changes have taken place and some are pending. The report does not include information on project achievements. There is no information on the activities of the co-ordinating committees. Finally, the 2002 Financial Statement is missing. The goals of SCL/ILP deserve support but priorities in relation to IUGS plans and commitments need to be reassessed and co-ordinated with that of IUGG. De Mulder proposed to cut down the funding level for ILP for this year. **All agreed.**

Kerridge said that IUGG had come to similar conclusions and will cut ILP's funding.

Riccardi thought that ILP lacks direction. Cadet said ILP does good science. Janoschek suggested that next time an EC member meets Shedlock, they outline carefully how IUGS feels and warn of the consequences of not improving the situation. De Mulder said that the Vision Document proposed a closer relationship with ILP, so if the situation improves, IUGS might raise funding to the previous level.

#### **7.d ICSU Committees**

Riccardi asked how many geologists are on the 17 interdisciplinary committees. Brett replied probably none. Often ICSU does not say when meetings are and no expenses are paid by ICSU for Union representatives. There is little information. The proposed ICSU newsletter never materialised. Unions are often not contacted about positions, but the situation is improving. De Mulder proposed that the Bureau to come up with new names. **All agreed.**

#### **7.e ICSU Grant Programme**

Brett said that many Unions complain that they get no ICSU grants. Most money goes to the Scientific Committees, which make better proposals since their existence depends on ICSU grants.

Janoschek said that an application had been sent in by Geoinicators (Category 1 grant; up to US \$ 100,000). Again, the rules for submission were sent out late. In the last two years, IUGS bodies received US \$ 50,000 in ICSU grants; IUGS pays US \$ 9,000 membership fee. Overall five Category 1 projects and 8 Category 2 projects were funded in 2002

Brett noted that much of ICSU's funds come direct from the USA. When the USA rejoins UNESCO, this may be lost. ICSU's position is even more precarious than IGCP's with respect to the grants programme.

#### **7.f Relations with other Unions**

De Mulder said that relations with IGU and IUGG were excellent. IGU and IUGS will have a joint Bureau meeting in Rome. Further, both Unions have a representative here at the meeting in Namibia. Relations with the International Union of Soil Sciences are good, but a bit more distant.

Kerridge gave a presentation about IUGG. It formed in 1919 and comprises seven semi-autonomous Associations (Seismology and Physics of the Earth's Interior; Vulcanology and Chemistry of the Earth's Interior; Hydrology; Oceans; Meteorology and Atmospheric; Geodesy Geomagnetism and Aeromagnetism). IUGG is seeking to define a role in the 21<sup>st</sup> Century, in the face of competition from AGU and EGS. There are Inter-Association bodies, such as; Geophysical Risk and Sustainability; Study of the Earth's Deep Interior (SEDI); Mathematical Geophysics; Electric and Magnetic Studies of Earthquakes and Volcanoes. At the last IUGG EC meeting, it was proposed that ILP funding should be cut. This was not done since ILP does good work. But at the next EC meeting it may be cut.

IUGG produces journals, practical guidelines, sets standards and provides a series of services (Mean sea-level service, International Earth rotation service, International service for geomagnetic indices, International GPS service). An Annual Directory is also published. The 2003 General Assembly will be in Sapporo, Japan "State of the Planet: Frontiers and Challenges", similar to IGC. There is talk of an International Geophysical Year – 'IGY+50' linking with IYPE. In conclusion, IUGG and IUGS have similar aims and should avoid overlapping. Representatives should attend at least at the first EC meeting of each term of office. Interaction is also possible at a lower level – with IYPE and IGC+50, and with Geoindicators.

De Mulder thanked Kerridge for his presentation and hoped relations would continue to improve. Plant added that there was potential for a joint meeting on climate change and global tectonics. Berger said that many IUGG people had made an input into Geoindicators.

## **IUGS POLICY AND STRATEGIC MATTERS**

### **8.a IUGS Statutes**

Refsdal presented a list of minor corrections to the statutes. Due to technical difficulties, these were not discussed, but will be submitted electronically to the EC for approval.

### **8.b IUGS Strategic Action Plan**

#### **8.b.1 Task Groups Progress**

Nothing specific was said under this item.

#### **8.b.2 Proposal policy and Joint Programmes**

Further to the discussion on the CRD (see 4.b.2) de Mulder reiterated the situation about projects: Top-down – from the CRD or IYPE Science Programme Committee: Bottom-up – from individuals or from IUGS bodies. Both types of projects may apply for funding through the IUGS Grant Programme, underpinned by the work of the Task Group on Proposal Policy. In addition, there are projects under the IGCP and the ICSU umbrella.

Borioni said that proposals come from individuals; there is no difference between bottom-up and top-down. Janoschek replied that the CRD gives general fields (top-down) and individuals made detailed proposals within that framework (bottom-up). Plant and Bobrowsky agreed with this concept. Brett proposed a system where anyone can submit a project on any topic but those fitting the CRD's framework were more likely to be supported. De Mulder suggested that one could make a short-cut and ask specialists to propose projects in their field which fit in with the CRD proposals. Plant said that asking a group to put up a proposal is undemocratic.

Borioni said that at the last IGC, affiliated organisations had been offered a call for projects. Bobrowsky agreed; affiliated organisations want to get involved in research. Brett warned that IUGS must be careful that rich ones do not get money from IUGS – but it is not possible to exclude rich ones – nor would we want to.

