

MINUTES



INTERNATIONAL UNION OF GEOLOGICAL SCIENCES 74th EXECUTIVE COMMITTEE MEETING

OPEN SESSION

January 15th-16th, 2020

Participants

IUGS Executive Committee:

CHENG Qiuming (CQ; President), Stanley FINNEY (SF; Secretary General), Hiroshi KITAZATO (HK; Treasurer), Roland OBERHAENSLI (RO, Past President, Chair of Nominating Committee), Kristine ASCH (KA; Vice President), William CAVAZZA (WC; Vice President), Edmund NICKLESS (EN; Councilor), Claudia MORA (CM; Councilor)

Observers (attending parts of the meeting):

Peter BOBROWSKY (Canadian National Committee for IUGS). Dhiraj Mohan BANERJEE (Indian National Committee), Mohd Badzran MAT TAIB (Malaysian National Committee), Hassina MOURI (South Africa National Committee), CHOI Sung Hi (Geological Society of Korea), Dolores PEREIRA (Publications Committee, PC), Alecos DEMETRIADES (Commission on Global Geochemical Baselines, CGGB), Shuzhong SHEN (International Commission on Stratigraphy, ICS), Francois ROBIDA (Commission on the Management & Application of Geoscience Information, CGI), Chris KING (Commission on Geoscience Education, Training & Technology, COGE), Rodolfo CAROSI (Commission on Tectonics and Structural Geology, TecTask), Marianne KLEMUN (International Commission on the History of Geological Sciences, INHIGEO), Yasukuni OKUBO (Task Group on Geohazards, TGG), Hans THYBO (International Lithosphere Program, ILP), Laurance Donnelly (Initiative on Forensic Geology, IFG), Vijay Prasad DIMRI (36th IGC), Ryu JONG-SIK (37th IGC), Hema ACHYUTHAN (Geological Society of India, GSI), Jennifer MCKINLEY (International Association for Mathematical Geosciences, IAMG), Bo-an JANG (International Association for Engineering Geology and the Environment, IAEG), Young Joo LEE (Coordinating Committee for Geoscience Programmes in East and Southeast Asia, CCOP)

IUGS Secretariat:

MA Yongzheng (Director), LI Wei (Secretary), SITU Yu (Secretary),
MU Langfeng (Secretary)

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1. Welcoming Addresses

Dr. Chang-sik Cheong, President of Geological Society of Korea, warmly welcomed all the participants in the 74th IUGS EC Meeting. He said that the Geological Society of Korea is greatly honored to host the 37th IGC in 2024 with Busan metropolitan city and Korea Institute of Geoscience and Mineral Resources, and to publish the IUGS journal Episodes. He introduced that the Organizing Committee of the 37th IGC, chaired by Prof. Daekyo Cheong, is actively preparing for an advertisement to attract more attention on the Busan IGC in the incoming Delhi IGC.

Prof. Cheng Qiuming (CQ) expressed his thanks to Dr. Cheong and Geological Society of Korea and the Organizer of the 37th IGC for the strong support hosting this IUGS EC meeting as well as the IUGS DDE Science Committee Meeting in Busan. Prof. Cheng introduced that since 2012 at the 34th IGC in Brisbane, the harmonized statutes and bylaws of IUGS and IGC ask IUGS to take a strong role and responsibilities to IGC activities. IUGS has taken all necessary efforts to support IGCs. These new efforts include increasing the financial budget to bring more business meetings to IGC, proactively spreading information and promotional materials via IUGS media and databases, setting up funds to support young scientists to IGC. Prof. Cheng said that IUGS will continue its strong support to the 37th IGC in Busan. Prof. Cheng appreciates very much about the Korean support to IUGS including the host of the editorial office of IUGS Journal Episodes.

2. Discussion and Approval of Agenda

Agenda approved.

3. 2019 Executive Committee and Bureau Meetings

3.a. Approval of Minutes of the 73rd EC meeting in Beijing

Motion to approve the Minutes of the 72nd EC Meeting

Approved

3.b. Status of Action arising from the 73rd EC meeting

All the actions have been completed.

3.c. Bureau meetings in New Delhi (May) and St. Petersburg (October)

CQ introduced that three Bureau Meetings were held in 2019: (1) Bureau Meeting in Beijing in Beijing in February; (2) Bureau Meeting in New Delhi in May; (3) Bureau Meeting in St. Petersburg in October. The first Bureau Meeting developed DDE, the first IUGS-recognized big science programme; the second Bureau Meeting focused on the 36th IGC and IGCC activities; and third Bureau Meeting interacted with the Russian geoscience community about the bidding for the 38th IGC.

3.d. Status of Action arising from New Delhi and St. Petersburg Bureau Meetings

CQ introduced that the majority of the actions have been completed except 3 ongoing actions. SF added that efforts are being made to complete the 3 ongoing actions.

4. Executive Committee Reports

4.a. President's Report

CQ reviewed his main activities in 2019.

(1) IUGS EC and Bureau Business Meetings and Activities

73rd EC Meeting in Fragrant Hill Hotel in Beijing Feb. 25- Mar. 2, 2019. It was held in conjunction with the Deep-time Digital Earth (DDE) forum in Beijing, China. The DDE forum not only released the IUGS new initiative but also provided an excellent opportunity for interaction and international collaboration. The plenary session of IUGS-DDE attracted more than 200 participants including about 70 top international geoscientists and geoscience data specialists as well as representatives of about 40 IUGS associated organizations.

Three Bureau Meetings. The First Bureau Meeting in Beijing just before the 73rd EC Meeting (Beijing, February 2). The Second Bureau Meeting in New Delhi May 18, 2019 (New Delhi, May 18). The Third Bureau Meeting in Saint Petersburg Oct. 20-21, 2019 (St. Petersburg, Oct. 20-21)

(2) ISC

ISC has released its action plan with four strategic challenge domains. ISC also established four committees including its Committee of Science Planning and Review (CSP). With nomination jointly by IUGS and the ISC China Committee, President Qiuming Cheng has been appointed by Prof. Daya Reddy, President of the International Science Council (ISC), as Member of ISC CSP.

CQ has interacted with the ISC Governing Council on several occasions. CQ visited the ISC CoDATA office and had a discussion with Dr. Simon Hodson, Executive Director of CoDATA about collaboration to support the DDE program. Subsequently CQ had exchanges with the entire Executives of CODATA in Beijing on September 21. Both sides agreed to consider putting forward a joint proposal for DDE and Fair Data to ISC under the 2.1 the action plan.

(3) UNESCO

CQ communicated regularly with the leaders of UNESCO. Wrote to congratulate both Dr. Shamila Nair-Bedouelle, UNESCO new Assistant Director-General for the Natural Sciences and to Mr. Kristof Vandenberghe, the new Chief of Section of UNESCO Earth Sciences and Geo-Hazards Risk Reduction, the IGGP Secretary. A face to face meeting was held at the IUGG 100th Celebration at the UNESCO Headquarters.

Delivered a video greeting address at the Open Session of the IGCP Council Meeting held at the UNESCO headquarters in Paris on Feb 22. He welcomed the new Council Members and the leaders of the new IGCP projects.

Attended the IGCP project annual workshop held in Tianjin on October 9 and exchanged with Dr. Li Pengde, the Deputy Director General of CGS, Dr. Peng Qiming, President of China Federation of Mining and Mr. Philippe Pypaert, UNESCO Beijing Officer.

(4) GeoUnions

The International Union of Geodesy and Geophysics (IUGG) hosted its 100th Anniversary Celebration at the UNESCO headquarters on 28 July. CQ attended the ceremony on behalf of IUGS and received a commemorative plaque presented by IUGG President Prof. Kathryn Waler in recognition of IUGS' long term cooperation with IUGG over the past years. On July 29, the GeoUnions had a one-day meeting at the ISC headquarters in Paris. The GeoUnions interacted with the ISC officers. Several new Presidents of unions attended the meeting. Qiuming Cheng introduced the IUGS DDE initiative and proposed the data-driven earth and space science to be the possible joint project for ISC.

(5) IGCC Meeting

The IGCC Members had a four-day visit at the 36th IGC venue and interacted with the LOC of 36th IGC and hosting organizations (Ministry of Earth Sciences, India Academy of Science and Ministry of Mines and Geological Survey of India). During the visit, IGCC visited the venue of the Congress, and had one day meeting on May 20 prior to a reception to interact with LOC of 36th IGC. IGCC also had a chance to meet with the IUGS India National Committee at the India Academy of Sciences. IGCC contributed valuable suggestions to the host of 36th IGC especially about the preparation processes.

