

IUGS COMMISSIONS



FOUR YEAR REPORTS

INTERNATIONAL UNION OF GEOLOGICAL SCIENCES

**Commission on the Management &
Application of Geoscience Info. (CGI)**

**Commission on Geological Sciences for
Environmental Planning
(COGEOENVIRONMENT)**

**International Commission on Stratigraphy
(ICS)**

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

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

COMMISSION FOR THE MANAGEMENT AND APPLICATION OF GEOSCIENCE INFORMATION (CGI)

Report to the International Union of Geological Sciences for the period 2002 - 2004

1. Introduction

- 1.1 Information in general and digital information in particular, underpins all of the IUGS strategic objectives. CGI will help to address the growing need to improve the quality and range of both information content and the applications that are used to acquire, analyse, process and disseminate that information, through the exchange of knowledge and best practice and the support for standards in geoscience.
- 1.2 CGI is a new (strictly speaking, re-activated) Commission, founded by the IUGS in late 2002. Its initial tasks have been to establish its objectives, set up its structures and modus operandi, and create a network of provisional Council members. It also began to develop and refine its preliminary work plans. An early task was establishment of a website to publicize its existence as widely as possible.
- 1.3 To a large degree the major accomplishment of the past 2 years has to be the steady building of the Commission itself and raising its profile through the web site and many presentations at conferences, workshops and seminars.
- 1.4 This work of informing those who need to be aware of this new Commission for geoscience information, will reach a culmination at the IGC, where the first full and formal meeting of the Council and election of Officers will take place and the first full Open Meeting will be held. The IGC in 2004 is, in effect, the occasion of the inauguration of CGI.

2. Objectives

Because CGI is a new Commission and this is its first full report to IUGS, it is probably worth summarising its objectives:

- Help in exchanging knowledge on geoscience information and systems
- Support dissemination of best practice in geoscience information
- Encourage the development of geoscience information standards
- Play a full part in the international geoscience information community and represent IUGS on geoscience information matters
- Bring together individuals and organisations with an interest in the management and application of geoscience information

3. Organisation and relationships

- 3.1 CGI operates through a Council. The Chair, Secretary General and Treasurer of the Council form an Executive sub-committee. The current Council, which is regarded as interim, has 8 officers see (Annex A); a new Council will be elected at the IGC. The structure of the Commission and its relationships with the IUGS Executive and its members is represented diagrammatically in Annex B.

3.2 CGI liaises closely with other bodies including the International Association of Mathematical Geologists and the Commission for the Geological Map of the World (and its projects and working groups, DIMAS and GEOTERM). It also interfaces with a global initiative on data modelling lead by the North American Data Model group, with the Canadian Geoscience Knowledge Network, with the FOREGS Contact Group on Computing Standards and has had initial dialogue with UNESCO, CCOP and CIFEG.

4. Funding and expenditure

4.1 CGI receives funding from the IUGS but no direct financial support from other bodies, although it received a grant from ICSU in 2002. It does however receive considerable indirect support in terms of staff-time and meeting and infrastructure facilities from the parent organisations of its Council members and organisations such as CGMW and EuroGeoSurveys.

4.2 A brief summary of the CGI accounts is included below (note that the 2 amounts marked thus * are not yet finalised):

Date	Item	\$ In	\$ Out	€ In	€ Out
11/2002	<i>Balance at start of CGI</i>		2712.81		1113.59
10/2002	Catering expenses 1 st meeting				10.00
12/2002	IUGS allocation	3000.00			
12/2002	ICSU block grant	5000.00			
12/2002	Web site set up costs		2512.32		
01/2003	Bank charges		0.60		25.00
03/2003	Travel expenses CGI meeting				222.80
09/2003	Travel expenses CGI lecture				603.47
11/2003	MTG meeting expenses*				426.00
12/2003	IUGS Allocation*			4104.75	
04/2004	<i>Current Balance</i>		7659.89		3931.07

5. Details of progress

5.1 An interim CGI Council has been established and several meetings held, specifically for CGI and also opportunistically by Council Officers in the margins of other conferences and workshops.

5.2 Draft Terms of Reference and Statutes for CGI have been produced and will be ratified at the CGI Council meeting at the IGC in August 2004.

5.3 A provisional Work Plan has been drafted.

5.4 A web site has been set up and maintained (http://www.bgs.ac.uk/cgi_web) and logo, branding and PowerPoint template designed.

5.5 A Working Group (MTG) has been created to take responsibility for the Multi-lingual Thesaurus for the Geosciences and develop and a definitive and well maintained thesaurus.

5.6 There has been close involvement with an international initiative to produce a global geoscience data model, resulting in the initiative becoming formally associated with CGI and probably becoming a CGI Working Group in the near future. The group is currently known by the acronym DMIC.

5.7 Presentations on CGI have been given at numerous national and international conferences and meetings.

5.8 A colour printed flyer has been designed and will be widely circulated prior to the IGC.

5.9 Significant logistical and documentation preparation for the first formal Council and Open Meetings at the IGC and the election of Council Officers.

6. Problems

6.1 Identifying appropriately experienced Council officers prepared to give time and be proactive has proved difficult (there is still no representation from South America).

6.2 Initial attempts to plan and organise Outreach Workshops proved more difficult than anticipated. Funding, while the most significant problem, is only one of the issues.

7. Future plans

7.1 The CGI Work Plan contains the following aims:

- encourage and support the development of geoscience standards
- develop a new multilingual thesaurus for geosciences (MTG), to be available at no charge
- Make the CGI web site a reference point for geoscience standards and information exchange
- organise Outreach Workshops in association with other bodies (e.g. in Africa or South America) to exchange knowledge and to transfer skills and technology
- collaborate with the organisers of the GeoInfo Conferences on organising the next conference in 2006
- extend CGI membership worldwide and offer a "home" and network to those geoscientists with an interest in geo-information .
- organise and hold successful CGI meetings at IGC 2004
- improve and extend the web site

7.2 The Work Plan and the component aims will be the subject of further discussion and detailed action plans will be developed at the CGI Council and Open Meetings in August this year.