Plant suggested asking for 'Expressions of Interest' - this is a title and a couple of paragraphs. This shows if there is interest in the project idea and it would help IUGS to combine groups with a common theme. De Mulder summarised: the CRD puts forward general project areas and IUGS calls for expressions of interest. **All agreed.**

De Mulder said that the Expressions could be sent to the Secretary General, to distribute to the CRD, who will choose one or more, together with suitable experts. Brett said that the time of application is given as October in the Task Group report. De Mulder said that if the 'Expression of Interest' system is used, then a time for these to be received must be stated. Janoschek added that it takes time to distribute the CRD's ideas, to collect the expressions of interest, to distribute them to the EC, to sort out and select the results and then for the expressions to be sent out and enlarged, for the proposed October deadline. Brett went back to the original Task Group on Proposal Policy document and made four points.

- 1) The original document states that affiliated organisations can apply. Should really be restricted to Commissions etc – but they get extra 'marks' if affiliated organisations are involved. Projects would need a letter of endorsement from the affiliated organisations concerned. However, the affiliated organisations should be informed of the possibilities.
- 2) Expression of interest – one page; final proposal – eight pages (excluding appendices for CVs etc)
- 3) Budget – maximum of US \$ 50,000.
- 4) Insist on electronic submission.

**All agreed** to these proposals.

The project output was agreed to be part of the Project Proposal – so something must be in the guidelines. There were two deliverables in general terms – an academic one and a popular, outreach one.

Plant asked for clarification of the relationship between IYPE and CRD. De Mulder replied that there was to be no direct link between them. Schalke said that IYPE wants eight to 10 projects funded with US \$ 500,000, through sponsors; a much bigger sum than discussed here.

Sato wondered how much money was available. Eder said the CRD minutes showed they planned for US \$ 15,000 per project. De Mulder said that for the Proposal Policy, US \$ 50,000 was set aside. How much each project got and how long it ran need to be decided. Cadet commented that money is needed to bring people together to start up a project. De Mulder agreed; c. US \$ 5,000 could be allocated for this, with up to US \$ 45,000 for the proposal altogether. Brett added that this should be staged over several years. Projects must be reviewed during their lifetime. Cadet warned that, with two or three projects, US \$ 50,000 per year is not much. If there are too many applicants, people will not bother, because the chance of success is so low. Janoschek said that project writers need a frame; the project would change as the available money changed.

### *Joint Programmes*

Cadet gave a presentation on options for implementation through the Joint Programmes, the field of Task Group 3 of the Strategic Action Plan.

#### 1. Aims and Methods

- a. Identification of potential fields for new programmes or joint initiatives, associating IUGS and prospective new partners.
- b. Taking account of current IUGS activities (CRD, IYPE, IGCP)

c. Following the thematic priorities selected by the EC, organisation of brainstorming workshop(s) to identify: Suitable research niches: Relevant partners: Budgets.

## II. Some priority areas

Selected after broad discussions

*a. Environment:* **1.** Palaeoclimates: active research domain with numerous programmes. As far as IUGS is concerned, this theme seems to be covered by the joint programme “CHANGES”. **2.** Natural hazards: catastrophes, human society and recovery. This theme is covered by the CRD (Paris 03.02.07 meeting) proposed priority action “The Geological and Human Record of Natural Catastrophes” potentially associating IUGS + INQUA + IUGG? As far as seismic hazards are concerned, one of the main problems lies in understanding seismic fault behaviour and the role of fluids. IUGS action will be linked to IUGG and ILP with the aim of associating marine (cf IODP) and on-land studies to obtain a better approach of seismic activity forecasting. Landslides are already covered by the ICL.

*b. Palaeontology, biogeosciences etc.:* **1.** Origin of Life and Exobiology: a field of major interest for Earth sciences; biology and astronomy-astrophysics have numerous organised programmes (cf MARS Sampling Project, etc). Our role could be to involve the geology-palaeontology community further by launching federative operation. This could be a good opportunity to strengthen our links with IPA.

*c. Resources:* **1.** Energy for the future: the new frontier is gas hydrates. Either in continental margins or in permafrost areas, methane hydrates are of a very high interest for three reasons:- energy - as a potential resource; environment - with the climatic effect of large gas releases due to their destabilization (cf the clathrate gun hypothesis); natural hazards – with major effects on continental margin stability. The scientific community is starting to get organised around these themes and some programmes already exist (cf the COSTA project on continental slope stability), although there is probably room for a major interdisciplinary programme associating academics (marine geologists, geochemists) and oil companies. **2.** Water – Geology, (ground water) and People: There is a general consensus about the importance of water in every field (availability, pollution etc.). Many organisations (UNESCO, UN, FAO, IAH, CGMW etc) are involved at different levels in several programmes (IHP, WWAP, IGRAC etc). As far as IUGS could be concerned, the challenge consists in finding a proper niche. Preliminary discussions with Bureau members, UNESCO’s Water Division, IAH specialists and UN WWAP representatives lead to a proposal focussing on groundwater with the following strategy: - to expand the IGCP, with a fifth working group particularly aimed at ground water researches and co-financed by UNESCO’s Water Division; - to apply for a major ICSU grant on groundwater in close cooperation with IAH; - to include groundwater into the IYPE research proposals. The inclusion of a precise research team might be done by workshops funded by IUGS. Proposed participants: Emilio Custoido (Spain), Ghislain de Marsily (France), Andrew Skinner (Great Britain), Wilhelm Struckmeier (Germany) and Alicia Aureli (UNESCO).