(6) DDE - IUGS Big Science Program

Since the DDE was announced as the first IUGS Big Science Program at the joint events of the 73rd IUGS EC Meeting and DDE Forum held in Beijing on February 25- Mar. 2, 2019, it has attracted a great deal of interest and support from various international organizations and top scientists. With the momentum provided from the DDE Forum, DDE teams have been working hard on the planning and implementation with several progressions.

(7) Other activities

CQ was invited to attend the Opening of China Mining Congress on October 10 in Tianjin; Delivered a speech at the Closing Ceremony of SiDRR Conference on May 11-12, 2019 in Beijing; Delivered a keynote speech on the Deep-time Digital Earth (DDE) big science program at the 20th IAMG Annual Conference held in State College, Pennsylvania, USA on August 10- 16, 2019, introducing the new IUGS-recognized big science program -

Deep-time Digital Earth (DDE) and encouraging IUGS association members to support and participate in this new programme.

4.b. Secretary General's Report

Stan Finney(SF) reviewed his main work in 2019:

(1) Correspondence with all IUGS constituent groups and several affiliated organizations, primarily with regard to budget allocations and comments from the EC, but also for advice on various administrative matters and personnel problems.

(2) IUGS Bureau Meetings and EC meeting

Bureau Meeting in Delhi, May 2019 and IGCC Meeting. Contacted LOC to arrange IGCC and Bureau meetings; Set agenda; Further developed contacts with LOC with regard to IUGS activities at the 36th IGC.

Bureau meeting in St. Petersburg, October 2019. Contacted VSEGEI to request invitation to host meeting. Set Agenda.

74th EC Meeting in Busan, January 2020. Sent request for invitation; Sent announcement/invitation; Call for annual reports; Prepared agenda and Documents

(3) IUGS Awards: Argand, Harrison, Early Career Scientist, and Hutchison Fund.

Prepared Announcements and Calls, and widely distributed them in all means. Receipt of and acknowledgment of all applications and nominations, and first screening of 80 more applications for Hutchison. Call for volunteers for expert panels; strategy developed and followed to recruit previous EC members. Corresponded with Expert Panel and Hutchison review team. Managed votes to approve all recommendations and nominations. Wrote and sent award letters to all (IUGS awardees, Hutchison Fund awardees) .Notified all parties all unsuccessful Hutchison Fund applicants, and nominators of unsuccessful nominees for IUGS awards.Managed all logistics for Awardees, including citations and responses, photos, to be read and published in Episodes and already announced in E-Bulletin and Social Media With great effort, relocated correct company to design and produce medals, provided designs and photos/files necessary to make them, arranged payment and delivery. Designed certificates for each Award, which the Secretariat will print and deliver in high quality folders.

Organize Awards presentation at Opening Ceremony, and recognition of awardees and Hutchison Fund travel awardees at IUGS Reception.

(4)36th IGC

As liaison between IUGS and the LOC of the 36th IGC, handled most arrangements for IUGS activities. Arranged complimentary hotel accommodations. Oversaw registration for EC, awardees, Hutchison. Consulted on awards presentation at opening. Consulted on list and schedule of meetings and activities for IUGS at Congress. Organizing the IUGS reception

Contacted LOC about IUGS logo on website and documents. For 5th Joint IUGS-IGC Council Meeting, prepared Draft Agenda and sent call for submission of additional questions and resolutions.

(5)38th IGC

Oversaw production and distribution of Call for Bids. Corresponded with and gave advice to Russian National Committee regarding activities at 38th IGC.

4.c. Treasurer's Report

Hiroshi Kitazato (HK) reported that by Dec. 31, 2019 the IUGS balance was USD 1,480,313.29. The total income and expenditures of IUGS in 2019 amounted to USD 496,303.42 and USD 579,104.88 respectively, contributing to a net income of USD - 82,801.46

In 2019, among the 122 IUGS Adhering Members, 65 were active members and 57 were inactive members based on the submission of membership fee.

Alteration of Status during the year 2019

Philippines	Inactive → Active	2017 and 2018 dues paid (2019 dues unpaid)
Portugal	Pending → Active	2017 to 2019 dues paid
Argentina		2018 and 2019 dues paid (2017 dues unpaid)
Azerbaijan Belgium Norway Sri Lanka	Active → Pending	Dues unpaid for 2 years until the end of 2019
Iceland Iraq Latvia Peru Tajikistan Uruguay	Pending → Inactive	Dues unpaid for 3 years until the end of 2019

Countries with no contact point - 24 countries

Angola, Azerbaijan, Belarus, Belize, Bolivia, Burkina Faso, Cote D'Ivoire, Ecuador, Georgia, Ghana, Iraq, Madagascar, Nicaragua, Panama, Paraguay, Saudi Arabia, Somalia, Suriname, Swaziland, Tunisia, Uruguay, Venezuela and Yemen (Rwanda)

Active countries are in decline. It's discussed that factors including communication, political reasons, lack of knowledge of IUGS among countries in Africa and etc. may all contribute to this trend. Several participants suggest IUGS get more involved in IGCP projects and get more visibility through them. CQ commented that extra efforts should be made to those Adhering Members turning from active to pending, and from pending to inactive.

4.d. Permanent Secretariat's Report

Mr. MA Yongzheng (MY) reported on the main work of the Secretariat.

(1) Organization of IUGS Business Meetings

73rd EC Meeting and DDE Forum in Beijing, China from 26 February to 2 March, 2019.

Bureau Meeting in New Delhi, India on 18 May 2019

Bureau Meeting in St. Petersburg, Russia on 21-22 October 2020

(2) IUGS Exhibitions

To publicize and promote the IUGS activities in the international geoscience community, the Secretariat organized the following IUGS exhibitions at major international geoscience conferences and events: EGU General Assembly in Vienna, Austria; 2019 GSA Annual Meeting in Phoenix, U.S.A.; 2019 China Mining Conference & Expo in Tianjin, China; 2019 AGU Fall Meeting in San Francisco U.S.A.

(3) Outreach and Publications

For Annual Report, designed the 2018 IUGS Annual Report; Mailed the hardcopies of the 2018 IUGS Annual Report to all the IUGS constituent groups and Adhering Members.

For Episodes, Prepared the list of recipients; Mailed 100 hardcopies of Episodes Vol. 42, No. 1 (Mar), No. 2 (Jun), No. 3 (Sep), No. 4 (Dec).

For E-Bulletin, Formatted and distributed the E-Bulletin #150-161 to over 160,000 recipients; Updated the list of recipients based on feedbacks; Drafted some pieces of IUGS news being published on E-Bulletin.

(4) Membership Maintenance

For Adhering Members, Updated the contact information of the IUGS Adhering Members in the IUGS Information Management System. Prepared the updated list of membership status of Adhering Members being posted on the IUGS website. Sent to the Ministry of Energy and Industry of United Arab Emirates the digital Membership Application Form and other related documents.

For Affiliated Members, Updated the contact information of IUGS Affiliated Organizations in the IUGS Information Management System according to the information published on their official websites.

Maintained correspondence with the International Research Center on Karst under the Auspices of UNESCO (IRCK) and Society for Environment Geochemistry and Health about the affiliated status application.

(5) 36th IGC

IUGS booth exhibition. Rented the booth; Paid for the design and construction fee; Designed posters; Collected and printed display materials

5th Ordinary Session of the IUGS-IGC Council. Distributed agenda; Called for registration; Designed and opened the online registration systems; Assembled four-year reports of IUGS bodies and added relevant information to the Secretary General Four-Year Report; Contacted EC candidates for shorter versions of CV. Reformatted CV for all the candidates to be posted the IUGS website.

(6) Secretariat office 2020 and beyond

China Geological Survey (CGS) strongly supports the renewal of the MoU and the continued operation of the IUGS Secretariat in China. CGS has already made a special report to the Ministry of Natural Resources of China about the renewal of the MoU. The Ministry of Natural Resources is now going through relevant formalities on the renewal of the MoU and will report to the State Council for final approval.

CQ thanked the Secretariat for the excellent work, not only the logistics but also huge amount of financial support which covers the design and construction fee of the IUGS booth at 36th IGC. CQ also thanked CGS for agreeing to have the Secretariat stay in China.

ACTION: The leaders of IUGS Constituent groups, Commissions and Task groups to send or bring the exhibition materials (hands-on material as well) to the Secretariat.

ACTION: The IUGS Commissions and Task groups to send a short four-year report to SF in early February.