Ian Jackson
Secretary General

Kristine Asch
Chair

25 April 2004

Annex A: List of Council Members

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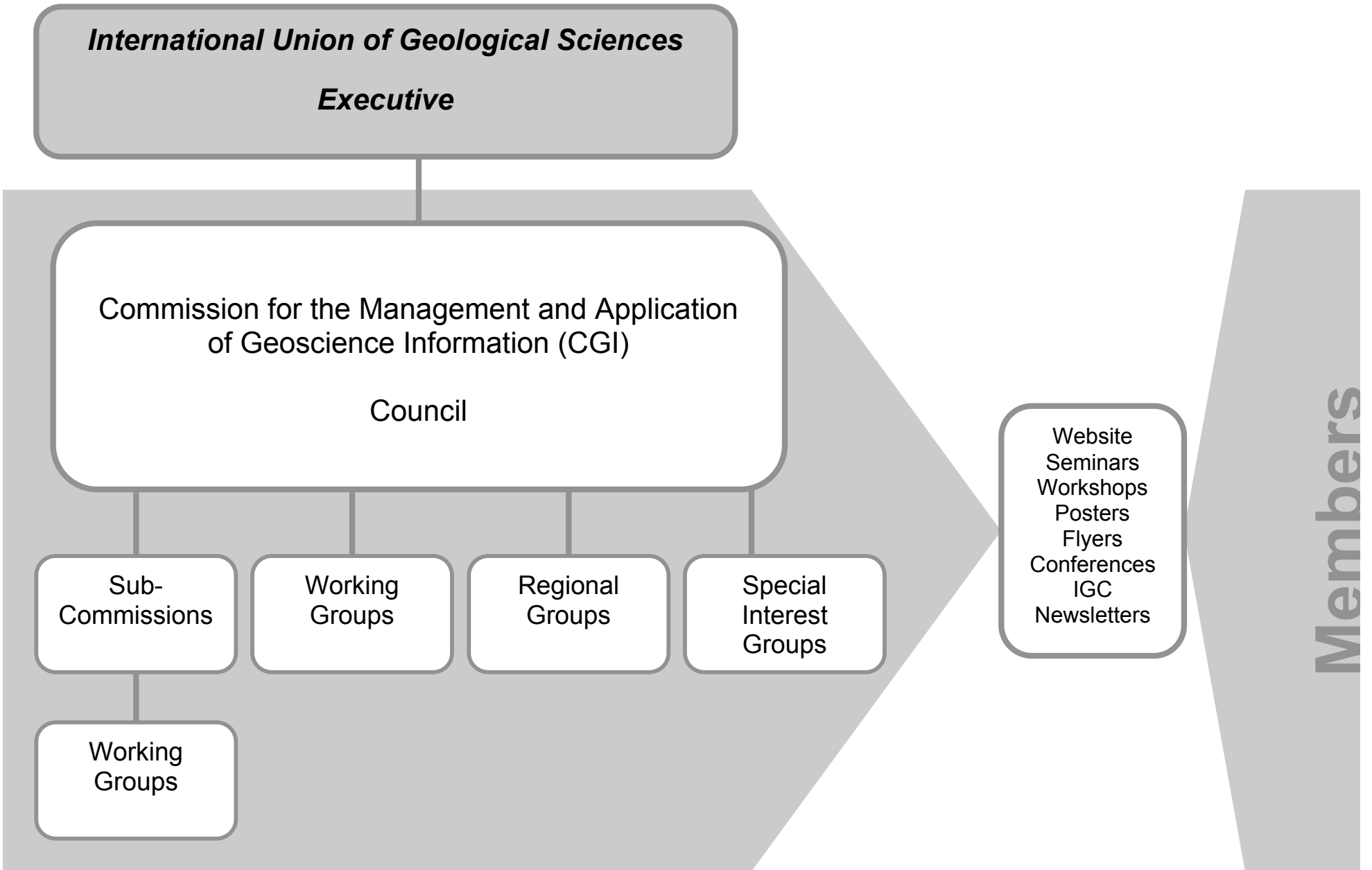
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**IUGS Commission on Geological Sciences for Environmental Planning
COGEOENVIRONMENT**

**SUMMARY OF CHIEF ACCOMPLISHMENTS
FOR THE PERIOD 2000-2004**

**Prepared by Colin Simpson, Chairman,
COGEOENVIRONMENT**

FINAL REPORT

This will be the last report of the COGEOENVIRONMENT Commission - one of the most productive and successful Commissions that the IUGS has created. During 2003 the IUGS Executive informed the Commission that in accordance with IUGS Statutes the Commission has completed its full term and is scheduled to be wound up at the end of the current term which is in August at the 2004 IGC. Given the achievements of the Commission to date, and the ongoing requirements for new directions and initiatives in environmental geoscience, Officers at the 2003 Commission AGM were unanimous in their desire for a new commission to be formed. A case was presented to the IUGS Executive meeting in Oslo in March 2004 to establish a Commission on *Geoscience in Environmental Management* (GEM) to progress a better understanding of the role of geoscience in environmental matters to the political and non-scientific spheres. (Refer to the separate Appendix on the new Commission submission attached).

INTRODUCTION TO THE 2000-2004 REPORT

The following report broadly outlines the activities of the Commission during the period 2000-2004. Over that time the Commission's profile in the international community remained high with the numbers of Corresponding Members increasing in that period to over 250, representing 85 countries.

OFFICERS

When the Commission commenced its current 4 year term in 2000 it had 10 Officers representing 12 countries. During the term the number of Officers was increased to a more representative continental distribution of 15 Officers representing 13 countries. The Officers at 2004 are as follows: Chairman: Adjunct Prof. Colin Simpson, Australia; Vice Chairman: Dr. Imasiku Nyambe, Zambia; Secretary General: Dr. Joy Jacqueline Pereira, Malaysia; Treasurer: Dr Kevin Telmer, Canada; Officers: Dr Dhia Al Bakri, Australia; Professor Theo Davies, Kenya; Professor Bernardino Figueiredo, Brazil; Prof.Dr.Qingcheng He, China; Dr. Brian Marker, United Kingdom; Dr. Ulrike Mattig, Germany; Dr Cathleen May, USA; Dr. Jonas Satkunas, Lithuania; Dr. Olle Selinus, Sweden; Dr. Roy Shlemon, USA; Prof. Igor Zektser, Russia;

WORKING GROUPS

In the period 2002 - 2004 the Commission has operated 6 Working Groups to address important geoscience issues that have requiring worldwide publicity

Working Groups at 2000

Geoindicators

Medical Geology

Urban Geology

Geology and Ecosystems (Geoecology)

In 2002 the two very successful Working Groups on Medical Geology, and the Geoindicators Initiative were elevated to "special project" status within the IUGS and became independent of Cogeoenvironment though the Commission Officers continued to assist both these Initiatives with international symposia/workshops etc.(Note that the budget figures shown below do not include any post-2002 funding for these 2 working groups).

Working Groups at 2004

Urban Geology

Geology and Ecosystems (Geoecology)

International Borders - Geoenvironmental Concerns;

Geoscience for Land Use & Sustainable Development

Over the past 2 years discussions have also focused on possibly forming 2 new Working Groups:

Working Group on Sustainable Subsurface Management (with the Netherlands Institute of Applied Geoscience);

Working Group on Geological Heritage and Tourism

These Working Groups have not been established because growing interest in these topics suggested the Commission may not have been the most appropriate managing organisation to promote these activities. The Commission is involved in the IGC Symposium T - 17.03 Geological Heritage and Tourism - a joint COGEOENVIRONMENT / UNESCO effort which will determine the future directions of geological heritage and tourism activities.

JAPAN BRANCH

In 2002 the Japanese affiliates of COGEOENVIRONMENT - members of the Geological Society of Japan's Committee of Environmental Geology were formally accepted as the Japan Branch of COGEOENVIRONMENT.

REGISTRY

Since 2002 the Commission has provided annual funding sponsorship (US\$1000) to assist with maintenance of the "Registry on Medical Geology" developed in 2002 by the US Armed Forces Institute of Pathology (AFIP) - a registry is the primary reference point for medical practitioners etc seeking information on a specific topic. This first registry ever developed on the topic was proposed by the Commission and has proven to be a significant means of international promotion of Medical Geology.

WEBSITES

2000-2004

The Commission and 2 Working Groups currently have 2 established websites - all linked to the IUGS website. (The former Working Groups of Medical Geology, and the Geoindicators Initiative also had established websites prior to their elevation into IUGS in 2002).

- COGEOENVIRONMENT home site maintained by GSU Sweden. (~2000 hits per month - statistics indicate website visits are doubling every 12 months).
- URBAN GEOLOGY website maintained by LESTARI, Malaysia.

In addition the Working Group on INTERNATIONAL BORDERS-GEOENVIRONMENTAL CONCERNS is currently developing their website.

PUBLICATIONS

The Commission continued to disseminate information in support of its primary objectives through production of publications:

The COGEOENVIRONMENT Newsletter

Newsletters 16 to 18 were distributed to all Corresponding members, sponsors, and also distributed free to all geological surveys world wide.

Commission Brochure

“Planning and Managing the Human Environment: The Essential Role of the Geosciences”

Language editions published prior to 2000:

- Chinese, English, Russian,

Published 2000-2004

- Spanish (worldwide distribution);
- Malay (funds obtained for distribution in Malaysia and Indonesia only)

Brochures posted onto websites - Malay, Japanese

Seeking publication funds at 2004 - German, Italian, Arabic (Farsie)

INTERNATIONAL WORKSHOPS ORGANISED BY THE COMMISSION 2000-2004

In the period 200 - 2004 Officers of COGEOENVIRONMENT organised several successful workshops/meetings. The following lists the main events in that category over 200-2004, it does not include the numerous seminar papers presented by Officers or papers published.

