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## Introduction

The new IUGS Executive Committee (EC) held its 1<sup>st</sup> Annual Meeting in Paris on 18-22 February, 2013 linked with a meeting of the Scientific Board of the International Geoscience Program (IGCP) - a joint program of IUGS and UNESCO. At the Annual Meeting, the EC reviewed and discussed annual reports and funding requests from IUGS activities (Commissions, Task Groups, Initiative, and Joint programs), Affiliate and Adhering Members. It finalized the 2013 IUGS budget, which allocated over \$400,000 for scientific programs and meetings; considered ad hoc reviews of the joint programs – IGCP and Geological Applications of Remote Sensing (GARS); agreed to sponsor a workshop in the G-EVER Meeting in Sendai, Japan on Catastrophic Tsunami (October 2013); agreed in principle to hold inter-IGC thematic conferences and regular summer schools; accepted as affiliate members two associations representing the geoethics community; and considered IUGS' strategic directions.

The EC decided to develop a small number of new proposals, building on the IUGS strategic plan accepted at the 34<sup>th</sup> IGC in Brisbane (<http://iugs.org/index.php?page=documents>) the recommendations of the final report of the Global Geoscience Initiative (GGI) (<http://www.agiweb.org/members/ggi/GGIFinalReport.pdf>) and the recommendations of the IUGS-IGC Statutes and Bylaws Committee. An outline of proposed initiatives and activities follows:

### *Proposed international initiative on meeting the needs for natural resources in the long term:*

The IUGS strategic plan and the GGI both recognize that population growth and the aspirations of developing nations mean it is a priority to secure new mineral, energy and water resources for the future, while meeting the environmental and social imperatives for sustainable development. This has led the EC to propose a major new IUGS program, which will address what should be done in the short-term to help meet the resource needs of future generations. At this stage, this program is being referred to as **Resourcing Future Generations (RFG)**, and it is intended that the initial emphasis will be on mineral resources.

The EC's expects that this will encompass, in part, more detailed evaluations of resource potential in under-explored regions, many of which are in less developed countries. This would probably require, amongst other factors, work in three areas where IUGS can bring influence:

1. Capacity building in terms of geological maps/mapping, data management, mineral systems understanding, exploration models, geophysical acquisition programs and integration of geophysical and geological data, etc.
2. Enhanced applications of satellite technologies for geological and environmental condition mapping and identifying possible mineral systems.

3. Geo-governance and education in relation to conflicts between resources (minerals vs. water vs. energy), and between production of resources and other land uses (agriculture, urbanization, conservation).

It is envisaged that the IUGS would play a catalytic and coordination role in RFG, and that there would be collaboration with diverse groups, which can contribute additional relevant experience and expertise.

To progress RFG, we are currently establishing a New Activities Strategic Implementation Committee (NASIC) – comprising a small group of eminent people from different parts of the world who can bring broad knowledge and strategic vision. It is planned to have NASIC established no later than mid-April and for its' draft report focused on mineral resources to be completed by October 2013.

NASIC will scope the proposed RFG initiative and advise the IUGS Bureau on its' implementation by addressing a series of important, inter-related threshold questions:

- Is RFG a concept worth developing?
- Is IUGS – as an apolitical, non-government union representing the international geoscience community – the right organization to take a lead in developing/coordinating/catalysing RFG as a substantial international program, given:
  - ✓ IUGS' formal contacts with some 120 member countries and associations with many geosurveys and societies internationally, and
  - ✓ IUGS activities, including support for geoscience training programs, geoscience standards, participation in Group on Earth Observations (GEO/GEOSS); etc?
- What other groups should be involved, including details of potential contacts?
- Who could be leaders/champions of RFG, including details of potential contacts?
- What would be needed to attract geosurveys interest/support?
- What would be needed to attract industry interest/support?
- What would be needed to attract others including international funding agencies, researchers, etc.?
- Are there likely to be sensitivities arising from having countries with different socio-economic philosophies, stages of development and resource requirements as active participants in RFG (e.g. China, Russia, India, Kazakhstan, Mongolia, US Canada, Australia, Latin American countries, South Africa, and developing nations in Africa and elsewhere) – and how could any such issues be dealt with?
- What is the general approach and indicative timeline recommended to develop and implement RFG, given the Pardee Keynote Symposium on Resourcing Future Generations that IUGS is convening for the GSA meeting in late October, 2013, and the proposed global summit on Resourcing the Future, to be hosted by China in mid-2014?
- Would there be mutual benefits if IUGS (and partners) were to develop RFG under another over-arching initiative(s), such as the well-funded and broadly based Future Earth (<http://www.icsu.org/future-earth>, which is being implemented by an ICSU-led alliance?