5. IUGS Committees

5.a. Publications Committee

5.a.1. Publications Committee Report

Dolores Pereira, Chair of the Publications Committee(PC), reported that the PC was composed of herself as Chair, Prof. Stanley Finney (IUGS Secretary General), Prof. Daekyo Cheong (Editor of Episodes), Mr. Giuseppe Di Capua (Webmaster), and Dr Gurmeet Kaur (member responsible for social media outreach issues). The Committee is appointed from July 2018 – 2022 and adopts a new principle to have a 2 year offset between the PC changing and the Executive changing to reduce future disruptions.

Episodes: The Impact Factor(IF) of the journal has increased with the 2018 IF being 1.708. An online editorial and review system is implemented with the achievements of user-friendliness, accuracy in contents and cross-ref possibilities. The website was updated to accommodate online first publications and online submission of papers.

GSL SP: Since last IGC, 11 high-quality books were published and several others are in progress. For 2019 and the next years, 3 books have been published and 10 books are in the pipe-line.

Social media: With three platforms (Facebook, Twitter and LinkedIn), it posts brief notes from IUGS, IUGS commissions and sub-commissions and IGCP. The frequency is as follows: an average 3-5 times every week , approximately posted around 60 times from Sep.1st to Dec.31st , 2019, and the total Facebook followers 7100 plus. Also, it has been continuously promoting preparations and activities of 36th IGC.

Website: Intensive work has been undertaken by the web master to update the information and redesign the new Web page. The new version has been in use recently and is still the process of improvement.

E-bulletin: It has provided monthly updates on IUGS news, events and achievements on time.

SF commented that Episodes is a uniquely free access journal, and the constituent groups could put together special issues like the Special Issue of Forensic Geology which has promoted forensic geology in a fantastic way. The articles published on e-bulletin and social media could also serve as advertisements. The constituent groups should make full use of them.

To improve the quality and IF of Episodes, it is suggested that special issues should invite renowned scientists in special fields to submit hot topics and the associate editors to invite more high-quality papers.

5.a.2. Discussion of IUGS website

Giuseppe Di Capua (Webmaster) was absent from this meeting and below is the briefing extracted in the PPT he prepared.

The new IUGS website is online from 12 December 2019. Significant improvements have been made and contents have been organized into a new structure. There are no

significant changes in 2019 statistics compared to 2018 ones but some positives signals. Domain and Web-Hosting services are new.

In future, the geo-science events in the calendar have to be improved, and some pictures should be added to pages to improve their aesthetic quality in order to become also more “attractive”.

5.b. Finance Committee

William Cavazza (WC), Chair of Finance Committee(FC), delivered the report. The current FC 2018-2020 includes WC himself (IUGS EC), Andrew J. Fleet (Chair, Dorest County Museum), John W. Hess (Chair, GSA Foundation) and Edmund Nickless (IUGS EC). They met twice in London in 2018, worked in remote in 2019.

FC's primary roles are to identify external financial opportunities for the IUGS and to propose to the Executive Committee ways to improve IUGS financial operations. The Terms of Reference of FC were drafted and circulated among EC members. The Committee shall consist of a minimum of 4 (four) and a maximum of 5 (five) persons, including a minimum of 1 (one) and a maximum of 2 (two) members of the IUGS Executive Committee (EC). Current IUGS Treasurers cannot be FC members. The Committee shall elect its Chair who will report directly to the EC. The FC shall be directly appointed by the IUGS EC for a term of up to four years. The entire FC or individual FC members may be re-appointed by the next EC, two terms in total. All FC members shall be from active IUGS member countries.

The recommendations presented at the 73rd are as follows: improvement of financial investments; membership drive; surplus funds; increased level of auditing; define level of funding to DDE; protection of IUGS intellectual property; and marketing of Episodes.

The Report 2016-2020 (including audit results) and Recommendations 2020-2024 will be presented to IUGS-IGC Joint Council at the 36th IGC in New Delhi.

5.c. Strategic Implementation Committee (NASIC)

Edmund Nickless (EN), Chair of the Strategic Implementation Committee (NASIC), began the report by briefly introducing the origin and mission of NASIC as well as the rationale of the Resourcing Future Generation (RFG) Initiative.

Since 2013, RFG has done the following work: Article in Episodes on RFG inviting comments; 4-page brochure; Symposia & Townhall meetings at AGU, GSA etc; White paper on supply/demand; Report on need for global effort to meet future needs; Briefing paper for COP21; Symposium at 35th IGC; Symposia at RFG2018; ReSToRe summer school; Published in peer reviewed journals; Linked to UNESCO, World Economic Forum, International Resource Panel, Economic Commission for Europe and various EU Horizon 2020 projects.

The highlight of the RFG activities in 2019 is ReSToRe (Researching Social Theories, Resources, and Environment): A postgraduate Summer School supported by iCRAG (Irish Centre for Research in Applied Geosciences) and others under the patronage of UNESCO; About 90 applications, 42 selected representing 28 nations including 18 developing countries; Eight distinguished mentors worked with four groups on cross-cutting themes relating to resourcing a sustainable future; A session on ReSToRe with presentations from four participants will be held at the 36th IGC.

The Workplan for 2020 and beyond are as follows:

Attend COP22 - Glasgow, UK; With others, develop programme of training activities involving ReSToRE II (in 2021), FoRGe (Fostering Researchers in Geoscience), Ad hoc training courses; With DDE, assess the feasibility of a joint meeting in 2022 to discuss integration of large data sets to predict mineralization at depth; Continue to work with Canadian colleagues to see if there is appetite for a follow up meeting to RFG2018.

It's suggested that the call for Summer School in the future be circulated through the IUGS National Committees, so that it could be better connected with the geo-science community.

5.d. Nomination Committee

Roland Oberhänsli(RO), the Past President of IUGS (Germany) and the Chair of the Nomination Committee(NC) gave the report. The current NC comprises Ruth Allington (UK), Hernani Chaves (Brazil), Dong Shuwen (China), Marko Komac (Slovenia), Reed Mapeo (Botswana) Suzanne O'Reilly (Australia) and RO.

In 2019, its work comprised two actions.

Firstly, the replacement of a councilor due to the unexpected retirement in 2018. The search and evaluation procedure was swiftly solved by electronic correspondence. Close cooperation of the NC with the Secretary General and the support of the Council Members allowed for a rapid and smooth election of councilor Claudia Mora.

The major action and effort of the NC was preparing a slate of candidates for the new EC. In early September, the NC screened the available nominations and checked the nominated persons for eligibility for a position in the IUGS EC to be elected during 36th IGC in Delhi. Due to few nominations for some office positions, the NC extended the call until the end of September. During the extended call period, further nominations were received. These nominations were checked electronically by the NC and both nominees were considered eligible. The NC submitted a slate for the new IUGS EC to be elected in Delhi to the 36th IGC and IUGS president. The slate comprises: 2 candidates for President; 2 for Secretary General; 1 for Treasurer; 4 for the two Vice Presidents; and 15 for the four Councilors. The CVs of the candidates are available on the IUGS website. The geographical distribution of the candidates met the minimum requirements, while unfortunately the gender balance didn't. The NC suggests IUGS Executive Committee and its constituents to encourage female colleagues to more (pro) active engagement in the IUGS bodies.

The list of the members of the new NC will be sent to the Secretary General for distribution to the National Committees.

6. IUGS Commissions: Annual Reports and 2020 Plans

6.a. Stratigraphy (ICS)

Prof. Shen Shuzhong, the Vice-Chair Elect of ICS, reported on ICS' main activities in 2019 and work focus in 2020. ICS's priority remains completion of the chart, series/epoch and stage/age definition..

The seven main areas of achievement in 2019 are in the following:

1. Five versions of the ICS Chart or Timescale have been produced by the Graphics Officer, Dr Kim Cohen) reflecting GSSP activity across the subcommissions;
2. There are now 18 translations of the chart and German and Russian translations have recently been completed;
3. The GSSPs for the base of the Hauterivian, the Chibanian and Priabonian stages (80% yes) are currently being evaluated;
4. Agreement that all subcommissions will each focus on completion of one new GSSP prior to the IGC in India;
5. Participation of the ICS as an active member of the DDE project;
6. STRATI 2019 in Milano (organized by Dr. Marco Balini and his colleagues), the third international stratigraphy conference was a huge success with field trips before and after, c. 300 delegates, many young researchers, business meetings of individual subcommissions and the ICS.
7. Agreement to develop a green paper on the subdivision of the Precambrian.

