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RESOURCING FUTURE GENERATIONS: SECOND CALL FOR PROPOSALS

IUGS invites bids for small top-up grants to take forward discrete pieces of work in support of RFG. This second invitation is open to all.

The first call in April 2016 attracted an encouraging number of proposals with six gaining funding.

Applications are invited for:

1. Novel work on an aspect of RFG, which develops an ongoing piece of work or an already separately funded research grant;
2. Organizing and running a workshop to promote RFG or an RFG theme.

Grants will average \$3000, though exceptionally a larger sum may be awarded. The full call is accessible at: <http://geolsoc.org.uk/RFG>

THE PUBLICATION OF EPISODES IS MOVING!

The present issue (December 2016) is the final one to be published for IUGS by the Geological Society of India, Bengaluru.

The next issue (March 2017) will be published by the **Geological Society of Korea**. The team in India will continue to process existing papers and receive new submissions until **December 1, 2016** after which submissions should go to:



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From March 2017, Episodes will be published online with printed copies being available on demand. **Arrangements for existing and new subscribers will be announced soon.**

REPORT ON THE 14TH WORKSHOP ON “DEEP PROCESSES AND METALLOGENY IN NORTHERN-CENTRAL-SOUTHERN ASIA” IN VLADIVOSTOK 3-6 OCTOBER 2016

Roland Oberhänsli
Past-President

From 3 to 6 October a team from VESGEI St. Petersburg and the Far East Institute of Geology of the Far East Branch of the Russian Academy of Sciences organized a workshop under the auspices of CGMW to work on the compilation of a new set of maps and Atlases of the Northern, Central, and Eastern Asian Realms using existing geological and tectonic maps as the basis. The new maps will focus on resource potential and make use of geochemical, aeromagnetic and gravity maps that had to be harmonised between the countries before compilation could begin. The existing collaborations will be extended. At this workshop the teams from Russia, China, Mongolia, Kazakhstan and Korea were complemented for the first time by a delegation from Japan which, hopefully, will become the 6th partner in the working group. During two days some 30 papers and 8 posters on data and concepts, regarding the new task, defined during the CGMW Council at the 35th IGC in Cape Town were presented and discussed. The workshop was followed by two days of excursions on and around Russian Island, south of Vladivostok.

The President of CGMW Philippe Rossy as well as myself as President of the CGMW sub-commission of metamorphic and magmatic maps and Past-President representing IUGS attended the workshop. The theme of the workshop allowed a presentation on the IUGS initiative “Resourcing Future Generations” and to remind those attending that the RFG 2018 interim congress in Vancouver could be a venue for presenting this Asian initiative to prepare resource maps.



NEW COMMISSION ON GEOHERITAGE

A new commission was approved during the last IGC in Cape Town. The new commission comprises two subcommissions, specifically the Heritage Stone Resource Subcommission (HSRS) and the Heritage Sites and Collections Subcommission (HSCS). The new commission will continue to develop the activities of the original Task Groups: Heritage Stone Task Group and Geoheritage Task Group. The initial challenge for the Commission is to establish formal links with other organisations and programmes working on the broad field of Geodiversity and Geoheritage and its links to architectural heritage, culture heritage and the built environment. More information on the new commission is available from Secretary Generals of the Subcommissions: Lola Pereira (mdp@usal.es) and Kevin Page (kevin.page@plymouth.ac.uk)

GSSP FOR THE CHATTIAN STAGE (OLIGOCENE SERIES; PALEOGENE SYSTEM) IS RATIFIED BY IUGS

In September 2016, the IUGS Executive Committee voted for ratification of the Global Stratotype Section and Point (GSSP) for the base of the Chattian Stage (Oligocene Series). The boundary is now formally defined at the highest common occurrence of the planktonic foraminifer *Chiloguembelina cubensis* at meter level 197 in the Monte Cagnero section, Piobbico (Marche, Central Italy). Italy is now the location of ten ratified GSSPs. A dedication ceremony for the GSSP is planned for May 2017. The most recent version of the ICS International Chronostratigraphic Chart can be viewed and downloaded from the ICS webpage <http://www.stratigraphy.org/index.php/ics-chart-timescale.be>

