



International Geographical Union
Union Géographique Internationale

Commission for
Water Sustainability



Annual Report 2018

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Contributors:

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F. Winde (Chair)

I. Canjevac, N. Frolova, D. Karthe, L. Zaharia

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Contents

A. Membership	
a. Structure of Steering Committee	3
b. Member statistics	3
B. Meetings	
a. Meetings held	4
b. Meetings planned	7
C. Networking	
a. Collaboration within the CWS	7
b. Collaboration with other IGU Commissions and Task Forces	8
c. Collaboration with other international or inter- and multidisciplinary groups	8
d. Cooperative efforts with ISC and CIPHS	8
D. Publications	
a. Newsletter and reports	8
b. Special issues, books	8
c. Joint papers	9
d. Website	9
E. Archival contributions	9
F. Other	10

A. Membership

a. Structure of Steering Committee

Over the reporting period Prof. Olga Scarpati announced her retirement from active academic research. The current composition of the SC is reflected in the following table:

Function	Name	Country, gender	SC since	max. to	Institution	Portfolio
Chair	Prof. Dr. habil. Frank Winde	South Africa, male	2012	2024	North-West University, Vaal Triangle Campus, Vanderbiljpark, Geography and Environmental Studies, PO Box 1174, Vanderbiljpark, 1900; Tel. +27 724059561, +49 17696001533, Skype: frank.winde, frank.winde@nwu.ac.za	Management and admin, Membership/recruitment, website/public visibility
Vize chair	Prof. Dr. Natalia Frolova	Russia, female	2012	2020	Lomonossov State University, Moscow, Department of Hydrology, Faculty of Geography, GSP-1, 119991, Leninskie Gory, MSU. Phone: +7 (495) 939-15-33 frolova_nl@mail.ru	Meetings + archiving
Vice-Chair	Prof. Dr. Chan-sheng He	USA, male	2012	2020	Western Michigan University. Wood Hall, Department of Geography, Western Michigan University, 3234 Wood Hall, Kalamazoo, MI 49008-5424. Phone: (269) 387-3425 Fax: (269) 387-3442 chansheng.he@wmich.edu	Publications + reporting
Member	Dr. Ivan Canjevac	Croatia, male	2012	2020	University of Zagreb, Faculty of Science, Department of Geography, Marulicev trg 19/II, 10000 Zagreb, Croatia, canjevac@geog.pmf.hr., Tel. 0038514895424, Fax 0038514895440, Skype name: naumovac canjevac@geog.pmf.hr	Collaboration + outreach
Member	Dr. Daniel Karthe	Mongolia, male	2016	2024	German-Mongolian University, Mongolia, daniel.karthe@ufz.de	Membership + recruitment
Member	Prof. Dr. Liliana Zaharia	Romania, female	2016	2024	University of Bucharest, Faculty of Geography 1 Nicolae Balcescu Blv., 010041, Bucharest, Romania, Tel: + 40-21-305 38 22, Fax: + 40-21-315 30 74, zaharialil@yahoo.com ; zaharialili@hotmail.com	Proposed: Meetings + archiving
Member	Prof. Dr. Lanhui Zhang	China, female	2016	2024	Lanzhou University, College of Earth Environmental Sciences, Guanyun Building 0912, TianshuiNan Road 222, Lanzhou City, zip code: 730000, Gansu Province, China, Tel/Fax:010 931 8912805 lhzhang@lzu.edu.cn	Proposed: Publications + reporting
Member	Dr Julia Hall	Austria, female	2017	2025	Vienna University of Technology, Institute of Hydraulic Engineering and Water Resources Management, Austria, Tel. 4315880122322, 1040 Vienna, Karlsplatz 13/222-2 hall@hydro.tuwien.ac.at	Collaboration + outreach
Member	Prof. emer. JAA (Tony) Jones	UK, male	2002	open ended	Institute of Geography and Earth Sciences, University of Wales, Aberystwyth. tonyandjenjones@btinternet.com	honorary SC-member

b. Member statistics

The Commission managed to grow in terms of active members who submitted a filled-in research profile template to 51 (34 male, 17 female) adding four countries (Australia, Turkey, Zimbabwe and Swaziland) to the 18 already represented at the Commission. We are welcoming the following colleagues (in chronological order of joining):