The following seven areas will be the focus for 2020:

1. Further versions of the ICS Chart or Timescale will be produced, and at least a further five GSSPs are hopefully to be defined.
2. There are now 18 translations of the chart, and more are expected. A Hungarian translation is in progress.
3. Ad hoc review (ARC) of the ICS by the IUGS has recently been published in Episodes, and the recommendations are being implemented.
4. The new 17th subcommission (Subcommission on Timescale Calibration) will drive forward the time calibration of the chronostratigraphic chart.
5. Development of projects by the ICS within the remit of the DDE project. There will be four key projects built around the completion of GSSPs, calibration, digitization and outreach.

6 A particular focus on internships for young scientists to engage in GSSP and DDE projects.

7. Inauguration of a YouTube channel and invite key members to present.

6.b. Education, Training and Technology Transfer (COGE)

Chris King(CK), Chair of COGE, mainly introduced the report ‘Strategy for Enhancing Global Geoscience Education – 2020 update’ which addresses the IUGS objective to ‘strengthen public awareness of geology and advance geological education in the widest sense.’ This report builds upon the European Geosciences Union (EGU) ‘Strategy for Enhancing Geoscience Education – 2019 update’ document, approved and fully funded by EGU Council for 2020, with indicative budgets to 2024 acknowledged.

The report has not only identified real weakness areas in geoscience education around the world, but some important pockets of strength and innovation. The research has shown that the most effective way to promote geoscience educational reform is to put effective teaching materials in the hands of teachers and educators and to demonstrate how these can be used most effectively.

The most important ways of providing IUGS support for global geoscience education be by: supporting and collaborating with global geoscience educational initiatives already underway - a number of these have been outlined in the document above; in particular, by broadening the EGU pilot initiative to appoint and train unpaid Geoscience Education Field Officers in different countries; as part of an IUGS/IGEO extension to the EGU initiative, two Field Officers were appointed and trained in presenting interactive workshops to teachers and informal educators in their own regions during 2019/20; it is hoped that four more can be appointed in 2020/21.

CK emphasized that if the Geoscience Education Field officer pilot is rolled out to more countries beyond the two included in the pilot, then this will involve considerable IUGS investment in future years, and urged the IUGS EC to support the work of the IUGS Commission on Education in general and the Geoscience Education Field Officer initiative in particular.

6.c. Management and Application of Geoscience Information (CGI)

François Robida(FR), Chair of CGI, gave the report. He started by introducing the Mission and Vision of CGI and the members of CGI Council (2017-2020).

CGI now has 515 members in 78 countries across the world. There is a big increase of 52 new members in 2019 from some 20 different countries.

The main activities in 2019:

Geoscience Terminology Working Group: The vocabulary host service has been managed by Geoscience Australia; Multi-lingual translation work in progress.

EarthResourceML (ERML) Standards Working Group: Uptake of the ERML data standard in national and provincial Geological Surveys (Australia - Europe), mainly through its adoption by data sharing communities such as AuScope, INSPIRE/Minerals4EU and EGDI

Joint CGI/OGC Geoscience Domain Working Group: Several sessions were held in 2019. Several use cases have been identified and are addressed by the 15 participants of the initiative.

CGI and Scientific Communities: Support IUGS recognized DDE Science Program (founding member + standards task group); CGI standards is presented at the CODATA 2019 conference in Beijing in Oct and CGI took this opportunity to discuss with CODATA leaders for the cooperation in geoscience standards and joint work for DDE needs for standards.

The future work programme is as follows:

- Actively participate and take responsibility in DDE.
- Play a more visible role in coordination of regional initiatives.
- Continue to push forward GeoScienceDWG in developing interoperability of 3D - 4Dgeosciences data models.
 - Catalyze productive alliances between geo-information bodies, including OGC, CODATA, RDA;
 - Stimulate progress in development and application of standard geoscience concepts and their representation in multiple languages.
 - Promote international use of data exchange standards in regions, commissions, countries, and organizations in collaboration;

- Facilitate outreach, knowledge transfer and take-up of best practice in geo-information.
- Enhance collaboration with other IUGS commissions.
- Co-organize a CGI geoscience information symposium at IGC 2020 in India.

6.d. History of Geological Sciences (INHIGEO)

Marianne Klemun, Secretary General of INHIGEO, started the report by briefly introducing the objectives, strategies and website of INHIGEO.

INHIGEO has 21 honorary senior members and 299 members from 57 countries. There are 13 affiliated organizations, and the 12 national affiliated organizations organize meetings and conferences in their countries in cooperation with History of Earth Sciences Society (HESS), the international affiliation.

The 44th Meeting of INHIGEO was held at the University of Varese in Italy, 2-22 Sep. 2019, with 80 registered participants and 48 oral presentations and 8 posters in the scientific program. The official accompanying book totalling 130 pages demonstrate this successful organization and event. Many young scholars attended the meeting.

The publications include: Figueirôa, S. F., Good, G.A., Peyerl, D. (eds) History, Exploration & Exploitation of Oil and Gas. Springer 2019. The papers from the conferences in Mexico and Armenia as well as Varese/Como: arrangements are in progress for publication.

The future INHIGEO Conferences include: 45th INHIGEO Symposium New Delhi, India (in association with the 36th International Geological Congress) 2-8 March 2020; 46th INHIGEO Symposium, Krakow, Poland, 18-24 July and ICHST Conference in Prague, Czech Republic, 25-31 July

INHIGEO wishes to especially acknowledge and thank IUGS for its past support. INHIGEO looks forward to the IUGS's continuous support in order to keep playing a vital role and providing important activities in future.

6.e. Tectonics and Structural Geology (TecTask)

Rodolfo Carosi, Chair of TecTask, gave the report.

In 2019, TecTask continued to focus on the following well-established topics:

1. TecTask Web Portal as our arena for communication and exposure to the public and science community (including social networks)
2. Terminology & Standards initiative with a wiki-like Internet Platform
3. Organizing YORSGET conferences for knowledge sharing, exchange and training opportunity for young scientists
4. Monthly world Web Cast seminars on Structural Geology and Tectonics uploaded to the TecTask YouTube channel
5. Outcropedia portal
6. TecTask as a major contributor and player at the 2020 IGC in Delhi
7. TecTask meeting 31st May 2019, Torino, Italy

The Expenditures in 2019 :

- € 500,00 Outcropedia Webportal maintenance;
 - € 1000,00 Funding for Young Scientist Bursary at Himalaya Karakoram Tibet meeting in Bozeman 2019 (USA)
 - € 2000,00 3rd YORSGET TecTask meeting 18-23 June 2020 Agrigento, Sicily (Italy)
 - € 1260,00 Organization of TecTask Executive Committee meeting Torino, May 2019
 - € 1700,00 Participation of the TT Chair to the EC meeting in Busan, January 2020
 - € 120,00 Bank account fees and bank transfers costs
 - € 4000,00 Contribution to the organization of the TecTask Workshop "STRUCTURAL GEOLOGY IN THE 21st CENTURY" 26-28 February 2020 IIT Kharagpur, INDIA
- Total revenue = € 12414,46

The Funding request for 2020:

- € 500: Outcropedia and TecTask websites annual maintenance
 - € 4,500 + € 500 of annual maintenance: development of an App for mobile for Outcropedia with the possibility to easy use Outcropedia and to upload photos of outcrops directly from smartphones in the field
 - € 1,500: attending to the IUGS-EC meeting
 - € 5,000: meeting of the TecTask executive committee to plan the commission activities.
- Total requested budget: € 12.000,00

6.f. Geoheritage (ICG)

Dolores Pereira, gave the report on behalf of Benjamin van Wyk de Vries, the Secretary General of ICG. The Commission was formed through the re-constitution of two pre-existing geological heritage Task Groups within IUGS, the Task Group on Geoheritage and the Heritage Stone Task Group (HSTG) as two sub-commissions, respectively the Heritage Stones Sub-commission(HSS) and the Heritage Sites and Collections Sub-commission(HSCS).

Heritage Stones Subcommission's progress in 2019:

- HSS Splinter Meeting at EGU 2019. With 21 presentations, this meeting was notable for the participation of several non-european presenters.

- Consolidations and finalisation of the IGCP project 637.

- Publications: Natural Stone and World Heritage 2019 Book

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Heritage Stones Subcommission's perspective in 2019:

- Continued IGCP Project work. Help underrepresented areas with the preservation of Heritage.

- A session at the 36th IGC: Natural Stones and Architectural Heritage.