*d. Miscellaneous:* **1.** Tectonics, sedimentary geology: our priority should be to reactivate the relevant IUGS Commissions before launching any action. **2.** Stratigraphy: we could contact ICS to support them in the setting up of a programme based on the CHRONOS initiative.

Cadet said that of the proposals put forward by the Joint Proposal Task Group, the water option will be followed this year. Three options or avenues: **1.** 5<sup>th</sup> leg of IGCP – this will be decided in May this year. **2.** Apply for a major ICSU grant. **3.** Include ground water in IYPE.

De Mulder proposed that Cadet should write an application for an ICSU grant, with Plant. **All agreed.**

### **8.c International Year of Planet Earth (IYPE)**

Schalke said a flier has been produced, describing IYPE, which started planning in Feb/March 2002. Since then, the organisational structure has been created. The management team includes Eder, de Mulder, Derbyshire and Schalke (Team leader).

Phase II, funded by IUGS and UNESCO, has US \$ 40,000 (US \$ 15,000 from UNESCO). IYPE is looking for sponsors. Shell promised US \$ 20,000 for, the Preparation Phase. USGS and AGI both support IYPE morally. Material prepared by AGI, including its Science week (CDs) material, can be used free of charge. IYPE got its logo from Germany's 'Jahr der Erde'. The brochure will explain the logo. China will *submit* the proposal for an international year to the UN. IYPE will be *announced* during IGC but will run in 2005-2007. Horst Rademacher, a professional writer and a geophysicist/science editor of Frankfurter Allgemeine, will join IYPE to help it reach laymen.

De Mulder meets Schalke regularly, so the Bureau is informed. Quarterly progress reports are written and will be sent to the EC.

The SPC (Science Programme Committee) met in Paris and has set boundary conditions earlier, including global, holistic, human dimension, developing countries and outreach potential.

The anticipated budget for the Year (2005-2007) includes US \$ 5 million for outreach and US \$ 15 million for the SPC. Shell International proposes to be the first sponsor. Sponsors will be sought from all exploration and production companies. Namdeb were interested and will get funds from de Beers. The World Bank's Energy Sector says that IYPE is eligible for funds.

Sponsors must get something from IYPE. Putting a logo on IYPE material is not enough. Shell's Public Relations officer will join the Outreach Committee. The science will be IUGS' part, but Shell is keen on the outreach. The 'Geology and Cars' and 'Geology and Soap' displays in the Namibian Geological Survey's museum, showing the role of geology in producing these articles, are excellent for public and media interest. A brochure will be produced soon and a Website and Newsletter are planned. It would be much better if IGU and IUGG are co-partners. Efforts in this direction will start directly after the EC meeting.

De Mulder thanked Schalke for both the report and for work done on behalf of IUGS. All the relevant Chinese ministries support IYPE, but the government will only promote IYPE if other countries support it; the Netherlands has agreed to support China. However, IYPE needs EC support which must push on with the science programme. Schalke added that the sponsors have said that if they do not see a serious financial commitment from IUGS and UNESCO, they will withdraw.

Several EC members stated that the brochure was critical; without it they were unable to effectively approach their governments for support. Eder said that Germany will support IYPE. If the UN adopts IYPE, UNESCO will organise the events. Colleagues in ecology and water sections want to push IYPE through; they will be partners, giving a holistic approach. Eder added that UNESCO will give US \$ 20,000 in 2003.

Sato asked if CCOP or EuroGeoSurveys were involved. Schalke replied that if he gets written support from China, they will become involved.

Cadet said IYPE could succeed in High Schools – the poster from the International Year of Mankind, with its games and website, were popular. France will give support. The National Committees must become active now, although they know that IYPE is developing. De Mulder said that the Committees had received the flier and had been invited to participate. EC members must approach their Minister of Foreign Affairs and UN representatives and report back to Schalke.

Schalke said action lists will now be sent to the Support Group (Sato, Bobrowsky, Gupta and Janoschek and non-IUGS people). De Mulder stressed that the Group must be given a clear idea of its role.

De Mulder said the draft report of the SPC meeting (led by Derbyshire, with IUGG and IGU representatives) is available. The projects list has several major headings each with more specialised projects. A group within the SPC worked to define the 25 project headings. When finalised, the IUGS/UNESCO must decide which eight get priority.

Boriani commented that the 25 topics are all environmental geology. Other academics must feel involved, not just the Quaternary and younger workers. Schalke replied that IYPE must be environmentally biased to get funds. De Mulder said that attention will also be given fundamental projects.

De Mulder summarized; it is anticipated that the proposals and their one page summaries will be ready in one month. The EC will select priorities. UNESCO will be involved in this process.

Janoschek said he needs the 25 documents will be distributed to the EC by the end of March. The EC should vote on the topics together with the SPC members. Finally, the IYPE Management team will determine the top eight projects taking into account the wishes by UNESCO and other full partners. The process will hopefully be finished by the end of June, at which time Schalke can incorporate them into the brochure, which will already have been started. **All agreed**

Bobrowsky said that some one page summaries were very poor. The EC is spending perhaps US \$ 50 million - it is critical that the right decision is made. Berger said that Derbyshire would improve them.

Boriani noted that the second IGC circular was about to be distributed – 50,000 copies. This needs something on IYPE. Schalke agreed to write a one page summary.