- Workshop on Geoindicators, 2000, Ustka, Poland
- Workshop on Health and the Geochemical Environment, 2000, Uppsala, Sweden
- Geoindicators papers given at Ecological Monitoring and Assessment Network, 200, Canada
- Geoindicator Short Course and Field Trip, 2001, Lusaka, Zambia
- International Workshop on Geoindicators for Ecosystem Monitoring in Parks and Protected Areas, 2001, Newfoundland.
- Geomed 2001 - the Second East and Southern Africa Regional Workshop on Geomedicine – a Short Course, Workshop, and Field Trip, Lusaka, Zambia
- The Working Group on Urban Geology arranged the presentation of Ed de Mulder’s keynote paper to the 2001 IAEG Conference on Engineering Geological Problems of Urban Areas, Ekaterinberg, Russia (Ed was unable to attend).
- In 2002 the Working Group on Urban Geology gave 5 presentations on paper about the topic throughout the year.
- During 2003 the Commission continued to actively support the two IUGS Special Status projects (former Commission Working Groups) on Geoindicators, and Medical Geology mainly through assistance of COGEOENVIRONMENT Officers and contacts to help with organising and seeking sponsoring for international workshops.
- International Workshop on Geosciences for Urban Development and Environmental Planning, 15-16 September 2003, Vilnius, Lithuania.
- Workshop on International Borders – Geoenvironmental Concerns, 17 September 2003, Vilnius, Lithuania.
- Dialogue on Geoscience Inputs for Development Proposals [for Urban Planning], 16 October 2003, Bangi, Malaysia.
- International Workshop on Medical Geology, 13-17 October 2003, Campinas, Brazil.
- International Geoindicators Workshop, 24-26 November 2003, Canberra, Australia.
- Short Course on Medical Geology, Health and the Environment, 1-4 December 2003, Canberra, Australia.
- Workshop on Medical Geology, 8-9 December 2003, Kuala Lumpur, Malaysia.
- Forum on Medical Geology, 10 December 2003, Kuala Lumpur, Malaysia.
- 2004 IGC Session T - 17.03 Geological heritage and tourism - COGEOENVIRONMENT / UNESCO
- 2004 IGC Session T - 37.03 Assessment of, and responses to geological hazards and risks in urban areas - COGEOENVIRONMENT / UGWG
- 2004 IGC Session G - 03.10 Geoindicators: methods and techniques for monitoring rapid geologic change - COGEOENVIRONMENT
- 2004 IGC Session G - 03.11 International borders – Geoenvironmental concerns - COGEOENVIRONMENT / GEOINDICATORS

COLLABORATION

During the period the Commission continued to interface with several international organisations to discuss ongoing and potential initiatives. The full list of contacts is not included here but it included the International Association of Engineering Geologists (IAEG), International Association of Hydrogeologists (IAH), International Association of Geomorphologists (IAG), International Society of City and Regional Planners (ISCRP), Mineral Resource Sustainability Program (MRSP) and Coordinating Programme on Geoscience for East and Southeast Asia (CCOP). In addition during 2003-4 the Commission has conducted joint activities with about 20 organisations.

CHIEF PROBLEMS & CONCERNS

REDUCED INSTITUTIONAL SUPPORT

There has been some loss of overall support from corporate and supporting Members. This loss of direct institutional \$ support, and their staff input is associated with:

BANKING DIFFICULTIES

Our inability to open an international bank account for over 6 months, together with a lack of a Treasurer resulted in a loss of ability to collect annual subs for one year.

CORPORATION RESTRUCTURING

The overall trend in developed countries to downsize government organisations (such as geological surveys) together with economic concepts which advocate that the same amount of work can still be undertaken with less resources, is resulting in the following:

- A - reduced corporation budgets is resulting in a loss of \$ support from institutions and
- B - staff (Including Officers) from such institutions have far less time to get involved in "external" activities.

GOGEOENVIRONMENT GENERALISED BUDGET OVERVIEW 2000-2004	
These figures do not include institutional in-kind support.	
INCOME 2000-2004	AMOUNT US\$
IUGS support (\$10,000/annum)	40,000
External funding acquired from grants, (ICSU, IUGS, GSA, etc)+account funds.	43,895
Bank interest	210
Workshop income	7660
Total income	91,765

EXPENDITURE 2000-2004	AMOUNT US\$
Technical Workshops	44,576
Meetings	24,908
Newsletter + Brochures	5,665
Miscellaneous (AFIP contribution, etc)	7,363
Secretariat	1,650
Bank costs	403
Total expenditure	84,565
Funds in bank (March 2004)	7200

APPENDIX

Copy of DRAFT letter to IUGS Council seeking ratification of the Proposed New Commission

PROPOSAL FOR RATIFICATION**IUGS COMMISSION ON
GEOSCIENCE IN ENVIRONMENTAL MANAGEMENT (GEM)****RATIONAL FOR A NEW COMMISSION**

Under the Statutes of IUGS the Commission on Geological Sciences for Environmental Planning (COGEOENVIRONMENT) has completed its full term and is scheduled to be decommissioned.

While COGEOENVIRONMENT has achieved much in stimulating discussion of, and raising awareness of environmental geosciences amongst scientists, it remains true that scientists in many parts of the world still have great difficulty in convincing policy makers that environmental geosciences are of great importance to sound, safe and economic decision making. On that basis, the current Officers of COGEOENVIRONMENT were unanimous in their desire for a new Commission to be formed to address this gap.

AIM OF A NEW COMMISSION

The Commission on Geoscience in Environmental Management aims to provide guidance to geoscientists on how best to integrate geoscience into environmental policy and to communicate the concepts to potential interest groups such as policy makers, politicians, environmental organizations and other science disciplines, including the general public.

IMPLEMENTATION STRATEGY

The proposed outreach to non-geoscience stakeholders would be through:

- Preparation and dissemination of information to interest groups based on existing best practice and new work.
- Holding focused workshops to help geoscientists to communicate with potential interest groups within and outside of the geosciences

To support the IUGS Mid-Term Vision, the proposed Commission will:

- Promote the development of environmental geoscience
- Increase policy relevance of environmental geoscience to ensure sustainable utilization of natural resources for Societal wellbeing
- Develop new Working Groups within the New Commission to address high priority requirements

ROLE OF EXISTING WORKING GROUPS

So that the new Commission can build on what has been achieved to date all COGEOENVIRONMENT Commission Working Groups will be assessed as to their relevance under the umbrella of the new commission. Working Groups that are currently addressing topics with significant political components, may be retained. Working Groups that are retained will have an enhanced focus on integrating geoscience into environmental policy in areas of relevance to society. The primary Working Groups that may be retained, and their proposed new directions, are:

- **Working Group on Urban Geology:-** A broadened focus to include information to assist geoscientists understand the political requirements associated with strengthening ties with planners and interested groups for reducing vulnerability to natural hazards through landuse planning responses
- **Working Group on International Borders - Geoenvironmental Concerns:-** Broadened focus on the policy issues of managing transboundary issues related to resources and the environment
- **Working Group on Geology and Ecosystems:-** Broadened focus on understanding and communicating policy issues on the role of geoscience in ecosystems management

STRATEGIC LINKAGES

It is proposed to develop strategic linkages through:

- Consolidating the network of existing partners e.g. IAEG, IAH, International Society of City and Regional Planners (ISOCARP)
- Establishing new working linkages, particularly with non-geoscience bodies for effective positioning and increased visibility e.g. Global Water Partnership, Millenium Ecosystem Assessment Initiative etc. and
- Investigating how to develop new linkages relevant to the new aims and objectives

OUTREACH AND CAPACITY BUILDING

Outreach and capacity building will be developed to :

- Update, broaden, and maintain the existing network of websites for information dissemination
- Identify the types of interest groups for the focus of the activity (stakeholder profiling)
- Develop and disseminate information (publications /brochures /newsletters etc.) in partnership with relevant stakeholders
- Focus capacity building on developing countries in partnership with IUGS National Committees and Affiliated Organisations

FINANCE

The new commission will work to raise its own operating finance through such activities as:

- Reduce financial dependency on IUGS by sourcing for research funds from international bodies.
- Reviewing the types of new commission membership with a view to generating funds
- Organising meetings and workshops on a self-funding basis

The new Commission has requested seed-funding from IUGS of US\$10,000 to cover the first year of operations.

