



IAH Karst Commission – Annual Report for 2019

INTRODUCTION

This report presents the main activities of the International Association of Hydrogeologists Commission on Karst Hydrogeology – Karst Commission (KC) during the year of 2019.

In 2019, Zoran Stevanović (Serbia), Augusto Auler (Brazil) and Zhang Cheng (China) served as Chairs of the Karst Commission (KC). Augusto Auler served as the Principal Chair during the entire year and, following the established rotation procedure, he will hand over this position to Zhang Cheng in May 2020.

ANNUAL MEETING

The International Association of Hydrogeologists (IAH) Karst Commission held its annual meeting on September 26, 2019, at the Trade Fairs and Congress Center of Malaga, during the 46th Congress of the International Association of Hydrogeologists. The meeting took place in room 1.B and was well attended, with approximately 35 people. The meeting started at 18:00 and ended at 19:30.

The meeting was coordinated by chairman Augusto Auler, assisted by co-chairman Zoran Stevanović.

MEMBERSHIP

The KC closed the year with 69 members, with six new members in 2019: [REDACTED]. We also have approximately 45 “Friends”, which are people interested in karst (or young researchers) that are kept updated with our activities through our newsletter. The list of “Friends” is informal, open to anyone interested and always growing.

FINANCES AND SPONSORSHIP

As an IAH commission the KC has no regular source of income. Support comes from donations to our programs. We have currently:

1,100 USD

858 Euros

This amount will be directed towards the “Funding for Young Scientists to Attend Conferences” as approved in Besançon 2018, and hopefully will be used in our next official meeting, UNESCOKarst 2020 in Bowling Green, USA.

We have received sponsorship from Enviroscan (donation for our programs), Mott MacDonald (support for our website) and Springer (donation of books for the Young Karst Researcher Prize).

MEETINGS IN 2019

Three meetings were organized by KC members and all took place in June, which made the attendance to all of them a nearly impossible task.

After many years, a traditional event of the KC was reestablished. The **Karst Commission Geotrip** was organized by colleagues from Serbia and Romania and took place between 15-18 of June 2019. Approximately 30 people attended the Geotrip which consisted in an informal field trip mixing karst and cultural sites in a relaxed atmosphere. The Geotrip visited the karst areas along the southern margin of the Carpathian Mountains, between the Danube and Olt rivers. The overall opinion was that it was an excellent meeting (<http://www.karst.edu.rs/en/index.html>).

Between June 17-21 2019, the **27th Karstological School** was organized by KC member Nataša Ravbar and karst colleagues from Postojna's Karst Institute and dealt with "Karst Hydrogeology – Research Trends and Applications". 153 participants from 25 countries attended the meeting. Keynote speakers were I. Sasowsky, R. Benischke, I. Jemcov, L. Gill and M. Sinreich, with a total of 35 additional presentations plus 57 posters.

Between June 24-26, 2019, karst enthusiasts gathered in Sicily for the **Man and Karst Conference**. Organized by KC Member Rosario Ruggeri, the meeting had approximately 100 participants from different countries and institutions. A total of 35 presentations were given, some of which will be selected for future publication in Springer's Carbonates and Evaporites. Field trips were offered in karst and volcanic landscapes of Sicily (<http://cirs-ragusa.org/blog/program/>).

COURSES IN 2019

Three courses took place in 2019.

In May 26 – June 1, 2019, the International Course on Characterization and Engineering of Karst Aquifers took place in Belgrade, coordinated by the Centre for Karst Hydrogeology of the University of Belgrade. Field trips occurred in the Carpathian Karst.

In September 21-22, 2019, prior to the IAH Conference in Malaga, the HYDROKARST course was offered, coordinated by KC member Bartolomé Andreo and Juan José Duran.

Two editions of the Short Course KARSYS occurred in 2019. This one-day course was offered during the Karstological School in Postojna and again at the IAH Congress in Malaga.

NEW BOOKS

Four new books related to karst hydrogeology were published in 2019. These books were either coordinated by KC members or contain chapters written by our members. All books were published by Springer:

- Eurokarst 2018, Besançon. Advances in the Hydrogeology of Karst and Carbonate Reservoirs. Edited by Catherine Bertrand, Sophie Denimal, Marc Steinmann and Philippe Renard.

- Karst Groundwater Contamination and Public Health. Beyond Case Studies. Edited by William B. White, Janet S. Herman, Ellen K. Herman and Marian Rustigliano.
- Karst Water Environment. Advances in Research, Management and Policy. Edited by Tamim Younos, Madeline Schreiber and Katarina Kosic Ficco.
- Dams and Reservoirs in Evaporites. Edited by Petar Milanovic, Nikolay Maksimovich and Olga Meshcheryakova.

COLLABORATIVE ARTICLES AND PROJECTS

We receive the news that the first WOKAM (World Karst Aquifer Mapping – a KC project) article, published in 2017 in Hydrogeology Journal and led by Zhao Chen and Nico Goldscheider, is one of the highest cited in the journal. A second paper has been submitted in 2019 and is presently under review.

The WoKaS – World Karst Spring hydrograph database, an initiative led by Tunde Olarinoye and Andreas Hartmann, has a worldwide group of collaborators. A very large and important dataset has been built and a paper has been submitted and accepted in Nature Scientific Data.

A topical paper collection on sustainable management of karst natural resources has been published in Environmental Earth Sciences, organized by Sasa Milanovic and Zoran Stevanovic. It can be accessed at:

https://link.springer.com/journal/12665/topicalCollection/AC_66ec433d2c4caa1c56d17c01d329e7a6

KC member Pierre-Yves Jeannin is organizing the “Karst Modelling Challenge”, a KC project. It held a meeting prior to the Malaga IAH Conference and is preparing a manuscript for submission.