- Prof. Y Xu, University of the Western Cape, South Africa
- Mr. F Donkor, WITS University, South Africa
- Dr. VS Yavuz, Siirt University, Turkey
- Mr. I Overton, Water Research Limited, Australia

- Prof. W Choi, University of Wisconsin, USA
- Prof. H Beckedahl, University of Swaziland, Swaziland
- Dr. K Winmore, Midlands State University, Zimbabwe
- Dr. T Marambanyika, Midland State University, Zimbabwe

The research profiles of most members are available on the new website of the Commission (www.igu-water.org). The membership per country is now as follows:

1 Argentina	2
2 Armenia	1
3 Australia	1
4 Austria	1
5 China	5
6 Croatia	3
7 Germany	4
8 India	1
9 Italy	1
10 Japan	1
11 Mongolia	1
12 Norway	1
13 Portugal	1
14 Romania	5
15 Russia	6
16 South Africa	6
17 Spain	1
18 Swaziland	1
19 Turkey	1
20 USA	4
21 UK	2
22 Zimbabwe	2

B. Meetings

a. Meetings held

- *2018 IGU Regional Conference, Quebec City, Canada (6-10 August)*

The annual meeting of the Commission was held as part of the IGU Regional Conference in Quebec City at which a total of 19 papers were presented in the following sessions:

Hydrological processes between fire and ice I (5 papers)

Water Sustainability – open session (4 papers)

Hydrological processes between fire and ice II (5 papers)

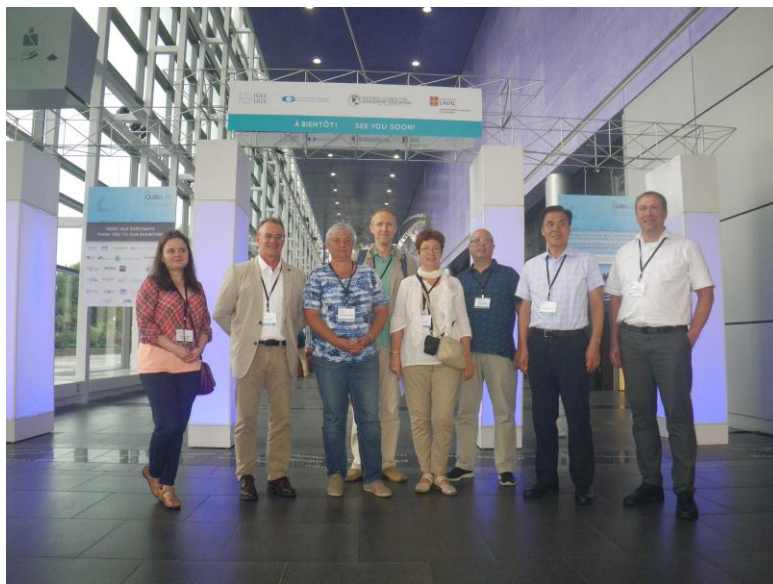
Human and water – managing the impacts (5 papers)

The general consensus among Commission members was that the sessions were interesting and successful in stimulating multidisciplinary and cross-country collaboration among members.

Supported by endorsement letters from the Chair an IGU travel grant was provided to prof. L. Zaharia and a partially funded volunteer position for her PhD student Ms. G. Morosanu.

Responding to a request for feedback the chair addressed a number of concerns members voiced regarding the organisation of the event by a professional company in an email to prof. Guy-Dorion of the LOC (for details see Newsletter no. 18 at www.igu-water.org).

The Commission also held its annual business meeting. Among other possible follow-up publications from the conference were discussed and, following the offer by prof. Zaharia, Bucharest (Romania) as the venue for the next annual meeting agreed upon.