The new Commission has requested that approval be given to transfer remaining funds in the COGEOENVIRONMENT bank account to the new Commission (Note. It is essential that the current Commission bank account **must** be retained for the new Commission's operations)

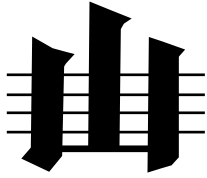
ORGANISATIONAL TRANSITION

To effect transfer of operations from the outgoing Commission to the new Commission it is proposed that initially Officers of the outgoing commission will form the base group of the new Commission to:

- Refine the aims and objectives of the new Commission
- Scope out an overall work plan for IUGS approval
- Supervise winding down and/or redirection of existing Working Groups
- Develop the most appropriate profile types, and identify potential targets, for recruitment of new Officer requirements
- Develop plans to commence formation of priority specialist Working Groups to address the requirements of the new aims and objectives

We seek ratification by the Council of the following:

- 1 - the decision by the IUGS Executive to create the Commission on Geoscience in Environmental Management (GEM)
- 2 - the decision by the IUGS Executive to appoint Dr Joy Pereira to be the Chair of the new Commission.



**INTERNATIONAL UNION OF GEOLOGICAL SCIENCES
INTERNATIONAL COMMISSION ON STRATIGRAPHY**

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**International Union of Geological Sciences
International Commission on Stratigraphy (ICS)**

CONSOLIDATED 4-YEAR REPORT (2000-2004)

Submitted Jointly by:

Felix GRADSTEIN [ICS Chair]
James OGG [ICS Secretary-General]
April, 2004

OVERALL OBJECTIVES, ORGANIZATION, and BUDGET

The International Commission on Stratigraphy (ICS) is a body of expert stratigraphers founded for the purpose of promoting and coordinating long-term international cooperation and establishing standards in stratigraphy. Its principal objectives are:

- (a) Establishment and publication of a standard global stratigraphic time scale and the preparation and publication of global correlation charts, with explanatory notes.
- (b) Compilation and maintenance of a stratigraphic data base center for the global earth sciences.
- (c) Unification of regional chronostratigraphic nomenclature by organizing and documenting stratigraphic units on a global database.
- (d) Promotion of education in stratigraphic methods, and the dissemination of stratigraphic knowledge.
- (e) Evaluation of new stratigraphic methods and their integration into a multidisciplinary stratigraphy.
- (f) Definition of principles of stratigraphic classification, terminology and procedure and their publication in guides and glossaries.

Subcommissions (see last pages for officers):

Quaternary (<i>organized 2002</i>)	Devonian
Neogene	Silurian
Paleogene	Ordovician
Cretaceous	Cambrian
Jurassic	Terminal Proterozoic (Ediacaran)
Triassic	Precambrian (<i>organized 2003</i>)
Permian	Stratigraphic Classification
Carboniferous	Stratigraphic Information Services

Websites:

ICS main site	www.stratigraphy.org
Quaternary	www.quaternary.stratigraphy.org.uk
Neogene	www.geo.uu.nl/sns
Paleogene	134.2.48.3/index.htm
Lutetian GSSP task group	wzar.unizar.es/perso/emolina/ypresian.html
Triassic (newsletter)	www.uni-muenster.de/GeoPalaeontologie/Palaeo/Palbot/albomsl.htm
Permian (newsletter)	pri.boisestate.edu/permophiles
Devonian	sds.uta.edu/
Silurian (newsletter)	iago.stfx.ca/people/mmelchin/SILURIAN9.HTM
Ordovician (discussion site)	seis.natsci.csulb.edu/ordstrat2/default.htm
Cambrian	www.uni-wuerzburg.de/palaeontologie/ISCS/index.html
Stratigraphic Classification	www.geocities.com/issc_arg (commercial site)
Stratigraphic Information Systems	
CHRONOS database network	www.chronos.org
(<i>concept posted at:</i>)	www.eas.purdue.edu/chronos

Budget

During 2000 through 2004, the ICS received an average of \$35,000 per year from IUGS to support the activities of the 16 subcommissions and working groups (typically \$1500 to \$2000 each) and the tasks of the ICS Executive (typically \$5000). In 2002, a special \$10,000 grant was received from ICSU to organize the first general assembly of ICS chairs for a strategic planning meeting (summarized in *Episodes*, vol. 25, no. 3).

CHIEF ACCOMPLISHMENTS (2000-2004)

A subset of major accomplishments is reproduced here, with emphasis on setting standards for geologic time (boundaries, ages). More details are in the individual subcommission reports (a 100+ page PDF document posted on ICS and IUGS websites).

A. GSSPs (boundary-stratotypes) created since 1999 (*listed in stratigraphic order*)

As of 2004, approximately 2/3rds of the international geologic stages are standardized with a Global Boundary Stratotype Section and Point (GSSP) at the base. The ICS goal is to complete all GSSPs by 2008.

Neogene

- stabilization of the GSSP for the base of the **Pleistocene** Stage (1999)
- base of the **Piacenzian** Stage at Punta Piccola, Italy (1998)
- base of the **Zanclean** Stage and of the **Pliocene** Series at Eraclea Minoa, Italy (2000)
- base of the **Messinian** Stage at Oued Akrech, Morocco (2000)
- base of the **Tortonian** Stage at the Monte dei Corvi beach section near Ancona, Italy (2003).

Paleogene

- base of the **Eocene** Series (and Ypresian Stage) in the Dababiya Section near Luxor, Egypt (2003).

Cretaceous

- base of the **Maastrichtian** Stage at Tercis, France (2000)
- base of the **Turonian** Stage at Pueblo, Colorado, USA (2003)
- base of the **Cenomanian** Stage and of the Late Cretaceous Series, at Risou, France (2002)

Jurassic

- base of the **Aalenian** Stage and of the Middle Jurassic Series at Fuentalsaz, Spain (2000).
- base of the **Sinemurian** Stage at East Somerset, England (2001).

Triassic

- base of the **Triassic** System at Meisan, China (2001).

Permian

- base of the **Lopingian** Series (Wuchiapingian stage) (2004).
- base of the **Guadalupian** Series (Middle Permian) and component **Roadian**, **Wordian** and **Capitanian** Stages in Guadalupian mountains, USA (2001).

Carboniferous

- base of the **Pennsylvanian** Subsystem, "Mid-Carboniferous boundary" at Arrow Canyon, Nevada, USA (1999).

Devonian

- *all Devonian stage boundaries are defined by a GSSP*

Ordovician

- base of the **Upper Ordovician** Series (un-named stage) at Fågelsång in Sweden (2002).
- base of the upper stage of the **Lower Ordovician** Series at Diabasbrottet in southern Sweden (2002).
- base of the **Ordovician** System and of the **Tremadocian** stage at Green Point, Newfoundland, Canada (2000).

Cambrian

- base of the **Paibian** Stage and the **Furongian Series** (uppermost series of Cambrian) in the Paibi section, NW Hunan province, south China (2003).

Proterozoic Era

- base of the **Ediacaran Period** (uppermost Proterozoic) in the Flinders Range, Australia (2004).

B. The International Stratigraphic Chart

This new type of International Stratigraphic Chart (divisions of geologic time), highlighting all those units which are formally defined by a GSSP, and leaving in unnamed those time intervals for which no internationally recommendable divisions was available. Such a chart gives an objective picture of the present state of the art in chronostratigraphy. Two color schemes are available: the International Geological Map of the World or of the U.S. Geological Survey. This chart is continually updated, and public graphics can be downloaded in either color scheme at www.stratigraphy.org.

C. Geologic Time Scale 2004

F.M. Gradstein, J.G. Ogg *et al.* brought the new International Geologic Time Scale to completion (GTS2004, being published by Cambridge University Press). This five-year project involved nearly 40 ICS collaborators and had active sponsorship from the petroleum industry, IUGS, the World Geological Map, **CHRONOS**, Geological Survey of Canada, U.S. Geological Survey, and Cambridge University Press. Virtually all Phanerozoic stage boundaries have clear descriptions and much better defined ages, including estimation of uncertainties. The entire time scale is illustrated by superior (color) graphics at various scales, formats, and audiences.