- A session at EGU 2020: Construction and Restoration Materials for Sustainable Development.

Sites and Collections Subcommission's highlights in 2019:

- Successful hand over of Global Geopark and World Heritage responsibilities to sub-commission. 13 assessments have been done in 2019, and 26 to be done in 2020.

- Advances in IUGS Global Geopark Scientific Assessment criteria towards implementation.

- Acceptation and successful first -year operation of IGCP project 692 "Geoheritage for Geohazard Resilience".

- Consolidation of a sub-commission membership and structure

Sites and Collections Subcommission's perspective in 2020:

- Consolidation of sub- and commission under new management.

- UNESCO Global Geopark Assessment and Guidelines.

- Consolidate Global Connections with IUGS UNESCO, IUCN, etc.

- Continue Global Stone Resources, and IGCP projects

6.g. Global Geochemical Baselines (CGGB)

Alecos Demetriades(AD), Treasurer of CGGB, gave the report.

In 2019, the CGGB added 17 new members who come from 11 countries.

The Main activities in 2019:

- IUGS Manual of Standard Methods for Establishing the Global Geochemical Reference Network. The compilation of this manual started in February 2018 and is expected to be completed in by the end of 2019. However, the job is more difficult than originally anticipated, because many people from all over the World are involved and the agreed deadlines are not always kept. The plan is to complete it by May 2020.

- Global Black Soil Geochemistry Manual.The final version of the this manual was presented at the 3rd Black Soil Project Workshop in November 2019.

- Global Geochemical Baselines Project. CGGB has been actively engaged in the promotion of this project with Sessions in International Conferences & Workshops such as 15th International Congress of the Geological Society of Greece, 5th YES Network Congress and 11th International Symposium on Environmental Geochemistry; Workshops in Chinese Universities such as Shangluo Institute, Henan University, Kaifeng and Chan'an University and Promotional items: At the 15th International Congress of the Geological Society of Greece, the Workshop material placed on the USB-memory stick that was given to all the 708 participants.

The planned activities in 2020:

- Continuing the work on the 'IUGS Manual of Standard Methods for Establishing the Global Geochemical Reference Network'.

- Publication of the "IUGS Manual of Standard Geochemical Methods for the Global Black Soil Project".

- Videos of sampling procedures.
- Revision of the IGCP 259 Report by removing all contradictory parts.
- Compilation of a popular book for lobbying at the United Nations level.
- Training Workshops, provided the required funding is made available.

- Sessions at the 36th IGS, EGU 2020, 5th International Symposium on Environment and Health, and 6th International Conference on Environmental Pollution and Health,

AD made two suggestions. The first is to start IUGS funding from May or June, and to end in April or May of the following fiscal year. The second is for sponsors from private companies to pay directly the activities they sponsor.

7. IUGS Task Groups, Initiatives, Joint Programs

7.a. GeoHazards (TGG)

Yasukuni Okubo, TGG Chair, delivered the report.

The major activities and achievements in 2018.

1. Meeting and field excursion in northern Vietnam in March
2. A session entitled "Societal Impacts of Geohazards" at International Conference on Silk-roads Disaster (SiDRR) in Beijing.
3. A session entitled "Global and Societal Impacts of Geohazards" at AOGS in Singapore.
4. 2019 Korea-Japan-Taiwan Joint Geoscience Symposium in October. The geohazards guideline and international meetings were discussed.
5. Visit to the Institute for Volcanology and Risk Assessment, Azores, Portugal, in October. TGG plans to establish a new project with IVAR to disseminate the IVAR achievements.
6. Special volume entitled "Global and Societal Impact of Seismic and Tsunami Events" on Geological Society of London Special Publication.

The planned activities in 2020:

1. 36th IGC in Delhi, India during 2-8 March, 2020. To organize the session entitled "Geohazards surveys, data integration and their comprehensive guidelines", to participate in the IUGS-IGC Council and to communicate with the other entities
2. International Conference entitled "Symposium on Study of new aspects of geohazards" in Tokyo during 23-24 May, 2020 to discuss mechanism of geohazards, guideline of survey technology of geohazards and susceptibility map of geohazards

3. Session entitled “ Subaqueous Landslides and Their Anthropogenic Impact for Coastal Regions” at JpGU-AGU in Makuhari, Japan during 24-28 May, 2020

4. Workshop of survey technology and warning system of geohazards in Sapporo, Japan in July.

7.b. Forensic Geology (IFG)

Laurance Donnelly, IFG Chair, gave the report.

Forensic geology is the application of geology to law enforcement. Geologists can assist in law enforcement in three aspects: examine crime scenes, provide geological trace evidence to eliminate or implicate suspects, and search the ground related to homicide, organized crime and terrorism. In 2019, IFG had held 70 formal events around the world, including exchange and capacity-building events, outreach events and training events.

In February 2019, Prof Pier Matteo Barone, based at the American University of Rome, became formally assigned to the IFG Committee as the Crime Scene Adviser.

Main products and achievements in 2019:

- Members of the IUGS-IFG committee were invited to provide operational support for casework.

- Members of IUGS-IFG were retained by the UK Police, National Crime Agency (NCA) listed as ‘Expert Advisers’.

- Awards. IUGS-IFG Treasurer, Prof Lorna Dawson, CBE was awarded a Fellowship of the Royal Society of Edinburgh (FRSE).

- A flyer was issued giving an overview of the aim, objectives and achievements of IUGS-IFG. This can also be downloaded on the IUGS-IFG web site in an electronic format.

- IUGS-IFG collaborated closely with GSL-FGG(Geological Society of London, Forensic Geoscience Group), including the completion of the manuscript for two major publications (expected to be available 2020) and the House of Lords enquiry into forensic science.

- Geoforensic International Network (GIN). In 2019, the countries that became included in were: Bolivia, Ecuador, Democratic Republic of Congo (DRC), Vietnam and Zambia.

7.c. Mapping the Ocean Realm - proposed new initiative

Kristine Asch(KA), introduced the proposal of IUGS Initiative Geoscientific Mapping the Ocean Realm (GeoMORE).

KA pointed out it's high time for an IUGS initiative of GeoMORE. The necessity is to build a well-structured multidisciplinary platform, a hub, a governing body and a multidisciplinary scientific team to scientifically drive the initiative, and so to help scientists to do the work.

The GeoMORE Initiative's aims until the 2024 IGC are:

- Develop a strategic concept to establish such a cross-disciplinary platform, shall include aims, schedule, milestones, communication concept, expected achievements, financial resources (grants, or other), facilities centralized and/or disbursed, equipment, possible difficulties that may be encountered
 - Recruit and built a leadership team
 - Recruit and built a interdisciplinary scientific team of and associated organisations (on marine mapping and map creation, geochemistry, geophysics and geobiology, but include also experts on geoterminology and taxonomy):
 - Research sources for information and data (e.g. IODP publications on cores/sea floor sediments, EMODnet geology, geochemistry, geophysics, bathymetry portals),
 - Start to collect necessary information (data, standards, methods) for cross-disciplinary geoscience mapping of the ocean floor.

KA also introduced the Preliminary Work and Preparation. the Potential participants/ collaborations, the Core team members, Commitments for synergy and support, and the Primary workplan in the next four years. The Initiative has got the first support letters from scientists with the International Lithosphere Programme, GFZ and IAMG.

In discussion, it's suggested that the initiative could start by applying for an IGCP project, and the Initiative could serve as a platform to find and converge the existing data. When it comes to marine issues, the political disputes should be taken into consideration.

8. Joint Programs

8.a. International Lithosphere Programme (ILP)

Hans Thyb (HT), President of ILP, gave the report.

Being a bottom-up organization, ILP has carried out 70 programs since 1980, each involving 50-1000 scientists all over the world. The research themes are classified into four aspects: geosciences of global change, contemporary dynamics and deep processes, continental lithosphere and oceanic lithosphere. The work is carried out through Task Forces (programs on scientific subjects) and Coordination Committees (programs with regional focus) with 5-year duration. New programs are approved by the ILP Bureau. ILP has 9 active Task Forces. It's anticipated to fund 9 new programmes for 2021-2025 which will cover a broad range of topics, including Lithosphere and the Origin of Life, Antarctic Lithosphere, Global Geo-Transects etc.

The major achievements include: Global Seismic Hazard Assessment Map, World Stress Map, Global Strain Rate Map, Global Impact Studies, International Continental Drilling Program (ICDP), Global Geoscience Transects and programmes.

The year 2020 marks the 40th Anniversary of ILP, and there will be special sessions at IGC and EGU.