If you have any constructive suggestions for RFG, or wish to express your willingness to play a significant role in the proposed initiative, please email: [ian.lambert7@gmail.com](mailto:ian.lambert7@gmail.com) and [iugs.beijing@gmail.com](mailto:iugs.beijing@gmail.com).

### ***International Tsunami workshop***

The IUGS has agreed to sponsor an international workshop: **Catastrophic Tsunami**, which will be designed to identify the gaps in geological knowledge that need to be addressed to help mitigate the impacts of this hazard. This is to be held in conjunction with the G-EVER meeting, in October 2013, in Sendai, Japan (<http://g-ever.org/en/intro/index.html>). The rationale for this follows:

There is now broad acceptance that it is not possible to rule out any subduction zone capable of hosting a great earthquake (equal to or greater than Mw 9). It follows that it is important that there is considerable activity aimed at providing relevant information as to where major tsunamigenic earthquakes are most likely to occur. There is a considerable number of major earthquake and tsunami activities under way, but this workshop will address whether:

- There are other important activities that should be undertaken systematically
- There is scope for better linkages between various activities
- There are important gaps in knowledge that should be addressed. For example, is there a need for:
  - ✓ More coordination of research, analyses and modeling of data.
  - ✓ Improving coverage and coordination of geodetic and seismic monitoring networks.
  - ✓ Systematic internationally coordinated geological inputs, particularly identifying paleo-tsunami deposits in the recent geological records to establish the occurrence, magnitude and frequency of tsunami in all regions with significant populations at risk.
  - ✓ Systems analysis to understand concatenated events, e.g., mega-thrust earthquake, tsunami flooding, volcanic eruption - lava flooding and volcanic ash clouds, health issue and aviation problems.
  - ✓ Developing formal mechanisms for gathering and communicating authoritative scientific and technical advice to governments and other decision-makers.

Governments, geoscience agencies, international funding agencies, the International Council for Science (ICSU) and its' Unions will be invited to send representatives to join leading earthquake and tsunami researchers at this vitally important meeting, the overall goal of which is to reach broad consensus on:

- (i) Additional activities and programs that are most needed to increase our capability to predict and mitigate the impacts of tsunami;
- (ii) Appropriate mechanisms for managing and communicating authoritative information to underpin short to longer-term decision making at international and national levels; and
- (iii) Funding opportunities for the most important additional activities.

The workshop participants will have a unique opportunity to participate in a field visit to tsunami-impacted areas (2011 event) in northeastern Honshu.

### ***Inter-IGC IUGS Sponsored Conferences/Symposia/Meetings:***

The IGC is the main scientific forum of the IUGS. A number of suggestions have been made over recent years to hold additional significant IUGS conferences and symposia between the quadrennial IGCs. These intermediate meetings would have a more restricted scope than IGCs and will strive to involve other Geo-Unions. Canada has proposed to host the schools first specialized IUGS conference in Vancouver, British Columbia in 2018, with a "future resources" theme. The IUGS EC has agreed in principle to this first inter-congress meeting. At the same time the IUGS has agreed to look into sponsoring regional "geo" summer school or workshops, particularly in less developed nations.

### ***Evidence-based decisions***

The next issue of Episodes is due out late March. It includes an article “Scientific advice underpinning decisions on major challenges” by Secretary General Ian Lambert and Phil McFadden. This outlines and illustrates what is needed to have scientific advice factored into important decisions and policies, drawing on Australian experience.

### **China raises its financial category of IUGS membership**

Prof. Meng Xianlai, the Executive Vice President of the Geological Society of China (GSC) — the Chinese Adhering Organization to the IUGS — informed the IUGS on March 1, 2013 of China’s wish to increase its financial category of membership from 7 to the highest level of 8, starting this year. With this increased contribution in membership fees to IUGS, China will further enhance its active involvement in IUGS activities with a view to making greater contributions to IUGS and to the broader global geosciences community.

Prof Roland Oberhänsli, IUGS President expressed his appreciation and gratitude on behalf of the union to the Geological Society of China and the Peoples Republic of China for their great support.

### **International geoscience organisation contacts**

The Directory of Geoscience Organizations of the World produced by the Geological Survey of Japan includes web links to national geological surveys as well as state and provincial geological surveys at: <http://www.gsj.jp/information/gsj-link/dir/index.html>

The geology.com website with news and information about geology and earth science also lists geological organizations and agencies: <http://geology.com/groups.html>