OBJECTIVES FOR NEXT 4 YEARS (2004-2008)

The following is a summary of objectives of the ICS Executive Commission and a selection of key goals noted in the detailed reports of each subcommission.

ICS Executive Committee

- Define GSSP sections for all stages of the Phanerozoic Era, and solidify subdivisions of the Precambrian. **All GSSPs will be ratified by 2008.**
- Improve the financial foundation of ICS to better serve the international stratigraphic community, including vital stratigraphic work in developing nations and former “east-bloc” countries.
- Replace the Precambrian suite of Global Standard Stratigraphic Ages (GSSAs) with a natural geologic time scale.
- Placing all important information on stratigraphic standardization into a suite of websites under appropriate subcommissions and a general ICS hub.
- Have both an active electronic journal called ‘E-Strata’, and a ‘new’ stratigraphy paper journal.
- Consider merits of and potentially forming the ‘Association of Stratigraphic Geologists’, closely linked to IUGS.
- Support the *CHRONOS* initiative to develop a suite of web-accessible international databases on all aspects of chronostratigraphy (paleontology, isotopes, cycles, magnetics, etc.). The *CHRONOS* workshop in November 2000 has recommended that the main coordination and responsibility for the continuity of this system be placed under the auspices of ICS.
- ICS and several of the Subcommissions will hold focused symposia and field trips during the International Geological Congress 2004 in Florence (Italy).

Quaternary Subcommission

- The immediate objective of the Quaternary Subcommission is to formalize the divisions of the Pleistocene Series and the Holocene/Pleistocene boundary; plus compile an international correlation chart for the most commonly used regional stratigraphic units and isotope stages. No international stage-level subdivisions for the Pleistocene or Holocene will be formalized.
- Potentially, there may be two additional working groups (possibly jointly with the INQUA Commission on Stratigraphy and Geochronology) concerned with dating significant Pleistocene boundaries and with formalizing the status of very short-time divisions (durations of 1-5 kyr) currently being recognized in the late Quaternary, e.g. events, phases, oscillations etc. (sometimes referred to as 'sub-Milankovitch scale oscillations').

Neogene Subcommission

- The long-term objective of the SNS has always been and still is to define GSSP sections for all stages of the Neogene system. At present 3 Neogene stages lack a GSSP.

Paleogene Subcommission

- Complete the work on the remaining GSSPs of Paleogene stages.
- Produce an updated version of an integrated Paleogene time scale.
- Produce standardized regional correlation charts, paleogeographic maps, and a state-of-the-art review of the stratigraphic tools used in the Paleogene.

Cretaceous Subcommittee

- To bring recommendations for the remaining 9 GSSPs before ICS as soon as possible, and not later than 2007:
 - 2004 -- Hauterivian, Barremian and Santonian.
 - 2005 -- Valanginian, Albian and Campanian
 - 2005 will be the 7th *International Cretaceous Symposium*, Neuchâtel, Switzerland
 - 2006 -- Aptian and Coniacian
 - 2007 -- Berriasian (base of Cretaceous)
- To communicate the results as widely as possible.

Jurassic Subcommittee

- Of the 10 Jurassic Stages, 3 GSSPs have been ratified, 1 is ready for submission to ICS, and 4 are advanced in their preparation, leaving only 2 with selection of preferred candidate(s) still to be made. All are expected to be finalized by 2006.
- The future focus of the Subcommittee will evolve away from Stage-boundary GSSP proposals to further refinement of the chronostratigraphic scale by integration of multidisciplinary methods of correlation.
- The Paleoclimate Working Group should begin to produce a series of maps showing the paleoclimate of the Jurassic World during selected time-slices, with documentation of the supporting evidence;
- The Tectonic Events Working Group will map in time and space the major tectonic events (including basin subsidence/uplift).

Triassic Subcommittee

- Completion of Triassic GSSPs
 - 2004 – Anisian and Olenekian
 - 2005 – Ladinian, Carnian, Norian and Rhaetian
 - 2006 -- Summary volume of all Triassic GSSPs. Emphasis switches to choice of non-marine auxiliary sections.

Permian Subcommittee

- Complete Late Permian stage GSSP ratification (Changhsingian, Wuchiapingian) during 2004
- Complete Early Permian GSSP selection during 2005

Carboniferous Subcommittee

- Base Viséan GSSP should be selected within the next year.
- The other stage boundaries should be set by GSSPs within the next four years.
- Radiometric dating will be the emphasis of some subcommittee members for the next five years. A merger of cyclostratigraphy with radiometric dating has potential for an ultra-high resolution time scale of the climatic and evolutionary trends through this period.

Devonian Subcommittee

- The subcommittee plans to come to conclusions on the subdivision of the Emsian, Givetian, Frasnian and Famennian stages.

Silurian Subcommittee

- The subcommittee is concerned with the relative scarcity of reliable geochronological dates that are biostratigraphically well constrained within the Silurian System. To improve the

situation, the subcommission executive will encourage its members to collaborate in projects that provide new calibrations for Silurian time.

Ordovician Subcommission

- Approval and ratification of three GSSPs remaining to complete subdivision of Ordovician System with goal of completion by 2005.
- Redirection of Subcommission's focus to interdisciplinary investigation of the global Ordovician Earth system.

Cambrian Subcommission

- Completion of global subdivision of Cambrian. Decisions on several GSSPs will be made at the *Fourth International Symposium on the Cambrian System*, Nanjing, China, 2005.
- Four regional correlation chart volumes are on the way.

Terminal Proterozoic Period Subcommission

- The next phase of subcommission work will focus on (1) the formal stratigraphic subdivision of the Ediacaran Period and (2) the establishment of a GSSP for a geochronologically defined Sturtian Period that preceded the Ediacaran Period.

International Stratigraphic Classification Subcommission

- ISSC differs from other Subcommissions because it is concerned with concepts and principles, and with their application on the various continents. Beyond the ongoing work in establishing an international language for sequence stratigraphy and cyclostratigraphy concepts and units, the ISSC will monitor recent critiques by the scientific community to the Golden Spike concept, and its application and will consider recent proposals to introduce new categories of stratigraphic units (i.e. impact-related units).
- The FINAL GOAL is the publication of a new version of the *Stratigraphic Guide*, simple, well illustrated, user-friendly, including both standard and new techniques.

INTERNATIONAL COMMISSION ON STRATIGRAPHY (ICS)

**DIRECTORY OF OFFICERS
2000-2004**

1 Jan 2004

COMMISSION EXECUTIVE

Chair: Prof. Felix M. Gradstein

Museum of Natural History, University of Oslo
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1st Vice Chair: Dr. H. Richard Lane

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2nd Vice Chair: Prof. Stanley Finney

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Vice-Chair at large: Prof. Domenico Rio

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Secretary General: Prof. James G. Ogg

Dept. Earth and Atmospheric Sciences, Mailcode: 1397 Civil Eng. Bldg.
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Past Chair: Prof. Jürgen Remane, SWITZERLAND

ICS Webmaster: Prof. Sorin Filipescu, ROMANIA

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 Vice-Chair: Dr. Annie V. Dhondt, BELGIUM
 Secretary: Dr Silvia Gardin, FRANCE

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 Vice Chair: Prof. Paul L. Smith, CANADA
 Secretary: Dr. Paul R. Bown, GREAT BRITAIN

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 Secretary: Dr. David M. Work, USA

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Chair: Prof. P. Bultynck, BELGIUM
 Vice-Chair: Prof. Rex E. Crick, USA
 Secretary: Dr. Thomas Becker, GERMANY

SUBCOMMISSION OF SILURIAN STRATIGRAPHY

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Vice Chair: A. Yu. Zhuravlev, RUSSIA
Secretary: Prof. Dr. Gerd Geyer, GERMANY