Schalke said there was enough money for this year. For each phase, there must be both IUGS and UNESCO contributions. For 2003, including the second phase of IYPE, US \$ 40,000 is needed from IUGS.

Riccardi asked what language the flier would be in. Schalke replied English only, but the brochure would have two pages for National Committees to write something in their own language in; the National Committees must do this. De Mulder added that a country could ‘adopt’ a science topic and then lead the work for that topic.

De Mulder thanked Schalke for the report and for his work for IYPE.

#### **8.d Road Map-Vision Document**

De Mulder said that this would be printed as a booklet. Plant had agreed to help on this. Janoschek noted that the Committee should thank Gupta for his work on the Vision Document.

### **9 EXTERNAL RELATIONS**

#### **9.a UNESCO**

De Mulder thanked Eder for attending; the verbal reports and discussions are more productive than written reports. Eder thanked de Mulder, and said there is a mutual interest between IUGS and UNESCO.

## 9.b EuroGeoSurveys

De Mulder noted that EuroGeoSurveys has 18 members, not all European. De Mulder met the Secretary General and discussed future relationships; a MoU is needed. IUGS thought EuroGeoSurveys to be a potential Associate, but EuroGeoSurveys think affiliated organisation status is more probable.

Cadet asked what would the advantage be of an affiliated organisation status? De Mulder replied that affiliation would give them access to ICSU. IUGS wants as many suitable affiliated organisations as possible, to broaden IUGS' base. Riccardi said that surveys are developing regional networks, with a global survey network in the end. Brett questioned whether an affiliated organisation can be a national body. Riccardi read the Statutes; affiliated organisations should be 'non-governmental' (politically independent).

De Mulder proposed that EuroGeoSurveys be invited to become an affiliated organisation, if they are non-governmental. **All agreed.**

## 9.c CCOP

De Mulder said that 11 surveys in SE Asia (including Japan and China) form CCOP, with which IUGS has a MoU. Berger noted that the MoU says they will become an Associate. De Mulder replied that CCOP has interest in joint programmes, but CCOP does not anticipate paying an annual contribution to IUGS. Affiliation would then be the best option. Sato concurred

Brett commented that IUGS must ensure that organisations stay affiliated. De Mulder replied that Bobrowsky is the link between the EC/IUGS and affiliated organisations. They get access to ICSU through IUGS and can be involved in IYPE. Progress is under way to get them more involved in IUGS activities. Plant asked if affiliated organisations have to use the IUGS logo. De Mulder replied that this is not necessarily the case.

## 9.d Other Organisations

Bobrowsky said he will inform affiliated organisations that they can take a page in *Episodes*, to outline their work.

There followed a discussion on the advantages of being an affiliated organisation. The advantages are – nominating persons for IGCP board positions, accessing ICSU, a more direct access to UNESCO, making proposals for sessions at IGC. De Mulder said he would prepare a document for the Electronic Bulletin. Bobrowsky asked how often an affiliated organisation approached ICSU through IUGS. De Mulder replied, never.

## 10. BUDGET

Janoschek said that, in the coming year, the **INCOME** might be lower – at c. US \$ 253,000. The US IGCP contribution, if paid or not, will have a big budgetary impact.

No money will be paid to MRSP this year by UNESCO and GARS (IGOS) is paid directly by UNESCO now; thus IUGS will get no income for these projects.

Two fund reserves are needed:

- a. In case *Episodes* is no longer supported by China. There has been absolutely no sign of this, but it is prudence to be ready.

- b. The US \$ 15,000 left over from the 2002 Proposal Policy/Grant Programme will be added to the Hutchison Fund.

The EC **accepted** the income estimate.

For **EXPENDITURE**, Janoschek noted that the total IGCP budget has US \$ 90,000 for decentralised projects – paid by UNESCO directly from its regional offices.

The EC then went through the proposed budget document.

Commissions – All proposed funding **accepted**. (COGEOENVIRONMENT – US \$ 10,000; CGI – US \$ 5,000; COMTEC – US \$ 5,161.57; CSP – US \$ 2,000; ICS – US \$ 35,000; INHIGEO – US \$ 4,000.) The money allocated to COMTEC is that sent to IUGS by the now closed-down IASTG Affiliate.

Task Groups - All proposed funding **accepted** (TG Geochemical Baselines – US \$ 1,500; TG Fossil Fuels – US \$ 3,500).

Initiative - All proposed funding **accepted** (Geoinicators – US \$ 5,000; Medical Geology – US \$ 10,000).

Bobrowsky commented that if bodies use their IUGS money to come to the EC meetings, then the money is not used for the projects. The EC must give advice or guidelines (not rules) on how the money should be spent. Brett said that everyone should be invited – but it must be clear that travel money should not come from IUGS sourced funds.

Proposed Committee funding **accepted** (Publications – US \$ 12,500; ARC – US \$ 7,000; CRD – US \$ 1,500).

Proposed Grant Programme funding **accepted** (US \$ 50,000).

IYPE. The proposed sums of US \$ 40,000 is a combination of US \$ 15,000 left over from last years unused Grant Programme (Proposal Policy) fund and a further US \$ 25,000 for this year. Cadet said that the request from Schalke was very rather vague. De Mulder said he would request a detailed budget. He added that other contributors/sponsors will only give money if IUGS puts a substantial sum into the project. Plant said that there must be financial regularity in IYPE – it is a lot of money compared to what most of the IUGS bodies get. The money should be given conditional on the terms set out in the Action above. **All agreed**.