KC member Nico Goldscheider is among the leaders of the KARMA (Karst Aquifer Resources Availability and Quality in the Mediterranean Area) project which is now in its initial stages and will involve many KC members.

PROGRAMS

The KC currently has two programs, the well-established Young Karst Researcher Prize and the new Funding for Young Scientists to Attend Karst Commission Conferences.

FUNDING FOR YOUNG SCIENTISTS TO ATTEND KARST COMMISSION CONFERENCES

There were no applications for this program in 2019. It was decided that the KC should not stick exclusively to the “low income criteria”, but instead focus on people that need financial support as many students do. Therefore, it was decided to expand our criteria and students that cannot fully support themselves will also be eligible for the funding. Partial funding, in order to help more people, will also be taken into consideration. The KC chairmen will coordinate the selection based on received applications and motivation letters.

FUNDING FOR LOW INCOME YOUNG SCIENTISTS TO ATTEND GEOTRIPS

It was approved that the KC should sponsor, partially, young scientists to attend Geotrips. It was suggested that some members could volunteer giving an “extra” money that would be used towards supporting low income young scientists. The amount of “donation” was not fixed but should be at the discretion of anyone willing to cooperate. At present the KC has no money to be used in this new funding program.

SOCIAL MEDIA

The Karst Commission has been very well represented in social media.

Our website is being regularly updated by KC member Aidan Foley, thanks to Mott MacDonald.

KC Facebook page is active, being updated by KC member Andreas Hartmann.

KC Twitter page is also active and updated by KC member Andreas Hartmann.

KC LinkedIn page is under responsibility of KC member Catherine Coxon.

KC NEWS

A change towards a more visually attractive format for our newsletter, the KC News, has taken place in 2019. Starting in March we adopted a new layout using a free marketing platform (Benchmark). Due to problems with the firewall of some e-mails, in November, following suggestions from the IAH Secretariat, we have changed to a better digital marketing provider (Campaign Monitor) which improved considerably our delivery rate besides providing us with metrics on who and when the newsletter was accessed.

ISO TECHNICAL COMMITTEE ON KARST

The Technical Committee (TC 319) of the International Standards Organization (ISO) had its first meeting in Guilin on the 23rd of September 2019. According to co-chairman Zhang Cheng, it was a very successful meeting and two projects were approved by the scientists: “Monitoring methods on Karst Critical Zones” and “Karst and Cave Terminologies”.

FUTURE ACTIVITIES AND MEETINGS

The KC official meeting in 2020 will be the UNESCO Karst 2020, Conservation of Fragile Karst Resources, to take place in Bowling Green (USA) between May 18-22. This meeting is being organized by KC member Chris Groves.

The 2020 Geotrip will occur between May 11-15 in Yellowstone National Park, in the United States, as approved in our official meeting in Dubrovnik in 2017. A tentative program for the Geotrip was presented and contains four days of tours. The meeting point will be the town of Gardiner and the nearest airport is in Bozeman, Montana. As usual there will be no fees and the participants will take care of the accommodation, food and transport (through rented cars). The Geotrip has been scheduled to be linked with our official meeting in 2020, the UNESCO Karst.

It was decided that in 2021 the KC official meeting will take place during the Eurokarst 2021 conference, on June 22-24 in Malaga, Spain.

KARST COMMISSION 50TH ANNIVERSARY

The Karst Commission will have its 50th anniversary in 2020. A celebration will occur during the UNESCO Karst meeting in Bowling Green. It has been decided to have a ceremony in which three long standing KC members will be honored, one for each geographical area:

Dr. Derek Ford (Canada) for the Americas.

Dr. Petar Milanovic (Serbia) for Europe and Africa.

Dr. Yuan Daoxian (China) for Asia and Oceania.

These three scientists have been formally invited to attend. A plaque or certificate will be provided. Details of the ceremony are being planned in conjunction with the UNESCO Karst conference organizers.

PUBLICATION OF ARTICLE ON KC 50TH ANNIVERSARY

It has been approved that an article/short paper (essay) should be written about the 50th anniversary of the Karst Commission to be published in Hydrogeology Journal.

HYDROGEOLOGY JOURNAL KARST SPECIAL ISSUE

Also as part of the 50th anniversary of the Karst Commission, a Special Issue on Karst, the first ever in Hydrogeology Journal will be prepared. Invitation was sent to several KC members and the response was enthusiastic, with over 30 people interested. The deadline for manuscript submission is April 30, 2020.

YOUNG KARST RESEARCHER PRIZE

A commission composed by members Peter Malik, Philippe Meus, Zoran Stevanovic and Augusto Auler attended all karst sessions during the IAH Malaga Congress and jointly selected three winners for the 2019 Young Karst Researcher Prize. The winner's received typical local gifts from the IAH Conference organizers and books from Springer. The awardees were:

Flann Corcoran – TU-Berlin, Germany.

Marie-Amelie Petre – HydroSciences Montpellier, France

Emmanuel Dubois – UQUAM, Canada.

FINAL CONSIDERATIONS

It has been a busy year for the Karst Commission. We acknowledge the enthusiastic support of our members. We are glad to report that the Karst Commission, as a 50-year-old lady (or gentleman), is still young at heart and ready to move forward and increase the awareness regarding karst.

Augusto Auler (Brazil)

Zoran Stevanović (Serbia) & Zhang Cheng (China)