8.b. UNESCO - IGCP

Ozlem Adiyaman Lopes, representative of the Earth Sciences and Geo-hazards Risk Reduction Section, Natural Science, UNESCO, was absent from this meeting. No report was given.

9. Big Science Program DDE

Roland Oberhansli (RO), reviewed the progress of the Digital Deep Earth (DDE) Program.

The DDE Forum(a 3 day full scientific meeting with 2 excursion) was held in Beijing, Feb 26-28, 2019. As of Jan.2020, there are 13 founding members of DDE.

The first achievements include:

- Produced a DDE brochure.
- Established a Science Committee.
- Establishing the DDE Board.
- Drafted a web site.
- Attracted a New member(Russian Federal Geological Foundation).
- Draft a proposal template.
- Infrastructure:the Research Center for DDE will be built in Kunshan Suzhou City.
- Publications: Publication in Science, 2019 DDE Forum abstracts in ACTA GEOLOGICA SINICA,Publication in Geo-Scientist.

DDE will be formally launched at the 36th IGC.A symposium and Town Hall meeting will also be held at the congress.

10. ARC Reports

10.a. Global Geochemical Baselines (CGGB)

Roland Oberhänsli, the ARC chair of CGGB, gave the report.

ARC Members comprises Roland Oberhänsli - IUGS Past-President (ARC Chair), Kristine Asch - IUGS Vice President (ARC Secretary); Mateja Gosar - Geological Survey of Slovenia (env. geochemistry); Stephanos P. Kiliadis - University of Athens (ore and bio-geochemistry)

CGGB Member Participants include:Alecos Demetriades - CGGB Treasurer; Ariadne Argyraki - CGGB Secretary; Christina Stouraiti - CGGB Treasurer des

The IUGS ARC for CGGB was extremely pleased in much of the progress made since the 2012 ARC. Especially noteworthy is the refocusing on facilitating geochemical work and the extraordinary success in their training programs for developing countries. The IUGS

welcomed the UNESCO International Centre on Global-scale Geochemistry accreditation and CGGB continued cooperation and developing new standards on sampling procedures despite some drawbacks.

The following suggestions/comments are given:

1. Needs to continue to develop their strategy for geochemical mapping and implement an effective technology.

2. Must develop a communication strategy which includes ideas for expanding membership and recruitment.

3. Should make videos showing sampling procedures available on the website.

4. Link stronger with other IUGS commissions/task/working groups more intensively.

5. Connect more scientists from Africa to CGGB by linking

6. Must demonstrably improve efforts to acquire other sources of funds through ICS grants, book royalties and other options.

7. Should encourage colleagues to submit an IGCP proposal.

8. Submit large grant proposal to IUGS.

9. "Manual" should be published either as the first manual (blue book) by UNESCO or as open access (special issue with DOI and possibly in SCOPUS).

The manual must be very widely disseminated: universities, geochemical conferences, geological congress, ...

10. Should continue to seek funding in order to host a regional CCOP conference;

11. Is encouraged to pursue their efforts with the UNESCO International Centre on Global-scale Geochemistry in Langfang, China to achieve full standardisation at a global scale as well as additional support from China government;

12. Is fully supported to continue for another term within the IUGS until the next IGC in 2024.

13. Is congratulated and encouraged to expand their current geochemical training programs for developing countries under the support of governments (such as China) and more intensively involve younger scientists at age about 40.

10.b. Management and Application of Geoscience Information (CGI)

Edmund Nickless(EN), the ARC Chair of CGI, gave the report.

The ARC comprises Edmund Nickless (Chair, IUGS Councillor), Claudia Mora (Secretary, IUGS Councillor), Marko Komac (European Federation of Geologists) and Helen McKenzie (Sellafield Limited). The ARC convened in London at the Geological Society on 14/15 October 2019. On the first day, the ARC met with François Robida, CGI Chair, and by Skype with Oliver Raymond, CGI Treasurer, to receive a presentation and discuss background information, including annual reports, newsletters and financial statements that had been provided prior to the meeting. The following day, the Review Committee worked together to draft a report, which has been subsequently edited, reviewed and agreed upon by all Committee members.

The following recommendations are made::

- 1.that the life of the Commission is extended for four years;
- 2.that emphasis is placed on promoting interest and understanding of GeoSciML and ERML, expanding the adoption of the standards, and embedding CGI into much larger, international consortia and programs dedicated to the evolution of geoinformation systems;
- 3.that CGI create a new program of work aligned with that emphasis, developing key performance indicators, and deliverables due at the end of the second and fourth years;
- 4.that the Commission is funded at a level commensurate with its agreed program, and that IUGS indicates a provisional level of funding in future years;
- 5.that there should be a further review at the end of three years to consider the case for further extending, or wrapping up the work of, the Commission;
- 6.that the Executive Committee provides feedback at least annually on progress achieved.

11. International Geological Congress (IGC)

11.a. 36th IGC in 2020

The 36th IGC will be held at India Expo and Mart Ltd., Greater Noida (Venue), 2-8 March 2020, Delhi, India.

Dr. Rasik Ravindra, Secretary General of the 36th IGC, introduced the main preparatory activities and progress of the 36th IGC.

The second and third circular of the congress were released during the year. These enumerated the various activities of the congress undertaken.

The wide ranging geoscientific themes were packaged under the **Science Program** that encompasses 287 Symposia under 45 Themes, coordinated by 137 geoscientists from across the globe. More than 7000 abstracts were submitted from nearly 120 countries. Thirteen (13) plenary talks by internationally reputed geoscientists and one(1) public lecture by Prof. K S Valdiya (India) were integrated into the congress program. More than 3000 oral presentations, 2000 e-posters are being planned to be scheduled during the congress. Further, 36 workshops/ short courses were also launched in November 2019 within the aegis of the Congress.

In accordance with the commitments made in the bid to host 36th IGC, an unprecedented support for 1000 numbers of registrations, 1000 numbers of air fare and 1000 numbers of local hospitalities were offered under **GeoHost program** either as full or partial support.

As a measure towards capacity building within the country, a **Special Registration Support Program (SRSP)** was launched by 36th IGC to cater to deserving Indian students and senior scientists. About 1000 Indian geoscientists shall be provided with registration fee assistance under this program.

The **Field Trip Program** offers an opportunity to delegates to visit seventy (70) unique geological milieus of the Indian sub-continent. This included 57 pre and post congress trips and 3 In-congress one/ short duration trips in India, 6 trips in Nepal, 3 trips in Bangladesh and 1 trip in Sri Lanka.

The **Legacy Program** has finalized the Flagship Publication with 41 articles from domain experts and shall be published soon. A special volume on selected Geoheritage sites of India has already been published.

WAPCOS (The Water and Power Consultancy Services, India Ltd.) – a mini Ratna Public Sector Undertaking under Ministry of Jal Shakti was appointed PCO for the 36th International Geological Congress.

With a wide outreach, promotional efforts, mega sponsorship campaign and networking, the 36th IGC is expected to attract various major sponsors, exhibitors and geoscientists to converge in India and co-host countries during the congress.

The sale of GeoExpo booths are under progress. Several attractive social events viz., congress dinner, Korean night etc. are being organized during the congress.

11.b. IUGS activities at the 36th IGC

Stan Finney (SF), IUGS Secretary General, introduced IUGS Meetings and activities during the 36th IGC. The Schedule is as follows:

Date	Time	Meetings &Activities
Feb. 29th	14:00-18:00	IUGS Bureau Meeting
Mar. 1st	8:30-12:30 14:00-18:00	The 75th IUGS EC Meeting
Mar. 2nd	8:30-12:30	IGCC Meeting
	14:00-16:15	Inaugural Ceremony (IUGS Awards)
	16:15-17:15	Plenary Session.1
	18:00-	Icebreaker
Mar. 3rd	8:30-10:45	Opening Session General (Argand Lecture)
	19:00-	IUGS Reception
Mar. 4th	8:30-10:45	Finance and Publications Committees Meetings
	14:00-16:15	IUGS Affiliated Organizations meeting
Mar. 6th	8:30-12:30	IUGS-IGC Joint Council I
	14:00-18:00	IUGS-IGC Joint Council II (continued)
Mar. 7th	8:30-12:30	IUGS-IGC Joint Council II
	14:00-18:00	IUGS-IGC Joint Council II
Mar. 8th	8:30-10:45	Hand-over EC meeting
	14:00-	Closing Ceremony
Mar. 9th	8:30-12:30	New EC meeting
	14:00-18:00	New IGCC meeting

11.c. 37th IGC in 2024

The 37th IGC will be held at BEXCO (Busan Exhibition and Convention Center), Busan, Republic of Korea from August 25-31, 2024.