ICSU EXTRAORDINARY GENERAL ASSEMBLY IN OSLO OCT. 24, 2016

At a joint General Assembly of the International Council of Sciences (ICSU) and the International Council of Social Sciences (ISSC) and ISSC, their members voted in favor of merging ICSU and ISSC to form a new International Science Council. Both former and newly elected IUGS Presidents Roland Oberhansli and Qiuming Cheng attended the general assembly in Oslo on Oct. 24. Prior to the assembly, Roland Oberhansli and Qiuming Cheng met other leaders from other members of the GeoUnions to discuss the development of the latter. Qiuming Cheng also met Richard Sinding-Larsen, former Secretariat General of IUGS, and both discussed an initiative regarding GeoIntelligence for Resource-Based Economic Development in Africa.

2016 TOTTORI EARTHQUAKE (M 6.6; 10 KM DEEP) AND ITS TECTONIC AND HISTORICAL ASPECTS

Ogawa, Y. and Johnston, S.T. (2016)

On October 21st, 2016, a major earthquake occurred with continuous aftershocks (maximum M 6.6; 10 km deep, largest intensity 8 to 10 on the Modified Mercalli Scale, 6 on the Japanese scale). The largest measured acceleration was 1494 gal at Kurayoshi City, larger than the 2016 Kumamoto earthquake at 1362 gal). No people were killed but some buildings were damaged. The following is a short report of tectonics and historical data.

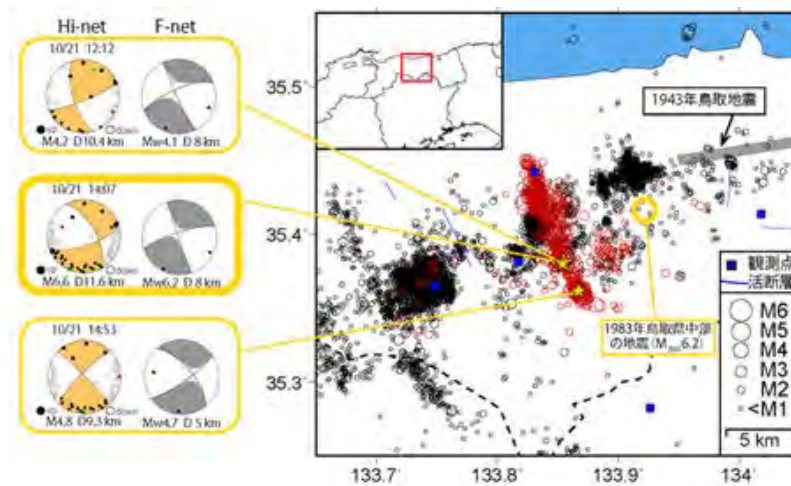


Fig.1. Epicenter of the major quake (upper yellow stars, including the foreshock, 1.5 hrs before), and aftershocks (red circle). Black is before the main shocks, and E-W gray bar is a focal plane trace of a 1943 Tottori earthquake (M 7.2). From NIED HP (<http://www.hinet.bosai.go.jp/topics/tottori161021/?LANG=j>)

According to a preliminary report by NIED, the focal mechanism of the main shock may be due to a strike slip by NW-SE sigma 1 (Figs. 1), but normal faulting was also included within the aftershocks (Fig. 2)

The tectonics of this region around Tottori Prefecture, Chugoku district, on the Japan Sea side of Honshu was interpreted as a transitional strained zone of the plate boundary between the Amurian and Philippine Sea plates by Takeshi Ishibashi (2015).