SUBCOMMISSION OF THE TERMINAL PROTEROZOIC SYSTEM

Chair: Prof. Andrew H. Knoll, USA
Vice-Chair: Prof. Malcolm Walter, AUSTRALIA
Secretary: Dr. Guy Narbonne, CANADA

WORKING GROUP (future Subcommittee) ON PRECAMBRIAN STRATIGRAPHY

Chair: Dr. Wouter Bleeker, CANADA
Vice Chair: Dr. Martin Van Kranendonk, AUSTRALIA
Secretary: Dr. Robert Rainbird, CANADA

SUBCOMMISSION OF STRATIGRAPHIC CLASSIFICATION

Chair: Prof. Maria Bianca Cita Sironi, ITALY
Vice Chair: Dr. Aston Embry, CANADA
Secretary and Webmaster: M.R. Petrizzo, ITALY

TASK GROUP: STRATIGRAPHY INFORMATION SERVICES

Chair: Prof. Eduardo A. Koutsoukos, BRAZIL
Vice-Chair: James S. Crampton, NEW ZEALAND
Secretary: Simone Galeotti, ITALY
Webmaster: Sorin Filipescu, ROMANIA

Four-Year Report to the IUGS Council from the International Commission on the History of Geological Sciences

April, 2004

Membership

Each country can have a maximum of 11 Members. Ballots for new Members are now held every two years. Membership numbers for the last four years have been:

2000–2001	159 (36 countries)
2001–2002	179 (37 countries)
2002–2003	169 (41 countries)
2002–2004	166 (40 countries)

Another (postal) ballot will be held in 2004, for new Members and a new Board, with the results being ratified at the Business Meeting of the Commission in Florence. Members who do not vote in two successive ballots forfeit their membership of the Commission. There are occasional resignations, and there have been a few deaths. Honorary Senior Members (see below) are not now counted in the Commission's country quotas.

Following the review meeting with Members of the IUGS Board in Dublin in 2003, it was recommended by the review group that persons over 70 should not be counted in a country's quota, but people over 70 may still retain membership if they so wish. This allows increase in the number of younger Members in 'crowded' countries like the US. The proposed change requires formal ratification by the IUGS Board and Council, but this will not be available to the Commission until the Florence meeting. Nevertheless, acting upon advice received from Dr Janoscheck, we are proceeding with the changed plan in this year's ballot. It will not involve many changes to practice in practice!

The Board

The Board currently is:

President: Professor Manuel Pinto (Portugal)
 Secretary-General: Professor David Oldroyd (Australia)
 Vice-President (North America): Dr Ursula Marvin (USA)
 Vice-President (Latin America): position vacant
 Vice-President (Europe): Professor Nicoletta Morello (Italy)
 Vice-President (Asia): Professor Kanenori Suwa (Japan)
 Past-President: Professor Hugh Torrens (UK)

Notes

1. The person who was elected to the Latin American vice-presidency for the four-year period of this Report provided no communications at all with the other Board Members and was therefore asked to resign, which he did. The position was then left vacant until the 2004 ballot.
2. Highly suitable persons have been found to fill all the positions in the 2004 ballot, but there will be a large turn-over of Board membership. As a way of maintaining 'institutional memory', it has been decided to create a new position of Vice-President (Australasia and Oceania), for which position the current Secretary-General is to be nominated.

Honorary Senior Members

The Commission, considering the 'problem' of elderly members, no longer able to participate much in its activities, but who wish to maintain links with it, instituted the category of Honorary Senior Members, such persons to be proposed and accepted at a business meeting of the Commission. They will be persons who are of highest distinction in the field or who have made exceptional contributions to the work of INHIGEO. Honorary Senior Members are not counted in a country's quota of 11 Members. This policy still requires formal ratification by the IUGS. At present, 10 persons have been named as Honoraries, but one has subsequently died.

Meetings

Conferences held by the Commission have been:

Rio de Janeiro (2000)

Portugal (Lisbon and Aveiro) + field excursions (2001)

Paris + field excursions (2002)

Dublin + field excursions (2003)

Planned future meetings

Florence Congress: Convening of Session 20.02 (2004)

Field excursion from Florence/Pisa to Venice, visiting sites of importance in the history of geology and major museums relating to the history of geology (2004)

Prague + field excursions (2005)

Contribution to the International Congress for the History of Science, Beijing (2004) (in doubt)

Informal offers of future meetings have been received from the US, Germany, and Lithuania, These have yet to be discussed and an order determined.

Comment:

1. Not too many INHIGEO Members wish to, or can afford to, participate in the full IGCs. On the other hand, they may wish to participate in an INHIGEO organised field excursion; and so too may some non-Members. For this reason, we have not made the 2004 field excursion part of the formal activities of the Congress, and are organizing it independently of the Congress. This separation this year has thus been done for pragmatic reasons, not because of any wish to dissociate the Commission from the Congress. A significant number of papers in Session 20.02 are being offered by non-INHIGEO geologists. Conversely, several INHIGEO Members will participate in the excursion but not attend the Congress. Some will participate in both activities. For the proposed excursion itinerary, please see the attached document.

Publications

Rio Congress

All the eight papers for the INHIGEO session at that IGC were invited. The contributions, together with other invited papers from INHIGEO Members, were formally refereed and published as Special Publication No. 192 of the Geological Society of London (D.R. Oldroyd [ed.], *The Earth Inside and Out: Some Major Contributions to Geology in the Twentieth Century*, 2002).

Portugal Conference

All papers were printed in full, but without formal refereeing, in: M. Pinto (ed.), *Geological Resources and History: INHIGEO Meeting Portugal 2001 Proceedings* (2003), with funding provided by the Gulbenkian Foundation and The University of Aveiro.

Paris Conference

Several books on the work of Alcide d'Orbigny were published by our French colleagues. Papers presented at the meeting were refereed and 33 of them were published in two issues of the new journal of the *Académie des Sciences, Palevol* (October and November, 2002).

Dublin Conference

Papers presented at this meeting have been refereed, and will appear later this year as: P. Wyse-Jackson (ed.), *Geological Travellers*, Pober Publishing Co., New York.

Florence Session and field excursion

We doubt whether the short papers offered in Session 20.02 will be appropriate for the publication of a separate book. Consideration could, however, be given to the preparation of a joint 'Proceedings' publication, in collaboration with Professor Vai's Session 20.01. A Report for the field excursion will be published in the Commission's *Newsletter*, but in all probability no more than that will be possible.

Prague Conference

We understand that our Czech colleagues are thinking about what may be done about publication of the papers for this meeting.

The Commission's Newsletter

These have been edited and produced by the Secretary-General in Sydney as follows:

- No. 32 (2000 for 1999) 84 pp.
- No. 33 (2001 for 2000) 91 pp.
- No. 34 (2002 for 2001) 96 pp.
- No. 35 (2003 for 2002) 98 pp.
- No. 36 (2004 for 2003) currently being compiled

This steady growth reflects the increasing membership and activities of the Commission. The *Newsletters* typically contain reports of meetings, obituaries, notices of honours, short articles, extensive book reviews, interesting 'notes and queries', announcements of forthcoming activities associated with the history of geology, reports of activities in different member countries, and a detailed membership list. They have grown remarkably from the short pamphlet-style *Newsletters* that were issued when the Commission was first founded and their compilation now constitutes a considerable task for the Secretary-General.

During the period covered by this Report, Professor K.S. Murty (India) has solicited information about the existence of geoarchives round the world, and his results have been published annually in the *Newsletters*. However, since this work started it has been overtaken by developments on the internet, so that most archives now advertise their wares through this medium and can easily be accessed through the Google search engine. We have therefore decided to terminate the INHIGEO reports on this topic, while continuing to urge Members to ensure that papers of known eminent geologists in their countries be preserved.

Contributions to Episodes

The Secretary-General has also provided a flow of a substantial number of 'Classic Papers', prepared by INHIGEO Members for the IUGS journal. In addition he has appealed to Members to write special articles on the events of the individual meetings of the International Geological Congress. The response to this has been good, and prospective authors have been found for most of the meetings. So far good quality papers have been submitted to the editorial office in Beijing for the all the Russian meetings, plus Stockholm, Madrid, and London (1948).