Dr. Daekyo CHEONG, Executive Chairman of Steering Committee for the 37th IGC, introduced the main preparatory activities.

The Steering Committee for the 37th IGC was established in June 2019. The 37th IGC will be jointly hosted by Korea Institute of Geoscience and Mineral Resources (KIGAM) and the Geological Society of Korea.

Promotion for the 37th IGC is conducted at geological science-related events in Korea and abroad. At the 36th IGC, there will be Korean Pavilion, Busan Night and Korean performance at the closing ceremony.

For the field excursion, participants can visit not only Korea but also Japan, China and Mongolia. All within 2 hours by air.

For the accommodation, 24 hotels with 8286 rooms are available. All of them are within 10 minutes' by car to the BEXCO.

Being an attractive and pleasant city with 12 National Geo-parks, Busan is prepared to present a successful IGC.

11.d. Bids for 38th IGC in 2028

SF briefly introduced that Russia is only bidder for the 38th IGC. The Russian National Committee made an application presentation to the Bureau members at VSEGEI during the Bureau Meeting in St. Petersburg.

12. Reports from IUGS Adhering Organizations

12.a. Canadian National Committee for IUGS

Peter Borowsky, a member of the Canadian National Committee (CNC) reported on the CNC's main activities and the constructive comments.

Canadian Membership in the IUGS is currently at Category 6. CNC-IUGS Membership comprises an elected Chair and 11 volunteer but elected individuals that represent a cross section of Canadian Earth Sciences capacity

Main activities include:

- Following up on the success of RFG 2018, question remains open about the future of RFG but also the future of the InterCongress Meetings (also see ICOGS below).
- Regular remote (online) meetings to address IUGS related geoscience activities of importance to Canada.
- Promoting and preparing for the IGC in India (organizing sessions, submitting abstracts, business meetings...).
- GSC in conjunction with India is attempting to resurrect International Consortium of Geological Surveys in Dehli).

Constructive Comments from CNC:

- Annual reports and suggestions for improvement from the Adhering Organizations should be a primary focus of the Annual IUGS EC meeting.
- It is recommended that all activities of the elected IUGS EC must adhere to the ideas laid out in the approved "strategic plan". As such, an update of the Strategic Plan would help direct future IUGS activities.
- The IUGS budget cannot be used to fund activities and projects that benefit members of the IUGS EC due to conflict of Interest.
- The IUGS EC meetings and especially the Bureau meetings take place regionally.
- The IUGS Bureau to use "personal" solicitation (in person or telephone NOT emails) with Adhering Body leadership individuals to promote membership in the Union.
- The lower Impact Factor for Episodes requires serious attention (advice from external experts rather than a problem for the internal Publication Committee to resolve).
- Affiliated Organizations should be charged a minimal annual fee (cf. AGI, etc.), since "some" of the currently listed Affiliates provide no benefit to the IUGS.

12.b. Indian National Committee for IUGS

D.M.Banerjee, from India National Science Academy (INSA), presented the report.

Main Activities in 2019:

- Interaction with IUGS Bureau Members: INSA-IUGS Committee hosted an interaction meeting with the IUGS Bureau Members during the MOU Signing related activity of the 36th IGC. An overview of the Contemporary Indian Geoscience Programs with active involvement of the INSA-IUGS Committee members was provided.

- For the 36th IGC, INSA-IUGS Committee remained deeply involved in the Organization of the 36th IGC playing different roles, as: Governing Body and Executive Committee Members, Science Programming Committee Chair and Member, Field Trip Committee Chair and Members.

- New Initiative: INSA-IUGS Committee negotiated for OIL INDIA-INSA Chair for developing new Geoscience Disciplines which are currently not being pursued in the Indian Universities.

- Nominated two senior geoscientists to the contest for the posts of Councilor and Nomination Committee.

- Twin Special Issues of the Proceedings of INSA will be released at the 36th IGC.

- Sessions: A Two-Day brainstorming Session was organized by the INSA-IUGS Committee on Conservation of Geoheritage Sites in India in collaboration with Society of Earth Scientist. A critical appraisal of Code of Stratigraphic Nomenclature and Related Issues was conducted, and a White Paper will be presented for mandatory use of the Stratigraphic Code by the Indian geoscientists .

12.c. Malaysian National Committee for IUGS

Mohd Badzran MAT TAIB, from the Department of Mineral and Geoscience Malaysia (JMG), gave the report.

Malaysian National Committee comprises 13 member organizations, including government agencies, institutes, universities, associations and etc.

Malaysia remains an active player in IGCP projects, and has been engaged in 9 IGCP projects.

Malaysia actively participates in the UNESCO Global Geopark programme and activities. Geoheritage mapping and assessment have been carried out over the country to identify the potential sites for Geopark either as national Geopark or UNESCO Global Geopark.

Assistance required from IUGS is in the following areas:

- Groundwater resource assessment and management.
- Processing, integration and interpretation of geochemical, geophysical and geological data in mineral exploration.
- Slope hazards risk mapping for disaster risk management.

12.d. Decline in Adhering Members

SF reviewed the annual reports of Adhering Members, and pointed out that it's notable IUGS active members are in decline. In 2019, among the 122 IUGS Adhering Members, 65 were active members and 57 were inactive members based on the submission of membership fee.

HK noted that 24 countries out of the inactive ones have no contact points. Most of the National Committees either change heads or do not transfer information to the new ones.

CQ pointed out that the EC always try the best to make contacts with Adhering Members, and listen to advice through various ways and at various occasions. For the last four IUGS EC Meetings, the venues have been carefully chosen with the first in Paris (UNESCO, ISC), the second in Potsdam (GFZ), the third in Beijing (originally in Colombia and changed to Beijing) together with DDE Forum, the fourth in Busan (37th IGC). Likewise, the Bureau takes every opportunity of the Bureau meetings to increase IUGS visibility and interact with the local geoscience community.

RO noted that the National Committees of Adhering Members are not responsive. Even if the member countries that put a lot of money into IUGS, they are not very responsive. Some member countries are not serious about the IUGS issues. What IUGS can do is to constantly contact the National Committees to at least send a valid email address.

The following suggestions and comments are made:

- A directory with contacts of primary Adhering Members would be useful to remain close contact and promote larger collaborative network.

- Encourage representatives from Adhering Members participate in IUGS constituent groups.

- Hold delegate meeting of Adhering Members every one or two years, since four years is too long for Council members.

- Encourage the active Adhering Members to recruit countries that are not members. For instance, ask the U.S. and Canada to attract Mexico back to IUGS

- Benefits to join IUGS should be evident. Dedicate a workshop or a short courses in the name of IUGS, or provide with data/standards.

- Promote IUGS publicity by encouraging young scientists and female scientists to join IUGS affiliated organizations.

- Effective communication is crucial, such as through personal relationship .

- Consolidate relations with geological surveys which benefit most from IUGS activities.

- Improve the relevance of IUGS activities to the Adhering Members.

- Include the benefits of joining IUGS in IUGS annual reports, and send them to the Adhering Members.

- Increase IUGS visibility at IGCs, and through the activities of Task groups, Commissions, and Joint Programs. IUGS EC members give lectures on their expertise during major events.

- Summarize the benefits of membership within 200 words (briefly) including key deliverables to the decision makers (the previous EC has already done this in IUGS brochure).

- Have officers of the Adhering Members for the next four years before the Council Meeting at IGC.

- Get IUGS more involved in new and top geoscience research.

13. Reports from IUGS Affiliated Organizations

13.a. Geological Society of Africa

Maideyi Lydia MECK was absent from the meeting and no report was given.

13.b. Geological Society of India

Hema Achyuthan, the Foreign Secretary of the Geological Society of India(GSI),gave the report.

The Geological Society of India founded in the year 1958 is the largest Earth Science Association of India with about 2100 Fellows and several Institutional and Corporate Members in India. The main objective of the Society is to promote study and research in all branches of Earth Science.

Main activities and achievements in 2018- 2019:

- The Journal of Geological Society of India: As in previous years, GSI has promptly maintained its unbroken record of punctual publication and timely distribution of the monthly Journal. It has been receiving increased international recognition as evidenced by the latest impact factor of 0.994.

- The Annual General Body Meeting for 2018-19. Was concluded during the FIGA(the Federation of Indian Geosciences Associations) meeting this year at Hyderabad.