As with the very recent New Zealand earthquake, we should be prepared for possible large aftershocks, and more specifically a very large earthquake such as those which occasionally occurred historically along the Nankai trough associated with subduction. There could also be links to a volcanic eruption such as that which occurred 1 month ago at Aso volcano. We must wait to see what happens next. Full report is available at : www.iugs.org

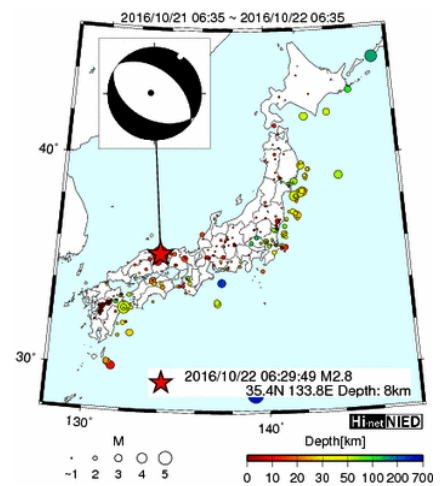


Fig.2. Normal fault mechanism of the after shock. From HP of NIED, <http://www.hinet.bosai.go.jp/?LANG=ja>

ANNOUNCING AN IMPORTANT NEW BOOK ON THE DEVONIAN

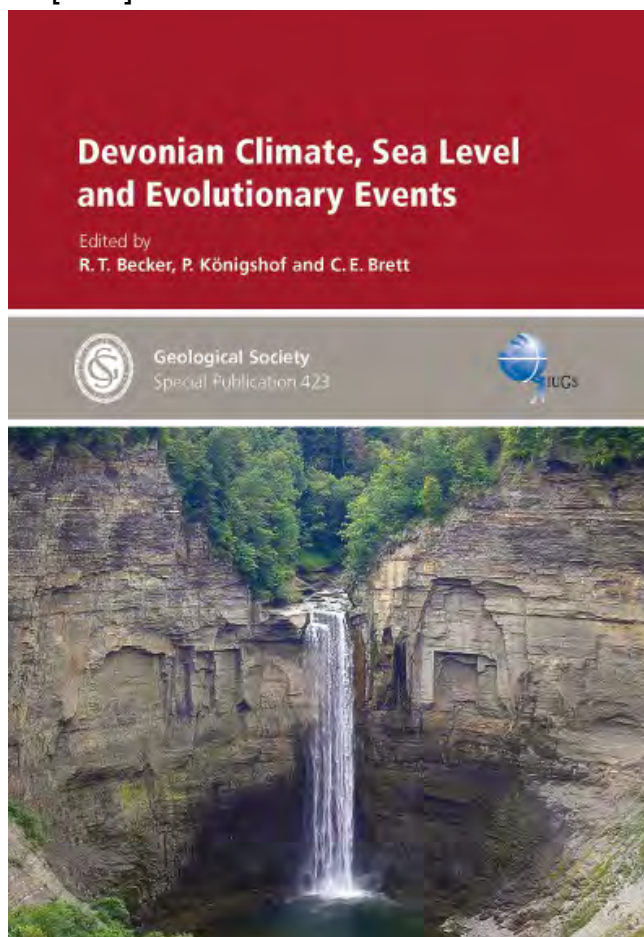
R T Becker, P. Königshof and C.E. Brett [Eds.]

Geological Society Special Publication 423, Geological Society (London) 481pp
Published online 4th October 2016 (printed copies available soon)
The geological and palaeontological records of climate change and evolutionary events reflect Earth's widely fluctuating climate systems.

Past climates hold the clues to understanding future developments. In this context, research on linked climate, biodiversity and sea-level fluctuations in the Devonian contribute to the general knowledge of deep-time climate dynamics. A fruitful cooperation between the International Geoscience Programme and the International Sub-Commission on Devonian Stratigraphy (SDS) addressed the complex succession of climate-linked Devonian global events of varying magnitude. The primary

goal of IGCP596 was to assess mid-Palaeozoic climate changes and their impact on marine and terrestrial biodiversity using an interdisciplinary approach. The focus of SDS includes a revision of the eustatic sea-level curve and the integration of refined chrono- and bio-stratigraphy with modern chemo-, magneto-, cyclo-event and sequence stratigraphy. This enabled much improved dating and correlation of abiotic perturbations, evolutionary changes, and organism and ecosystem ranges. Results by 37 authors are presented in 14 chapters, which cover the entire Devonian.