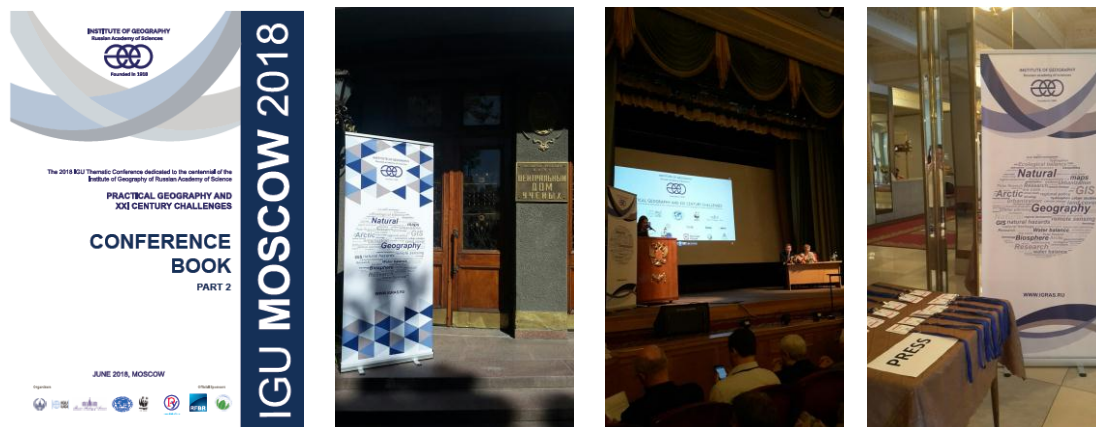


*Concluding the conference in the foyer of the International Conference Centre
(from left: Gabriela Morosanu, Frank Winde, Natalia Frolova, Ivan Čanjevac, Liliana Zaharia, Danijel Orešić,
Chansheng He, Daniel Karthe)*

- ***IGU Thematic Conference, Moscow, June 2018***

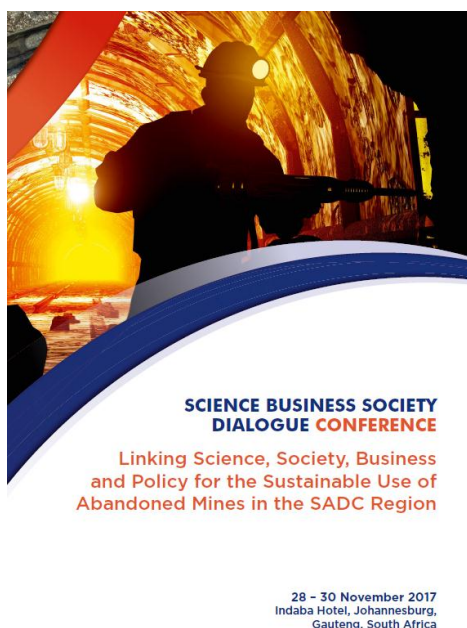
Following an initiative of prof. W. Kollosov the IGU Thematic Conference: Practical Geography and XXI Century Challenges was held in Moscow, 4–6 June 2018 supported by the Commission. The conference was dedicated to the 100th anniversary of the foundation of the Institute of Geography of the Russian Academy of Sciences (IGRAS) as largest geographical research organisation in Russia and attracted 750 participants representing 36 countries. As part of one of the eight themes of the conference (Theme 2: Environmental Challenges) our Commission held the following sessions headed by proffs. N. Frolova and M. Bolgov and attended by a number of Commission members:

1. Water resources in the conditions of climate change
2. Water management : modern principles, methods, results
3. Water pollution and health impacts
4. Extreme hydrological events



- ***Joint Leopoldina-ASSAf Conference on sustainable use of abandoned mines (28-30 Nov. 2017), Johannesburg, South Africa***

The South African members of the Commission together with the National Academy of Science Leopoldina (Germany) and the Academy of Science of South Africa (ASSAf) jointly organised an international conference on the sustainable use of abandoned mines in the SADC region, where water and its protection from mining-related pollution played a key role. Having attracted some 100 hand-picked participants a key topic was the conversion of underground mines into pumped hydro storage schemes for the first time bringing together five research teams from four different countries where this innovative concept is currently explored. The conference statement and report can be found at: [doi http://dx.doi.org/10.17159/assaf.2018/0025](http://dx.doi.org/10.17159/assaf.2018/0025).