ICSU – Scientific Committee on the Lithosphere (SCL-ILP). Janoschek proposed giving half what was given last year, although SCL-ILP did not ask for *any* money. Brett said that ILP is a good programme. A draconian cut may seriously affect their programmes, initiating a downward spiral. Brett suggested US \$ 15,000. Cadet agreed; a common approach from IUGG would be appropriate. **All agreed** to US \$ 15,000.

Proposed funding for the Hutchison Fund **agreed** (US \$ 15,000).

Affiliated organisations. Janoschek reported that several have asked for funding.

IAGC – asked for US \$ 4,000, but they are a rich organisation and no sum allocated. **Agreed**.

IAGOD – asked for more than US \$ 2,000, but also rich. Receives \$ 1,000. **Agreed**.

IAMG – asked or more than US \$ 2,000, but also rich. Receives US \$ 1,000. **Agreed**.

IGEO – US \$ 5,000 for inviting people to their quadrennial meeting. **Agreed**.

AGID – US \$ 1,000. **Agreed**.

CGMW – US \$ 2,500. **Agreed**.

GSAfrica – US \$ 4,000. **Agreed**.

IFPS – US \$ 1,000. **Agreed.**  
ISRM – US \$ 1,000. **Agreed.**

Other Expenses.

Visibility Products Bobrowsky said he needs money for this. De Mulder suggested US \$ 10,000.

Bobrowsky agreed and said he would report to the Bureau before spending any of it. **All agreed.**  
Proposed funding for *Episodes* **accepted** (Contribution to China US \$ 23,000; reserves US \$ 15,000).  
Website. US \$ 1,500 is a very low amount for supporting a website. **All agreed.**

Janoschek then recapitulated on the inferred income (US \$ 480,500.00) and the proposed expenses (US \$ 578,661.57). A deficit of US \$ 98,161,57 results. De Mulder said that a deficit in establishing the budget has been usual but IUGS never actually goes into the 'red' for the year. Janoschek has been a prudent Treasurer/Acting Treasure for IUGS for the past three years. De Mulder thanked Janoschek very warmly for his efforts and for this year's report. **All agreed.**

Budget details are given in Appendix 2 of these minutes.

## **11 UPDATE**

### **11.a Annual Report**

Janoschek and de Mulder thanked Refsdal for a superb job in production of the first ever IUGS Annual Report. IUGS can now think about how the next could be improved. Rice noted that the reader would have learned nothing geologically related. The EC agreed that some geological highlights, such as Medical Geology and Geoinicators, could be included, but not in detail.

Plant said all the pictures came from Norway which was a bit restrictive. Rice replied that the production had been a bit of a rush job. Anyone with a suitable picture can send it to Rice for next years report.

De Mulder said the logos of the affiliated organisations should be printed by their description. Rice asked if these descriptions could be reduced. Bobrowsky said no; they are important and must be given proper space in the report.

### **11.b IUGS Directory**

Refsdal said this is updated on the website every week. Anne Liimaa-Dehls does a fine job at searching out email addresses.

### **11.c IUGS Logo**

De Mulder said that the logo chosen by electronic voting in 2002 conflicted conceptually with IUGG and so it was modified, making it a more 'shallow Earth'. IUGG is now happy, and so is the Bureau. Riccardi asked if there was a philosophical background to the logo; this could be published in *Episodes*. De Mulder said he would do this. Zhang Hongren said the new logo is in grey-scale rather than a line drawing; it takes more memory and does not reproduce so well.

### **11.d Brochure and Flier**

Refsdal said that the new flier needed minor corrections. 4,000 would be printed for the EGS-AGU-EUG Joint Assembly meeting in Nice.

De Mulder said that the brochure had been on the agenda for a long time and not been realised so far; it will be partly aimed at the non-scientific market. Refsdal said that she, Bobrowsky and Vodden would finish this in 2003.

### **11.e Visibility and Advertising**

De Mulder said that Task Group 5 had suggested several products. Bobrowsky said that promotion items cost money. IUGS will not make money on them, but might recover costs, so a stockpile is not needed. A decision is needed at this meeting on what products are to be made. Riccardi complimented Task Group 5 on a very good report – to the point and very practical. The sum given was discussed in the Budget (see above).

### **11.f Exhibition Policy**

De Mulder said the policy is to exhibit at congresses. The provisional list is:

EGS-AGU-EUG – Nice, April 2003

IGEO – Calgary, October 2003

INQUA – Reno, June 2003

Riccardi suggested that there should be a poster for National Committees to hang up at conferences etc. Refsdal said she had been working on this. Zhang Hongren said it could be printed in China very cheaply.

## **12. Free Discussion**

### **12.a List of Rapporteurs**

Janoschek's proposed list of rapporteurs was slightly modified and accepted. See Appendices 3 and 4 of these minutes.

### **12.b Bringing Developing World persons in the EC/Bureau**

De Mulder presented a document on how to provide access to members of all nations to positions in the IUGS Bureau. De Mulder added that only c. 25 countries have the financial possibilities to support Bureau positions. A problem lay in deciding what is a developing country: the UN definition leaves a huge middle range which would be excluded. The document is attached as Appendix 5 of these minutes

Brett said he was against all three options proposed in the document. For the first, the cost is too high. For the second, it is hypothetical and for the third, half is still too much. He was not sure if most Unions in ICSU paid for their EC from Union money. In its previous meeting in Lower Hutt, a suggestion was made to put money aside each year and then every 3<sup>rd</sup> term to get a person with no financial support on the Bureau. Riccardi said the third option was the only realistic possibility. De Mulder suggested first that countries could combine in paying their 'half' and second that the US \$ 20 per IGC attendee could be used for this. De Mulder said that no conclusion was reached and the discussion will be continued in the next EC meeting.