Readers are reminded that GSL is the preferred publisher of books from IUGS-related activities. Proposals for new titles should be sent to angharad.hills@geolsoc.org.uk. Instructions on proposals can be found at the GSL website https://www.geolsoc.org.uk/sp_authorinfo





IAPG SESSIONS ON GEOETHICS AT THE 35TH IGC

Geoethics played an important part in the programme of the last 35th IGC in Cape Town, thanks to several events organized by IAPG – International Association for Promoting Geoethics (<http://www.geoethics.org>): 6 oral sessions, 1 poster session and 1 panel session. 27 speakers with different skills and expertise, coming from 17 countries in 5 continents, discussed both theoretical aspects and case-studies of geoethics, covering a wide spectrum of geoethical issues including: theoretical and educational aspects of geoethics (Silvia Peppoloni, David Mogk, John Geissman and Shree Prasad Vista), ethical implications in mining (Edmund Nickless, Pekka Nurmi, Madhumita Das), in geohazards (Eldon Gath and George Stone), in geoheritage and environmental protection (Margaret Brocx); relationships between geoscientists and decision makers (Mark Priddle), ethical activities in geoscience organizations (Christine McEntee and Heather Houlton), frauds in paleontology (Artur Sà), ethical aspects in data management (Michiel Van der Meulen and Serge Van Vessel), geoscience communication (Iain Stewart, Martin Bohle, Nick Bilham) and local population involvement (Daniel Lebel), global initiatives on sustainability and risk reduction (Joel Gill), geosciences to serve society (Jean-Robert Mweze, Nic Bilham, Ezzoura Errami, Marie Fleming and Koen Verbruggen). 5 keynote speakers (Silvia Peppoloni, Christine McEntee, Iain Stewart, David Mogk, Edmund Nickless) and 5 panelists (Nic Bilham, Ruth Allington, Silvia Peppoloni, David Mogk, Heather Houlton) addressed the topic “What’s the point of geoethics”, highlighting key-issues and giving a framework of reference for future development of geoethics (<http://www.geoethics.org/35thigc.html>). A large audience attended all the 3 day-sessions, with fruitful involvement in discussion.

The great success of the consideration of geoethics in Cape Town was the result of cooperative work led by IAPG together with IUGS-Task Group on Global Geoscience Professionalism, Geological Society of London, European Federation of Geologists, EuroGeoSurveys, and contributions of representatives of the American Geosciences Institute, American Geophysical Union, Natural Resources Canada, African Association of Women in Geosciences, Geological Survey of Finland, Geological Survey of the Netherlands and Geological Survey of Ireland.

The interest of geoscientists in geoethical aspects has expanded greatly and today geoethics has a higher visibility than before. During the past 4 years IAPG has worked to give greater scientific dignity to Geoethics by developing a clear conceptual strong base for the future development of ethical issues by the geoscience community. This result was a target met by the IAPG founded in 2012 at the 34th IGC and, at the same time, a starting point for the next phase of geoethics work by the Association. In her keynote talk, Silvia Peppoloni announced the next publication of the IAPG - the “Cape Town Statement on Geoethics” - that takes stock of the present situation on geoethics and will be an essential point of reference.

IAPG thanks all who contributed to the success of the symposium on geoethics.