- ***Intern. Symposium: Sustainable Urban Renewal, Chongqing (China), 12 June 2018***

As newly appointed member of the Commission the Director of the China-Africa Water Institute, Prof. Yongxin Xu, together with the University of Chongqing and the China-Africa Water Institute approached our Commission to jointly organise an international symposium on sustainable urban renewal that was hosted by T.Y. Lin International Engineering Consulting (China) Co. Ltd., in Chongqing (China) on 12 June 2018. Aspect relating to water sustainability included urban waste water management, mine water management, and water quality aspects in cities.



Prof. Y. Xu as session chair

c. Meetings planned

- ***Annual Commission Meeting 2019, Bucharest (Romania)***

Following the offer of Prof. Zaharia to host next year's annual Commission meeting at the University of Bucharest members present at the Quebec business meeting unanimously agreed to hold the 2019 meeting in Romania. The exact dates, times and venues will be determined in collaboration with the host university and be communicated to members together with the call for abstracts in due course.

- ***IGU Congress 2020, Istanbul (Turkey)***

Responding to a request by the Chair Dr. Yavuz, as newly joined member from Turkey, indicated his active support of the Commission in preparation for the 2020 IGU Congress in Istanbul (Turkey).

C. Networking

a. Collaboration within the Commission and with other IGU Commissions and Task Forces

(1) Hydrological glossary

Following a proposal by Gabriela Morosanu (Romania) the idea of the Commission contributing to a hydrological glossary was launched and enthusiastically discussed among member via email correspondence. Latching on to the original initiative by the Hydrology Group of the Scientific Committee of EGEA (European Association of Geography Students) to create a wiki platform-based glossary several members forwarded existing glossaries as well as links to multilingual online versions. The idea is generally supported while members are aware that duplication should be avoided. On the Commission's website two published glossaries are available in pdf also providing a link to the multilingual online glossary mentioned above.

(2) Joint book project

Following the chair's request for responses to a proposed book project (a Springer template was sent out as an example) a lively discussion pursued in response to Prof. D. Karthe proposing to explore the viability of a dedicated volume on 'Hydrogeography and Water Sustainability' as a

seemingly underrepresented topic in current hydrological and geographical literature. The discussion is still ongoing with many members having expressed keen interest to contribute. The discussion mainly revolves around scope and target audiences as well as style and contents of a possible joint book produced by the Commission aiming to fill a gap rather than competing with existing works.

b. Collaboration with other IGU Commissions and Task Forces

For this period no related activities are to be reported.

c. Collaboration with other international or inter- and multidisciplinary groups

A joint proposal of South African members of the Commission to UNESCO-IGCP was submitted together with scientists from six other African countries aiming to investigate environmental and health effects of abandoned mines in Africa.

A joint symposium with the China-Africa Water Institute was held in Chongqing (China) (see above mentioned conference).

d. Cooperative efforts with ISC and CIPHS

The document outlining the vision of the newly formed International Science Council (ISC) was distributed and contents noted. A call for contributing to reviewing proposals was answered by the chair and distributed.

D. Publications

a. Newsletter and reports

Newsletter no. 18 has been circulated in September 2017 and can also be found at the Commission's website (www.igu-water.org).