## **13 VENUE AND DATE OF THE 52<sup>nd</sup> EXECUTIVE COMMITTEE MEETING**

De Mulder said that Norway has officially invited IUGS to hold the next Executive Committee in Oslo. This will include a short visit to Svalbard. The Bureau suggested March 15–19 for the meeting, with the field trip before. This gives time to prepare for the meeting, after the IGCP meeting. **All agreed.**

## **14 ANY OTHER BUSINESS**

### **14.a IYPE Brochure**

Plant commented that the content must be greatly improved for the next version. The 'Club of Rome' concept is totally discredited in the industry; IUGS will get no mining sponsors if this is mentioned.

#### **14.b Timing of meetings at the IGC**

Boriani mentioned that the timing of meetings at IGC should be discussed. De Mulder said the EC meeting should be back to back with the IGC meeting. Also, the EC members want to participate in the meeting. Refsdal said there were two meetings – one for the outgoing Executive Committee and one for the new incoming Executive Committee.

Janoschek said he would make a list of meetings and send it to Boriani

#### **14.c COGEOETT**

De Mulder said that at the last EC meeting it had been decided to have a Commission on Geological Education and Technology Transfer. Nyambok had prepared a document on this. However, the Bureau decided that IGEO, which is experienced in this field, should be asked if they would work in a Task Group. They refused, but said that IUGS should leave the business to them, and support them. The Bureau agreed. De Mulder invited the EC to support this approach. **All agreed.** Bobrowsky said that IUGS should try and broaden IGEO's outlook; the developing world should be the main target.

#### **14.d IUGS Domicile**

Refsdal noted that this process will be finished soon. Two pages have been written about what IUGS is and does, for the tax people. A form has been filled in and returned.

## 15 Appendices

### Appendix 1. Publications Policy of IUGS

The Union expects that most scientific activities funded by the Union will result in some form of publication. Publication arrangements generally should seek the widest possible visibility and distribution of IUGS products to interested scientific and lay readerships.

The IUGS **New Publication Series**, also referred to as the Special Publication series, provided for many years a publication outlet for the scientific work of the Union and ensured that results are available to others in a form that is functional but inexpensive. The NPS will cease as of the publication in 2001 of # 36 (The Campanian-Maastrichtian Boundary).

For a variety of reasons it now appears to be more appropriate and advantageous to the Union for Union-funded work to be published by others. Such outlets typically include scientific journals, monographs, maps and charts published by scientific and professional organizations, and by commercial (for-profit) publishers. The following guidelines now apply to the publication of IUGS work.

All publications, including but not limited to articles, monographs, maps and charts, must carry a clear statement, prominently displayed, acknowledging the IUGS contribution. In most cases, the statement will take the following form: "*This (project, symposium, workshop, etc.) was sponsored (co-sponsored, supported, etc.) by the International Union of Geological Sciences.*"

1. Where appropriate, monograph, maps, charts and journals should carry the name and the logo of the Union, in addition to the above statement. In monographs, the logo and statement of sponsorship will normally be placed on the cover, title page or other front matter. On maps and charts, design considerations require flexibility in the placement of the logo and statement of sponsorship, but, nevertheless, the message must be clear.
2. The Union expects that, wherever possible, outside organizations publishing the results of IUGS-sponsored work will pay a royalty to the Union on the sale of such publications. Any money thus generated will be returned to the scientific group responsible for the publication to help in their own scientific work.
3. Where appropriate, the Union will negotiate to retain copyright or an equitable share of copyright to any IUGS-sponsored work published by other organizations.
4. The Union will assist in promoting the distribution of IUGS-related or sponsored publications through announcements in *Episodes*, website notification, and at IUGS displays at conferences and meetings.
5. Any publishing arrangements with outside publishers should provide the IUGS with a reasonable number of complimentary copies for promotion, display, review, and other official uses. One copy must be sent to the IUGS secretariat for archiving. In addition, the arrangement negotiated should consider free distribution of a reasonable number of copies of the product to appropriate libraries in developing countries.

The IUGS Secretary-General is responsible for informing all IUGS bodies of current publication policies and guidelines, and for encouraging compliance. The IUGS Executive Committee, through the Secretary-General, will make explicit and clear to each recipient of IUGS funds to support scientific endeavours that the Union expects publication of results, and that a condition of funding is that the recipient will comply with Union publication policies."