OTHER NEWS FROM IAPG

IAPG held its 1st General Assembly in Cape Town during the 35th IGC. Among the decisions, the institution of the Geoethics Medal and the International Geoethics Day. Details will be published in the IAPG website (<http://www.geoethics.org>). IAPG has proposed and organized sessions/symposia on geoethics at the 88th Congress of the Italian Geological Society and the IX Geological Congress of Spain in September 2016. New IAPG events are scheduled for the XVIII Peruvian Congress of Geology in October and for the AGU Fall Meeting 2016 in December. An IAPG workshop will be held in Nigeria in October 2016. MINERLIMA 2016 will be held in November 2016 as a joint initiative IAPG-Peru and Peruvian Geological Society. More information is available in the section “Events” in the IAPG website.

Photo-gallery from the IAPG sessions on geoethics at the 35th IGC



Chairpersons of an IAPG session: John Geissman and Silvia Peppoloni.



Audience of the IAPG sessions.



Panelists of the session “What’s the Point of Geoethics?”



Discussion during an IAPG session.



Grounded in geoscience, the conference will serve as a forum for industry, government, academia and other stakeholders to discuss their research as well as the key issues and trends shaping the future delivery of energy, minerals and water resources within the context of sustainable development.

The Premiere International Conference on:

**MINERALS
ENERGY
WATER
THE EARTH**

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SESSION PROPOSALS

Submit your session proposal under the technical and nontechnical themes and sub-themes making up the below matrix.

Proposals will be accepted until February 2017. Ideas that depart from session themes, provided that they are relevant to the conference, will be considered.

Session proposals must include:

Proponents | Session title |
Short summary | Relationship to conference partners |
Expected participation

Energy	Minerals	Water	The Earth	Resources and Society
Conventional	Major Minerals	Sub-surface Water	Earth Evolution	Resources and Indigenous People
Unconventional	Minor - Critical Minerals	Surface Water	Earth Processes	Role of Geological Surveys
Sedimentary Basins	Technology and Metals	Water - Minerals	Earth Systems	Resource Frontiers - Arctic, Oceans
Geothermal - Renewable	New Sources	Water - Energy	GAC-MAC	Sustainability and Climate
				Knowledge and Education
				Geoethics
				Young Leaders

SUBMIT YOUR SESSION PROPOSAL

WHY RFG 2018?

The rapid growth of developing economies and the fundamental needs of many disadvantaged people across the globe are resulting in an increased demand for many resources and changes in the delivery of existing ones. The need for focused environmental priorities and new technologies will add additional requirements and constraints.

The **International Union of Geological Sciences (IUGS)**, the **Canadian Federation of Earth Sciences (CFES)**, the **Canadian Institute of Mining, Metallurgy and Petroleum (CIM)**, the **Geological Association of Canada (GAC)** and the **Mineralogical Association of Canada (MAC)** are partnering to bring industry, academia and governments together to tackle this growing issue.

The **Resources for Future Generations conference (RFG 2018)** takes its theme from a **new IUGS initiative** of the same name designed to mobilize **geoscientists, policy-makers**, and other stakeholders to explore resource and related sustainability issues.

RFG 2018 Technical Partners and Supporters

Who will attend?

This joint venture is estimated to attract 4,000 to 5,000 scientists, policy-makers, industry representatives and members of civil society.

[Download the brochure!](#)



Education

4-day technical program
2,500+ oral presentations and poster sessions
Daily plenary followed by themed keynotes



Discovery

Short courses and field trips



Community

4,000 to 5,000 Canadian and international participants



Exhibition

3-day trade show



Students & Emerging Leaders

Special events and sessions dedicated to students and emerging leaders



Networking

Knowledge exchange and business opportunities

Spread the word, join the **#RFG2018** discussion.



Forward



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NOTES

- If you require notices, information on publications, etc. to be considered for inclusion in forthcoming IUGS e-bulletins, please mail to amel.barich@iugs.org or amel.barich@gmail.com.
- Please check the IUGS [Calendar of Events](#) for upcoming scientific meetings this coming month. If you require information on international conferences, meetings, etc. to be considered for inclusion in this Calendar please mail to: peter.bobrowsky@canada.ca
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