Contributions to the Elsevier Encyclopedia of Geology, forthcoming in five volumes, 2004

The Secretary-General has obtained the services of INHIGEO Members to author twenty-two 4000-word articles for this publication. All have been refereed and passed on to the publisher.

In addition, bibliographies of works on the geology of Armenia, the African rift-valley area, and the Canary Islands have been published by the Commission and distributed *gratis* to Members, interested persons, and some major libraries.

Finance (all figures are given in Australian dollars)

2000

Income	Expenditure
4570.07 (IUGS)	1880.95 (President's and S-G's expenses)
2031.49 (IUHPS)	1135.70 (Printing)
114.72 (miscellaneous)	2468.69 (Grants to Members to attend Congress [*])
	947.21 (Archive work grant)
	208.12 (Miscellaneous)
<hr/>	<hr/>
6716.28	6640.67

* This money was provided by the IUHPS grant money, not the IUGS.

2001		
Income		Expenditure
5892.75 (IUGS)		793.80 (S-G's expenses)
0000.00 (IUHPS)**		1320.00 (Printing)
141.45 (Miscellaneous)		2384.49 (Grants to Members attending Conference)
		1995.59 (Grant to guest lecturer from Canada)
		16.81 (Miscellaneous)
<hr/>		<hr/>
6034.42		6510.69
2002		
Income		Expenditure
5348.56 (IUGS)		800.00 (S-G's expenses)
1891.68 (IUHPS)		1053.00 (Printing)
141.50 (Miscellaneous)		425.00 (GSL subvention for colour printing for SP 192)
		4635.67 (Grants to Members attending Conference)
		7.92 (Miscellaneous)
<hr/>		<hr/>
7708.74		7248.34
2003		
Income		Expenditure
5963.42 (IUGS)		671.19 (President's expenses, attending meeting in Nice)
1576.28 (IUHPS)		800.00 (S-G's expenses)
267.01 (Miscellaneous)		1413.50 (Printing)
		793.85 (Grant to Vilnius Univ. towards Conference publication)
		410.39 Translation charge from Russian (for <i>Episodes</i> Classic Paper)
		4628.48 (Grants to Members attending Conference)
		10.50 (Miscellaneous)
<hr/>		<hr/>
7806.74		8149.36
<i>Summary</i>		
Total income		Total expenditure
6716.28		6640.67
6034.42		6510.69
7708.74		7243.34
7806.74***		8149.36
<hr/>		<hr/>
28266.18		28544.06

Notes

1. No grant has been allocated by the IUHPS in 2004 towards the organization of the INHIGEO field excursion in Italy, since there was a misunderstanding (which has been acknowledged as their error). They thought that we were applying for money to assist people to attend the Florence IGC, which they could not agree to allocate as it would have been money for another body's Congress. In fact, the money was requested for use towards our independent INHIGEO field excursion. They managed to lose my original submission and a second copy was forwarded as a matter of urgency. Possibly the ensuing haste led to the misapprehension as to the nature of our application.
2. The Commission would not have been viable without its access to free mailing from the S-G's Institution. However, we understand that the envisaged new incumbent's institution has agreed to offer similar support.

David R. Oldroyd
Secretary-General, INHIGEO, 5 April, 2004

** The Commission was unable to participate in the IUHPS Congress.

*** Due to a transcription error, this figure was given in the Annual Report as \$7708.74.

International Union of Geological Sciences

Commission on the Systematics in Petrology (CSP)

2000-2003 Summary Report

TITLE OF CONSTITUENT BODY:

IUGS Commission on the Systematics in Petrology (CSP).

OVERALL OBJECTIVES:

The overall objectives of the Commission on Systematics in Petrology (CSP) are the classification of igneous, metamorphic and sedimentary rocks, the elaboration of principles and recommendations, and establishing data bases, leading to a comprehensive nomenclature of magmatic, metamorphic and sedimentary rock-types. These objectives aim at co-ordinating international efforts and international communication in the field of systematics. Achieving classificatory schemes for rocks which are internationally accepted will result in strengthening international co-operation and scientific communication in the broadest frame of geological research.

Information about CSP and its activities may be obtained through the CSP new website at <http://www.dmp.unipd.it/IUGS-CSP/IUGS-CSPindex.htm>, with links to the IUGS homepage and the pages of the Subcommittee.

ORGANIZATION:

On the 50th Executive Committee meeting of the IUGS at Lower Hutt (New Zealand, February 2002) Prof. Giuliano Bellieni have been nominated as the new Chairman of the CSP because of the official engagement of Prof. J. Keller ended with the year 2000. Dr. Raffaele Sassi has been nominated Secretary-General.

Actually the parent commission (CSP) is composed of Chairman (Prof. Giuliano Bellieni), Vice-Chairman (Prof. Jorg Keller), Secretary-General (Dr. Raffaele Sassi) and twelve members through ten countries.

DURING THE LAST 4 YEARS, THE COMMISSION HAD FOUR SUBCOMMISSIONS:

- **Subcommission on the Systematics of Igneous Rocks (SSIR)**. Chairman: Bernard Bonin, Orsay (France); Secretary: Bernard Platevoet, Orsay (France). The Subcommittee comprises 14 members.

- **Subcommission on the Systematics of Metamorphic Rocks (SCMR)**. Chairman: Douglas Fettes, Edinburgh (UK); Secretary: Jaqueline Desmons, Nancy (France). The Subcommittee comprises 26 members. The Subcommittee established an advisory Working Group of c200 geologists spread worldwide and 9 Specialist Study Groups comprising c50 geologists.

- **Subcommission on Data Bases for Petrology (SDBP)**. Chairman: José Brandle, Madrid, Spain; Secretary: Geza Nagy, Budapest, Hungary. This commission completed its activity in 2002 and it was closed.

- **Subcommission on the Systematics of Sedimentary rocks (SSSR)** is still in process of establishment. Niichi Nishiwaki has contacted active sedimentologists to form a discussion group in order to re-establish this subcommission.

	2003	2002	2001	2000
CSP	Chairman: G. Bellieni Vice-Chairman: J. Keller Secretary General: R. Sassi	Chairman: G. Bellieni Vice-Chairman: J. Keller Secretary General: R. Sassi	Chairman: Prof. J. Keller Vice-Chairman: A. Dudek Secretary General: Dr. H. Muller-Sigmund	Chairman: Prof. J. Keller Vice-Chairman: A. Dudek Secretary General: Dr. H. Muller-Sigmund
SSIR	Chairman: B. Bonin Secretary: B. Platvoet	Chairman: B. Bonin Secretary: B. Platvoet	Chairman: M. Le Bas Secretary: A. Woolley	Chairman: M. Le Bas Secretary: A. Woolley
SCMR	Chairman: D.J. Fettes Secretary: J. Desmons	Chairman: D.J. Fettes Secretary: J. Desmons	Chairman: D.J. Fettes Secretary: J. Desmons	Chairman: Dr. R. Schmidt Secretary: J. Desmon
SDBP	CLOSED	Chairman: J. Brandle Secretary: G. Nagy	Chairman: J. Brandle Secretary: G. Nagy	Chairman: J. Brandle Secretary: G. Nagy

EXTENT OF NATIONAL/REGIONAL/GLOBAL SUPPORT:

Members of the Commission and Subcommissions represent more than 30 countries. With a large additional number of corresponding members in Working Groups, etc., they represent a wide spread among both geologists and countries. The broad international activities with working meetings, written exchange and personal contacts would not be possible without a substantial additional support from national sources for administrative/secretarial expenses and for travel subsistence.

In particular, support from the following organisation is acknowledged: UNESCO, CNR-Italy, Academy of Sciences Russia, Carnegie and Smithsonian Institutions, USA, NERC-UK, World Data Center-"A", ETH

Zürich, Natural History Museum of London (UK), Academy of Sciences (China), Spanish Ministry of Education and Research, University of Padova, University of Freiburg, University of Paris-Sud.