The quadrennial report on activities of the Commission was published in last year:

Winde F (2017): Water Sustainability. Quadrennial report of the Commission for Water Sustainability 2012-2016. *International Geographical Union Bulletin*, 65-66 (2015-2016), 344-353

In addition the chair compiled the earlier mentioned feedback report to the LOC of the Quebec Conference as well as the 2017 Annual Report to IGU Ex-Co.

b. Special issues, books

A special edition edited by Chansheng He and Frank Winde for the journal *Ecosystem Health and Sustainability* (EHS) entitled: Water Sustainability and Watershed Ecosystem Health was completed in 2018:

He C, Winde F (2018): Water Sustainability and Watershed Ecosystem Health. *Ecosystem Health and Sustainability*, 4 (10), 241-242, ISSN: 2096-4129 (print), 2332-8878 (online), DOI 10.1080/20964129.2018.1538666, <https://doi.org/10.1080/20964129.2018.1538666>

c. Joint papers

In this section papers are listed which resulted from joint efforts of two or more members of the Commission or were flowing from collaborative projects in which two or more members of the Commission participated. Names of members of the Commission are in red and underlined.

Kaiser F, Winde F, Erasmus E (2018): Storing energy in disused mines: comparing pumped water and compressed air-based technologies. *International Journal of Mining and Mineral Engineering*, vol. 9, no. 3, 177-195

Vasilchuk Y, Frolova N, Kasimov N, Winde F, Budantseva N, Chizhova J, Efimova L, Krasnova E, Terskaya E, Tokarev I, Vasilchuk A (2018): Isotope stratification of meromictic Lake Terkhtzvetnoe at the White Sea coast (Russia). *International Journal of Limnology*, 54 (23), 9 pages, <https://doi.org/10.1051/limn/2018012>

Zaharia, L, Ioana-Toroimac, G, Morosanu, G, Galie, A, Moldoveanu, M, Čanjevac, I, Belleudy, P, Plantak, M, Buzjak, N, Bočić, N, Legout, C, Bigot, S, Ciobotaru, N (2018): Review of national methodologies for rivers' hydromorphological assessment: A comparative approach in France, Romania, and Croatia. *Journal of environmental management*, 217 (1), 735-746.

Čanjevac, I, Orešić, D (2018): Changes in discharge regimes of rivers in Croatia. *Acta Geographica Slovenica*, 58 (2), 7-18.

Orešić, D, Čanjevac, I, Maradin, M (2017): Changes in discharge regimes in the middle course of the Sava River in the 1931-2011 period. *Prace Geograficzne* 151, 93-119

Joint paper with the German Geographer's working group on Hydrology:

Karthe, D.; Chiffard, P.; Cyffka, B.; Menzel, L.; Nacken, H.; Raeder, U.; Sommerhäuser, M. & Weiler, M. (2017): Water research in Germany: from the reconstruction of the Roman Rhine to a risk assessment for aquatic neophytes. *Environmental Earth Sciences* 76:549

d. Website

Efforts to improve the appearance, attractiveness and contents of the website continued resulting in an extensive overhaul of the design, the addition of significant historical material pertaining to past activities of the Commission and significantly shortened updating intervals. It is believed that the increased attractiveness of the website is reflected by the various unsolicited request for membership The Commission received over the past year (www.igu-water-org).

E. Archival contributions

A section on the Commission's website is now dedicated to archive news. Progress was also made in retrieving information regarding past conferences as a means to record and track the historical development of the Commission (www.igu-water.org).

F. Other

Retirement of Prof. Olga Eugenia Scarpati



After nearly two decades of serving the Commission as its Secretary Prof. Olga E. Scarpati has announced her retirement from active scientific research and academia.

Olga was one of the founding members of the Commission and has unfailingly helped distributing news and information among the Commission members ever since. Olga also organised the Commission's first meeting in Latin America (Buenos Aires, 2005) overcoming fiscal constraint plaguing the country through successfully soliciting support from a range of national and international institutions.

Preparing for her departure from active involvement well in advance Olga was able to engage new young researchers to ensure the continued representation of Argentina on the Commission securing an important gateway for members to collaborate with non-English speaking colleagues in Latin America.

The chair, the founder of the Commission Emeritus Professor Tony Jones and the Steering Committee are unanimous in thanking Olga for her unfailing enthusiastic support of the Commission, her warmth and friendship and wish her plenty of opportunity to enjoy these years of her new life together with her partner Alberto, family and all the people dear to her.