- Seminars/Symposia/Meetings and Training Programmes on the following occasions: Earth Day, Birth Centenary Celebrations of B.P.Radhakrishna, Foundation Day and etc.

- The regular activity of monthly scientific lectures are conducted on the second Wednesday of each month and Special / Endowment lectures were continued with the involvement of a wider spectrum of geoscientists.

13.c. International Association of Mathematical Geosciences (IAMG)

Jennifer McKinley, President of IAMG, made the presentation.

Founded in 1968 in Prague, the mission of the International Association for Mathematical Geosciences (IAMG) is to promote worldwide the advancement of mathematics, statistics and informatics in the geosciences. IAMG aims to further method development and disseminate results of new research in its fields of interest with outreach within the geoscience, mathematics and geoinformatics communities.

Chief accomplishments in 2019.

- IAMG2019, the 20th IAMG conference was held at State College, Pennsylvania, U.S.A. August 10-16, 2019. For the first time, Vistelius Award was awarded to both a female and a male recipient.

- The IAMG convened a session in the Silk Roads Disaster Risks Reduction and Sustainable Development (SiDRR) conference in Beijing, May 2019.

- The IAMG is founding partner of the IUGS-recognized ‘Big Science Program’ Global Deep Time Digital Earth Initiative (DDE) to be launched at the 36th International Geological Congress in New Delhi.

- Publications: *Mathematical Geosciences* (IF 1.966), *Natural Resources Research* (IF 3.094), *Computers & Geosciences* (IF 2.721) and etc.

- Sponsorship and support: the IAMG has provided sponsorship to support associated conferences.

- Supporting Early Career Scientists: In 2019 there were 6 postdoctoral and postgraduate research awards, which came to a total of \$15,000 with an additional \$9,700 provided as travel grants supporting 8 postgraduate students. Provided \$9,200 in support Student Chapters that are located around the world.

In future:

- Remains committed to supporting early career scientist and to encouraging women in science.

- A Founders Scholarship for early career researchers was set up to mark the 50th Celebration of the IAMG, the first recipient will be awarded at the 36th IGC.

- New Student Chapters are always welcome.

13.d. International Association of Engineering Geology (IAEG)

Prof.Bo-An JANG, IAEG Vice President for Asia, delivered the annual report.

IAEG is a worldwide scientific society with 4412 members and 64 nations and regional groups. There are 19 active professional commissions and groups in different fields. Being the official academic journal of IAEG, “Bulletin of Engineering Geology and the Environment” has 8 issues in 2019 with IF 2.138.

Progress in 2019:

- IAEG Executive & Council Meeting was held on September 21-22, 2019 in Jeju, Korea.

- The 12th IAEG Asian Regional Conference was held by the Korean Society of Engineering Geology and Korea National Group of IAEG on September 23-27, 2019 in Korea. More than 400 delegates from over 30 countries attended this conference.

- The 2nd IAEG African Regional Congress was held jointly with the 4th NAEGE Annual Conference on October 27-30, 2019 in Abuja, Nigeria, with the Theme of “Environmental and Engineering Geological Mapping for Sustainable Development”.

Main activities in 2020:

- 50th Anniversary Ceremony of Bulletin of Engineering Geology and the Environment (1970-2020) will be held.

- IAEG ExCom and Council meeting 2020 & the 3rd European Regional Conference of IAEG will be held in Athen.

13.e. Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP)

Dr. Young Joo LEE, Director of CCOP Technical Secretariat, delivered the presentation entitled “CCOP's role as Regional Geoscience Community: toward Sustainable Earth”.

Being an International Intergovernmental Organization, CCOP is a Unique Regional Geoscience Community in Asia. Its mission is to facilitate and coordinate the implementation of applied geoscience programmes in East and Southeast Asia in order to contribute to economic development and the improvement of the quality of life. CCOP has sixteen member countries, and is supported by fourteen cooperating countries.

CCOP is in constant interaction with all the member countries geoscience organizations, as well as other related international organisations. CCOP has been coordinating and facilitating geosciences activities for member countries through its permanent representatives, who are normally the head of the national geoscience organization of the country.

Projects, workshops and seminars of CCOP as Regional Geoscience Community center on the following fields: Energy and Mineral Resources, Geohazards/ Ground water/ Global Climate Change, Urban Geology, Geoscience Big Data, Education & Outreach,

Capacity Building. CCOP products are its facilitating and coordinating of geosciences activities to its member countries and publications published.

13.f. International Association for Promoting Geoethics (IAPG)

Peter. Bobrowsky, IAPG Coordinator for North America, gave the annual report.

The IAPG is a multidisciplinary, scientific network for widening the discussion and creating consciousness about problems of ethics applied to the geosciences, in particular on the ethical, social and cultural implications of geoscience knowledge, research, practice, education and communication.

Currently the IAPG network comprises 2321 members from 128 countries on 5 continents. The IAPG is also present in 31 countries with national sections.

Chief products:

- School on Geoethics and Natural Issues: The School on Geoethics (the “Schola”) was founded on 20 July 2019.

- SpringerBriefs Series in Geoethics: Launched on 14 June 2019. It envisions a series of publications that aim to discuss ethical, social, and cultural implications of geosciences knowledge, education, research, practice and communication.

- A series of Books and Special Issues with many scientific papers/chapters on geoethics.

- Oral and Poster Presentations in scientific sessions, courses, meetings.

- Webinar and Video-lectures.

International events:

International Geoethics Day. Officially launched in 2017, is held every year during the Earth Science Week. On 17 October 2019, the IAPG community celebrated the 3rd edition.

AWARDS

The Geoethics Medal 2019 was awarded to Linda C. Gundersen (U.S. Geological Survey, retired) in July 2019.

Plans for 2020:

- Editorial projects with peer-review process.
- International/National conferences/meetings.
- Activities of the School on Geoethics.
- Other activities (main initiatives by IAPG and its national sections).

13.g. International Consortium on Landslides

Peter Bobrowsky, President of International Consortium on Landslides (ICL), gave the report.

Goals of ICL are to reduce landslide disaster risk through development of landslide science and technology and capacity development.

Chief accomplishments in 2019:

□ Planning of the Kyoto Landslide Commitment 2020 (KLC2020) to extend the Sendai Landslide Partnerships 2015-2025 (SLP2015-2-25) to 2025, 2030 and beyond in a long term and in a wider scale. A series of meetings were organized to plan KLC2020. On 18 September 2019, the final KLC2020 document was approved and signed by the first group of partners including SLP2015-2025. 48 organizations signed it in 2019 including ICL, UNESCO, UNU, IRDR, WFEO, IAEG, Geological Survey of Canada, Gov. of Japan, Italy and Slovenia and others

Major activity in 2020:

Organization of the Fifth World Landslide Forum (WLF5) on 2-6 November 2020 in Kyoto, Japan. Implementing and Monitoring the Sendai Landslide Partnerships 2015-2025. 609 speakers have already registered through the preliminary registration.

14. International Science Council and Geo-unions

14. a. International Science Council

It's already discussed in IUGS President's report.

14.b. Report on TROP-ICSU

Chris King, IUGS representative on TROP-ICSU, made a report on the Trans-disciplinary Research Pedagogy for Improving Climate Studies and Understanding (TROP-ICSU Project).

The vision of project is democratisation of knowledge through freely accessible digital resources, which helps all of humanity to invest their talent, skills and ambition in a focused way to address the problems of climate change.

The project has developed model teaching and learning modules as proof of concept of integrating climate change-related topics across the curriculum. They are designed and packaged such that teachers across the world can use them to impart trans-disciplinary training that is essential for addressing the problems of climate change. There are approximately 300 educational resources for teachers to integrate climate education with curriculum of 10 disciplines (as proof of concept) using teaching tools and lesson plans reviewed by more than 50 Climate Experts and 700 teachers from 10 different countries

Being an example of pedagogical innovation, the project seeks extensive collaborations with international organizations to promote and disseminate TROP- ICSU Resources across the world for the use of teachers.

15. Closing of the Open Session

CQ thanked all the delegates for their participation in and contributions to the IUGS EC meeting, and expressed appreciation to their valuable comments and suggestions regarding IUGS' future development.

ACTION LIST

Item	Description	Status
EC74Act_01	The leaders of IUGS Constituent groups, Commissions and Task groups to send or bring the exhibition materials (hands-on material as well) to the Secretariat.	Done
EC74Act_02	The IUGS Commissions and Task groups to send a short four-year report to SF in early February.	Done