ANNUAL REPORT FOR 2020

INTRODUCTION

This report presents the main activities of the International Association of Hydrogeologists Commission on Karst Hydrogeology – Karst Commission (KC) during the year of 2020.

In 2020 Zoran Stevanović (Serbia), Augusto Auler (Brazil) and Zhang Cheng (China) were formally the Chairs of the Karst Commission (KC). Augusto Auler served as the Principal Chair until the end of April 2020, followed by Augusto Auler and Zoran Stevanović coordinating the KC until the end of 2020.

2020 was a special year for the KC because of its 50th anniversary. However, the COVID pandemic affected some of the planned activities, such as the conference that was schedule to host our annual meeting (this conference became a virtual one), our 50th anniversary celebration (which was postponed) and our annual meeting (which was cancelled).

ANNUAL MEETING

Unfortunately, there was no official meeting in 2020 due to the pandemic situation. The meeting had been planned to take place during the KARST 2020 conference in Bowling Green, Kentucky, USA. However, this conference was initially postponed, and then became a virtual event. During this conference the celebration of the KC 50th nniversary had been planned as a major event, with keynote lectures and the physical presence of the three honorees, Derek Ford (Canada), Yuan Daoxian (China) and Petar Milanovic (Serbia). It was decided to postpone the ceremony to 2021.

MEMBERSHIP

The KC closed the year with 73 members, with four new members in 2020: Junbing Pu (China), Laurence Gill (Ireland), Lee Anne Bledsoe (USA) and Jean-Baptiste Charlier (France). We also have approximately 50 "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.

IAH KARST COMMISSION

FINANCES AND SPONSORSHIP

TAs 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 should be directed towards the "Funding for Young Scientists to Attend Conferences" as approved in Besançon 2018, to be used in our next official meeting.

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

MEETINGS IN 2020

Unfortunately, no meetings were organized by the KC in 2020 due to the COVID pandemic situation. However, our members have actively contributed to several virtual events, including those organized by UNESCO-IHP, Western Kentucky University, IWRA, etc.

COURSES IN 2020

Most of our regular courses planned for 2020 are postponed due to the COVID pandemic situation. The International Research Center on Karst, Guilin, China organized online 12th International training course in November, 2020 on Karst Resources, Environmental Effects and Ecological Industries with about 40 attendants. Some regular courses such as CEKA have been organized at national level, only.

NEW PUBLICATIONS

The major project during 2020 was the preparation of the Special Issue of Hydrogeology Journal dedicated to karst. This Special Issue, intitled "Five decades of advances in karst hydrogeology" was finalized in December 2020 and sent to Springer for publication. The Special Issue contains 29 papers written by 97 authors from 20 countries. Most of the papers are already on line and can be accessed at the journal's website. The complete Special Issue will be assembled and printed in February 2021.

IAH KARST COMMISSION

COLLABORATIVE ARTICLES AND PROJECTS

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, received the classification of "highly cited paper" by Web of Science, a rare and prestigious award. The second paper of the WOKAM project has been published and can be accessed at: <u>https://link.springer.com/article/10.1007/s10040-020-02139-5</u>

The WoKaS – World Karst Spring hydrograph database, an initiative led by Tunde Olarinoye and Andreas Hartmann, has published an important paper in Scientific Data, containing an extensive database of karst springs around the world. The paper involved several KC members and can be accessed at: <u>https://www.nature.com/articles/s41597-019-0346-5</u>.

The KARMA (Karst Aquifer Resources Availability and Quality in the Mediterranean Area) project is now active and additional information can be found at its website (<u>www.karma-project.org</u>). This project involves 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

Three candidates were selected to receive funds to attend the KARST 2020 conference in Bowling Green, Kentucky (USA). Due to the fact that the conference became a virtual one, the funding was not offered in 2020.

FUNDING FOR LOW INCOME YOUNG SCIENTISTS TO ATTEND GEOTRIPS

The Geotrip planned for 2020 to Yellowstone National Park (USA) in conjunction with the official 2020 meeting, KARST 2020 in Bowling Green, Kentucky, USA, was cancelled. Thus, this funding was not offered in 2020.

YOUNG KARST RESEARCHER PRIZE

This prize was not offered in 2020 due to the fact that there was no official KC meeting and conference.

IAH KARST COMMISSION

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

Twelve issues of the KC News, our monthly newsletter, were published in 2020 and sent electronically to our members and friends.

FUTURE ACTIVITIES AND MEETINGS

Due to the continuing COVID pandemic situation, planning for 2021 is under consideration. The KC has approved that the 2021 official meeting would take place during the EUROKARST 2021 conference, on June 22-24 in Malaga, Spain. But this conference was postponed to 2022. Due to the considerable uncertainty regarding conferences in 2021, the KC has not yet made a final decision about what the next steps should be.

KARST COMMISSION 50TH ANNIVERSARY

The Karst Commission had its 50th anniversary in 2020. A celebration was planned to occur during the KARST 2020 meeting in Bowling Green, Kentucky (USA). However, this meeting was initially postponed from May to August and then became a virtual one. It was decided to postpone the ceremony to the EUROKARST 2021 in Malaga. However, with the postponement of this conference, a decision is yet to be made regarding how to proceed.

MISCELLANEOUS

A comprehensive document containing a series of guidelines was prepared. These guidelines intend to establish procedures to help incoming chairman to deal with various issues related to the KC.

A new logo was approved for the KC and is now being used in our newsletter. The 50th anniversary version of this logo can be seen at the beginning of this document.

Three KC members were elected to the IAH council in 2020 as Vice-Presidents. Marco Pettita is re-elected as the Vice-President for Europe (West and Central), Joanna Doummar was elected as the new Vice-President for the Middle East & North Africa, and Seifu Kebede is now the Vice-President for Sub-Saharan Africa.

KC member Andreas Hartmann from the Chair of Hydrological Modelling and Water Resources at the University of Freiburg, Germany, was honored with the Arne Richter Award for Outstanding Early Career Scientists 2020, a prestigious award.

FINAL CONSIDERATIONS

2020, the year in which the KC turned 50 years old, was a peculiar one. With the COVID pandemic many of our initiatives had to be postponed. 2021 will be the final year of the current Chairmen and, with the resilience of the pandemic, many of our programs are temporarily on hold. We are hoping for a better 2021 and for further productive 50 years for the Karst Commission.