<b>IUGS Commissions</b>			<b>61,61.57</b>
	COGEOENVIRONMENT	10,000.00	
	CGI (COGEOINFO)	5,000.00	
	COMTEC (Tectonics)	5,161.57	
	CSP (Systematics Petrology)	2,000.00	
	ICS (Stratigraphy)	35,000.00	
	INHIGEO (Hist. Geol. Sci.)	4,000.00	
	CGSG	0.00	
<b>IUGS Task Groups</b>			<b>5,000.00</b>
	Geosites	0.00	
	Public Affairs	0.00	
	Geochemical Baselines	1,500.00	
	Fossil Fuels	3,500.00	
<b>IUGS Initiatives</b>			<b>15,000.00</b>
	GEOINDICATORS	5,000.00	
	MEDICAL GEOLOGY	10,000.00	
<b>Committees</b>			<b>21,000.00</b>
	CP (Publications)	12,500.00	
	Finances	0.00	
	ARC	7,000.00	
	CRD	1,500.00	
<b>Proposal Policy</b>			<b>50,000.00</b>
<b>Internat. Year Planet Earth</b>			<b>40,000.00</b>
	Annual Contribution	25,000.00	
	Workshops	15,000.00	
<b>ICSU Commission on Lithosphere (SCL)</b>			<b>15,000.00</b>
<b>Hutchison Fund</b>			<b>15,000.00</b>
<b>Affiliated organizations</b>			<b>16,500.00</b>
	AGID	1,000.00	
	AGA	0.00	
	CGMW (Geol.Map of the World)	2,500.00	
	IAGC	0.00	
	IAGOD	1,000.00	
	IAMG	1,000.00	
	IFPS	1,000.00	
	IGEO	5,000.00	
	GSA (Geol. Society of Africa)	4,000.00	
	ISRM	1,000.00	
<b>Contributions</b>			<b>11,500.00</b>
	ICSU	9,500.00	
	Operating Costs/Supplies	2,000.00	
<b>Other expenses</b>			<b>68,000.00</b>
	Routine Meetings	30,000.00	
	Represent. Scientific Meetings	5,000.00	
	Exhibitions	10,000.00	
	Annual report, Brochure	10,000.00	
	Visibility	10,000.00	
	Bank Charges	3,000.00	
<b>Episodes</b>			<b>38,000.00</b>
	Contribution China	23,000.00	
	Reserves	15,000.00	
<b>Website</b>			<b>1,500.00</b>
<b>Contingency</b>			<b>15,000.00</b>
	<b><u>TOTAL EXPENSES</u></b>		<b><u>578,661.57</u></b>
	<b>Transfer to/from reserve</b>		
	<b><u>TOTAL</u></b>		<b><u>480,500.00</u></b>

### Appendix 3. Rapporteurs list for IUGS bodies

This list was agreed on by the EC for 2003 and following years:

<b>de MULDER:</b>	International Commission on Stratigraphy ICS
<b>BRETT:</b>	Nominating Committee Task Group on Public Affairs
<b>JANOSCHEK:</b>	Committee on Research Directions CRD Ad-hoc Review Committees Joint Program: International Geological Correlation Programme IGCP
<b>BRAMBATI:</b>	Finance Committee Commission on Global Sedimentary Geology Joint Program: Geological Application of Remote Sensing GARS
<b>SATO:</b>	Joint Program: Mineral Resources Sustainability Program MRSP Commission on Systematics in Petrology International Commission on the History of Geological Sciences IUGS/IGC Merger
<b>BOBROWSKY:</b>	Publications Committee PC Task Group on Geoscience Education Initiative on GEOINDICATORS
<b>PLANT:</b>	Commission on Petrology and Chemistry of the Solid Earth Task Group on Global Geochemical Baselines Task Group Geochronological Decay Constants Initiative on Medical Geology
<b>CADET:</b>	Commission on Tectonics COMTEC
<b>GUPTA:</b>	Commission on Geological Information (COGEOINFO) CGI Commission on Geological Sciences for Environmental Planning COGEOENVIRONMENT Joint Program: International Lithosphere Programme/ Scientific Committee on the Lithosphere ILP/SCL
<b>RICCARDI:</b>	Task Group on Global Geosites Task Group on Fossil Fuels

#### Appendix 4. Rapporteur list for IUGS affiliated organisations

This list was agreed on by the EC for 2003 and following years:

AAPG	American Association of Petroleum Geologists	Cadet
AEG	Association of Exploration Geochemists	Plant
AEGS	Association of European Geological Societies	de Mulder
AGA	Arab Geologist Association	Cadet
AGI	American Geological Institute	Brett
AGID	Association of Geoscientists for International Development	Cadet
AGU	American Geophysical Union	Gupta
AIPEA	Association Internationale pour l'Etude des Argiles	Cadet
CBGA	Carpathian Balkan Geological Association	Janoschek
CGMW	Commission for the Geological Map of the World	Janoschek
CIFEG	International Centre for Training and Exchanges in the Geosciences	Cadet
CPCEMR	Circum-Pacific Council for Energy and Mineral Resources	Sato
EASE	European Association of Science Editors	Sato
EMU	European Mineralogical Union	Plant
GS	Geochemical Society	Brett
GSA	Geological Society of Africa	Riccardi
GSA	Geological Society of America	Brett
GV	Geologische Vereinigung	Janoschek
IAEG	International Association of Engineering Geology and the Environment	Bobrowsky
IAG	International Association of Geomorphologists	Bobrowsky
IAGC	International Association of Geochemistry and Cosmochemistry	Plant
IAGOD	International Association on the Genesis of Ore Deposits	Gupta
IAH	International Association of Hydrogeologists	Sato
IAMG	International Association for Mathematical Geology	Bobrowsky
IAS	International Association of Sedimentology	Brambati
ICL	International Consortium on Landslides	Gupta
IFPS	International Federation of Palynological Societies	Riccardi
IGEO	The International Geoscience Education Organization	Plant
IMA	International Mineralogical Association	Plant
INQUA	International Union for Quaternary Research	Bobrowsky
IPA	International Palaeontological Association	Riccardi
IPA	International Permafrost Association	Bobrowsky
ISRM	International Society for Rock Mechanics	Sato
ISSMGE	International Society of Soil Mechanics and Geotechnical Engineering	Sato
Met. Society	Meteoritical Society	Brett
SEG	Society of Economic Geologists, Inc.	Plant
SEPM	Society for Sedimentary Geology	Brambati
SGA	Society for Geology Applied to Mineral Deposits	Plant