INTERFACE WITH OTHER INTERNATIONAL PROJECT:

Close liaison between the Commission and three Subcommissions with overlapping membership. Russian terminological Commission.

Important it was the close linkage with the adjoining IUGS, Commission on Igneous and Metamorphic Petrogenesis (CIMP) Global Sedimentary Geology Commission (GSGC) and Management and Application of Geoscience Information (CGI). Same for, Commission on New Mineral Names (IMA) and for several IGCP Projects.

CHIEF ACCOMPLISHMENTS in 2000-2003:

The Commission and its three active Subcommissions continued their work on systematics, classification and nomenclature of igneous and metamorphic rocks with questionnaires, circulars and written discussions.

- **SSIR:** The main activity was the publication by Cambridge University Press of the 2nd Edition of the "Blue Book": "Igneous Rocks. A Classification and Glossary of Terms", Recommendations of the International Union of Geological Sciences Subcommission on the Systematics of Igneous Rocks. R.W. Le Maitre (Editor). Activity was run mainly by electronic messages during the careful proof reading stage, between the editor Roger Le Maitre and all the authors that are alive today.

This Subcommission is now working on the possibility to use the TAS classification towards the plutonic rocks.

- **SCMR:** A considerable amount of drafting, reviewing and editing of texts was carried out. A meeting of the full Subcommission was held in Prague in September 2003. This was seen as the last full meeting and the aim was to agree actions and a schedule to bring the Subcommission's work to full publication. The main results were: i) the eight papers, which had been posted on the website as 'provisional Recommendations', were considered in the light of received comment. All the papers were accepted as 'Recommendations' subject to agreed minor changes; ii) the four remaining papers were presented by their senior authors and actions agreed to finalise these papers as 'recommendations' by late 2004; iii) progress on the Glossary was considered and a schedule for completion by summer 2004 agreed; iv) a format for a book publication was agreed, with chapters based on the current papers.

The website has been edited and upgraded.

- **SDBP:** This Subcommission has been active and successful up to 2002. During the Rio IGC 31st 12 papers are presented in oral and poster session. This symposium was organised to:

i) establish relationships among interested researchers in geological data base, ii) update of the IGBA and SEDBA with addition of new data, correction of previous data, revision of software, iii) develop different version for different platforms.

WEB: About 40000 analyses have been stored and can be retrieved and displayed with conjunction to the GIS system.

This Subcommission finished its work and then it was definitively closed.

- **SSSR:** During 2000-2003 Prof. Niichi Nishiwaki has contacted active sedimentologists to form a discussion group in order to re-establish this subcommission. The planned activity will focus on the re-establishing of this Subcommission through calls for specialist and papers during the 32nd IGC.

PRODUCTS IN 2000-2003:

CSP

- Bellieni G. & Sassi R. (2003) – IUGS Commission on the Systematics in Petrology (CSP). Episodes, vol. 26-2, 142-143.

SSIR

- Le Bas M.J. (2001). Report of the working party on the Classification of the Lunar Igneous. Meteoritics and Planetary Sciences, 36.

- Le Maitre R.W. (Ed.), Streckeisen A., Zanettin B., Le Bas M. J., Bonin B., Bateman P., Bellieni G., Dudek A., Efremova S., Keller J., Lameyre J., Sabine P.A., Schmid R., Soerensen H., Woolley A.R. (2002). Igneous rocks. A classification and glossary of terms. Recommendations of the International Union of Geological Sciences Subcommission on the Systematics of Igneous Rocks. Cambridge University Press, Cambridge, 0-236.

- downloadable C++ routines for implementing the TAS classification for volcanic rocks, including code for CIPW norm calculations, from <http://www.cambridge.org/resources/052166215X>.

SCMR (downloadable at <http://www.bgs.ac.uk/SCMR/>)

- Schmid, R, Fettes, D, Harte, B, Davis, E, Desmons, J, and Siivola, J: Towards a unified nomenclature in metamorphic petrology: How to name a metamorphic rock. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 14.01.2001.

- K H Brodie, D Fettes, B Harte & R Schmid: Towards a unified nomenclature in metamorphic petrology: Structural terms, including fault rocks. A proposal on behalf of the IUGS Sucommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.10.2002.
- Smulikowski, W, Desmons, J, Harte, B, Sassi, F P Schmid, R: Towards a unified nomenclature in metamorphic petrology: Types, grade and facies. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.01.2003.
- Desmons, J, Smulikowski, W, and Schmid, R: Towards a unified nomenclature in metamorphic petrology: High-P/T rock terms. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.07.2002.
- Árkai, P, Sassi F P and Desmons, J. Towards a unified nomenclature in metamorphic petrology: Very low - grade to low grade metamorphic rocks. A proposal on behalf of the IUGS Sucommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.10.2002.
- Dudek A, Coutinho, J M V, Desmons, J, Kräutner, H G, Sassi F, Schmid R and Sen S: Towards a unified nomenclature in metamorphic petrology: Amphibolite and granulite. A proposal on behalf of the IUGS Sucommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.10.2002.
- Wimmenauer, W., and Bryhni, I.: Towards a unified nomenclature of metamorphism: Migmatites and related rocks. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 31.07.2002.
- Rosen, O M, Desmons, J. and Fettes, D.: Towards a unified nomenclature of metamorphism: Carbonate and related rocks. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Draft only, web version of 30.06.2003.
- Stöffler, D. and Grieve, R.A.F. : Towards a unified nomenclature of metamorphism: Impactites. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Provisional recommendations, web version of 30.06.2003.
- Towards a unified nomenclature of metamorphism: Metasomatic rocks. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Proposal, in preparation.
- Towards a unified nomenclature of metamorphism: Contact metamorphic rocks. A proposal on behalf of the IUGS Subcommission on the Systematics of Metamorphic Rocks. Proposal, in preparation.

SDBP

Oral and Poster presentation at 31° IGC in Rio 2000

Session 24.4 (Use and future of Geological Data Base) 2000

- Data base of Paleozoic-Mesozoic sandstone in Japan and its application to discrimination of tectonic provinces from chemical composition.
- Database system to manage Nerst distribution coefficients and its application for petrogenetic modelling.
- The MPI database georoc: a new web tool for scientist.
- 221500 elements analyses of 5500 volcanic rock samples included in the first geochemical database of the kamchatka island arc system: low-K, calc-alkaline, highK, shoshonite, ultra-potassic and K-Na alkaline basalt series.
- Litho-geochemical data base support to the new geological map of Tenerife.
- IGBA2000: A comprehensive system of FORTRAN programs for decoding of the International IGBA database IGBA-DAT.

SUMMARY OF IUGS SUPPORT AND CSP EXPENDITURES

	2003	2002	2001	2000
SUPPORT FROM IUGS (US\$)	2000	2000	Allocations not request	Allocations not request
EXPENDITURES (US\$)				
CSP	217	1691	none	none
SSIR	500	500	54	none
SCMR	4752	337	609	15
SDBP			none	500

AIMS FOR 2004 AND ONWARDS

CSP: Revision of the membership as many member have indicated their willingness to resign after so many years of sustained activity and nomination of new members representative of world-wide countries.

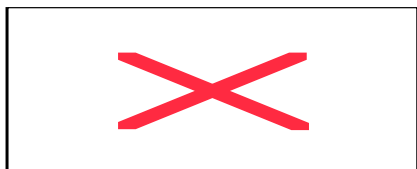
SSIR: Re-examination of problems stemming from the discussions during the preparation of the 2nd Edition of the Blue Book, namely the enlarged use of the TAS classification towards the plutonic rocks.

Building of the website of the SSIR, which is still lacking.

SCMR: Publication of Systematics of Metamorphic Rocks and complete the Glossary of Metamorphic Rocks as the Igneous Rock ("Blue Book"). A short meeting of members attending the IGC might be held but no farther meetings of the full Subcommittee are planned. Obtain general agreement on final recommendations on systematics of metamorphic rocks and discuss the final format for hardcopy publishing

SSSR: The planned activity will focus on the re-establishing of this Subcommittee through calls for specialist and papers during the 32nd IGC.

Date: April 14th 2004



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