## **Appendix 5. Access to IUGS Bureau positions for all nations**

Position paper, First draft 11 February 2003. By De Mulder

### **Preamble**

An unwritten rule in the Union says that those holding Bureau positions (President, Secretary-General and Treasurer) shall be financially supported for by their home organisation and shall never apply for any IUGS funding for their IUGS activities. This is *not* in the Statutes but IUGS Bye-law number 22 states the following:

*In proposing candidates for the offices of President, Treasurer and, especially, Secretary General, the Nominating Committee shall also ascertain the possible infrastructural support, forthcoming from international or national sources.*

This unwritten rule has been financially profitable to IUGS. It saves the Union about US \$ 50,000 per year. On the other hand, this system privileges candidates from economically strong countries or organisations. It has resulted in an over-representation of officers from Northern America and Western Europe in the Bureau over the past decade. Access to Bureau positions is only feasible to persons from the richest countries and even these are less and less willing to cover the costs involved. This attitude is also fuelled by the fact that other ICSU Unions have different rules and generally cover all travel and per diem costs for all officers, including the Bureau members. According to the Chairman of the Nominating Committee, it is getting more and more difficult to select excellent candidates for the positions, as fewer and fewer organisations are able and willing to cover the expenses involved.

As, in practice, most of the EC power is connected to the Bureau positions, the current system unwillingly but unavoidably tends to give most of the IUGS power to officers from the most developed part of the world.

Even if the travel and per diem costs of a Bureau member are covered by his or her home organisation, the officer often has been given a fixed budget. If this budget would be about to be exceeded and IUGS urgently needed to have this Bureau member at a meeting, the current system does not allow the person to go, unless the trip is paid from his or hers own pocket.

Both from a democratic and a practical point of view the system needs revision. Some options for a change are discussed below. However, any change will be at the financial expense of the Union.

### **Options for revision**

Revision of the above described system may be approached along three lines:

1. to cover the out-of-pocket costs of the Bureau members from the IUGS budget
2. to cover these costs from other budgets
3. to cover these costs partly from the IUGS budget and partly from other budgets

#### *To cover all out-of-pocket costs from the IUGS budget*

This system is common in most of the ICSU Unions. The advantage of this system is that the financial position of the home organization is not a discriminating condition for successful candidature for any of the EC positions, including the Bureau positions. Although all EC officers will be treated according to the same standards, decisions on travel will in practice be taken by the Bureau members including on their own travels.

A disadvantage of this system is the cost to IUGS, which will amount to some US \$ 50,000 annually. A potential way to overcome the problem of the increased cost to IUGS may be to raise the annual fees by all member countries. Member countries may, however, not be enthusiastic to raise the fees in general and in particular if they have not provided an officer in the EC.

#### *To cover out-of-pocket cost from other budgets*

At present this is the case. Other financial sources might be identified to cover the Bureau's travel costs than by the home organisations. These have not been found so far and will most probably not be found in near future. Theoretically, such funding organisations may exist but these will never cover such costs unconditionally.

The only way out for this proposal, is to increase IUGS' non-regular income. To that end, IUGS should get involved in projects or events through which funds may flow into the IUGS bank account. IUGS' involvement in IGC 32 could be seen in that way. If IGC would attract 5000 participants who pay US \$ 20 to IUGS, as agreed, the Union would receive an extra-budgetary income of US \$ 100,000. This money could be used to cover the extra costs concerned with disconnecting the Bureau members financially from their home organisations. Unfortunately, as this income only occurs once every four years, these would cover only half of the costs involved. Apart from IGC, IUGS may actively become involved in other major projects. One option would be the International Year of Planet Earth, another would be to play a prominent role as Congress broker.

#### *To cover these costs partly from the IUGS budget and partly from other budgets*

If IUGS was be ready to allocate US \$ 25,000 annually, the remaining US \$ 25,000 needed could be generated by additional fees to be paid by the 10 member countries who have an officer in the EC. This would cost US \$ 2,500 to each country. Again, this may be too expensive for the 36 Less Developed Countries. In that case, such countries might combine efforts on a regional level to generate this amount. Another way to proceed on this track may be to raise the membership fee for countries that have an elected officer by one category. This, however, would not hold for countries in the highest category. These may be freed from this because of the high sum paid already or these may cover travel costs for their officers anyway.

This hybrid approach might combine a release of the discriminatory condition on the financial status of the home organisation with a reduced financial risk to the Union.

**Conclusion**

If IUGS seriously wants to consider providing better access to Bureau positions, the best solutions on the short term would be to either allocate US \$ 50,000 annually from its regular budget, or to launch a system of mixed funding by IUGS and *all* member countries providing an elected IUGS officer. The first option may not be feasible for the short term: 20 % of income from member countries *extra* for this. On the longer term, it should be IUGS' ambition to significantly increase its project-related budget, so that it could cover travel costs of its officers entirely from the IUGS treasure. In sum, it is proposed here to start in 2004 with mixed funding. Half the costs should be generated from countries providing an officer, either through a fixed amount per year or through raising its membership's category. This would require modified Bye-laws.