

Commission on Mineral and Thermal Waters

Commission Eaux Minérales et Thermales



MINUTES OF THE 47th ANNUAL SESSION

Together with

45th IAH CONGRESS
GROUNWATER AND LIFE: Science and Technology in Action
Daejeon, Korea, 9 – 14 September 2018
&
5th Slovenian Geological Congress,
Velenje, Slovenia, 3-5 October 2018

prepared by: Natalia Vinograd, Adam Porowski, Jim LaMoreaux

December 2018

According to decision of the CMTW-IAH Meeting 2017 in Luso, Portugal, an open meeting of the IAH Commission on Mineral and Thermal Water in 2018 was held during the 45th IAH Congress in Daejeon, Korea.

The CMTW business meeting (mainly for the regular members) was held during the 5th Slovenian Geological Congress in Velenje, Slovenia.

Minutes of the Open Meeting

of the IAH Commission on Mineral and Thermal Water (IAH-CMTW)

1. Welcome of the participants and members.

Chairman: *Jim Lamoreaux*

Secretary: *Natalia Vinograd* (in replacement for Adam Porowski)

Participants introduce themselves.

2. Short information about current activities of the CMTW for IAH members.

Speaker: *Jim Lamoreaux* .

CMTW organizes annual meetings and publishes special issues of the journals „Environmental Earth Science“ and „Sustainable Water Resources Management“, at present has about 1500 publications.

3. Information about CMTW Meeting together with 5th Slovenian Geological Congress in Velenje, 3 – 5 October 2018.

Speaker: *Jim Lamoreaux* .

The Congress will be Organised by the Geological Survey of Slovenia ([GeoZS](#)) and the Slovenian Geological Society ([SGD](#)) with partners: Velenje Coal Mine ([PV](#)), Faculty of Civil and Geodetic Engineering ([FGG](#)), Slovenian Mining Association of Engineers and Technicians ([SRDIT](#)), International Association of Hydrogeologists - Slovene Committee ([SKIAH](#)), and Municipality of Velenje ([MOV](#)).

4. Short information about the conference in Villa de Luso, Portugal, 2017.

Speaker: *Jim Lamoreaux* .

Due to the insufficient number of CMTW members, acceptance of the Minutes is moved to the next CMTW Meeting in Slovenia, October, 2018.

5. Information about current and upcoming publication activities coordinated by the CMTW and the Chairman – Jim Lamoreaux.

- a) New Zealand Mineral Waters: Andy Shugg and Jim Lamoreaux
- b) New publication of Special Issue of Sustainable Water Resources Management with papers from CMTW meeting in Rome, 2015, and Portugal, 2017: guest editors Vincenzo Piscopo, Jose Marques and Paula Carreira
- c) New publication: ***Encyclopedia of Sustainability Science and Technology, Second Edition***, edited by **Robert A. Meyers**.

Jim is an Editor of the Environmental Geology Section and has requested CMTW members to participate in authorship of one or more chapters. The following chapters may be still available for participation or they are already published:

1. Impacts and Methodology of Fracking
2. Coral Morphology and Deposition
3. Mine Waters Inrush
4. Water in Loess
5. Surface Water Geochemistry
6. Surface and Groundwater Interaction
7. Climatic Effects on Ice and Snow
8. Brine Disposal
9. Metals Mining in Sub-Tropical Climates
10. Managed Aquifer Recharge
11. Remediation in Karst
12. Groundwater Vulnerability
13. Arid and Semi-arid Soil and Water Interaction
14. Mineral and Thermal Waters (Adam Porowski – published)

6. Presentation of the MinWat-2020 in Italy (March-April, 2020)

Speakers: Paolo Fabbri and Dario Tedesco

The conference will be organized by the IAHR Italian National Chapter. Topics will be typical for MinWat Conferences. It is to be held in Caserta, Italy in March, 31-April 3 2020.

Dario Tedesco represents the region and conference venue. The region is situated to the North from Naples and is rich in mineral carbonated water. The conference will be held in the High School of Public Administration. The sponsor is Ferrarelle company.

7. Further CMTW Meetings.

Speaker: Jim Lamoreaux.

2019 – not yet decided.

2021 – proposition: Crimean Peninsula (required further decision).

8. New IAH member invitation to participate in the CMTW activities.

Speaker: David Kreamer

David Kreamer introduced himself. He is a contact person of the IAH. If one can join CMTW, it is necessary to send CV to Jim Lamoreaux.

LIST OF PARTICIPANTS

No	Name	Country	e-mail
1	LAMOREAUX, JAMES (Chairman)	USA	jlamoreaux@pela.com
2	VINOGRAD, NATALIA (CMTW member, secretary, IAH Vice-President)	RU	natalia_vinograd@yahoo.com nv.70@hotmail.com
3	David Kreamer (USA) – University of Nevada, Las Vegas, IAH Vice-President	USA	dave.kreamer@unlv.edu
4	FABBRI PAOLO	IT	Paolo.fabbri@unipd.it
5	Dario Tedesco (Italy), University of Campania – L.Varvitelli,	IT	dario.tedesco@unicampania.it
6	Xu Lang (China), Jilin University	ChRL	liangxu2513@mails.jlu.edu.cn
7	John Sharp (USA), University of Texas	USA	johnsharp@jsg.utexas.edu
8	Petra Kovacs-Bodor (Hungary), Eotuis loraud University	HU	petrabodor@caesar.elte.hu
9	Elena Kayukova (Russia), St.Petersburg University,	RF	epkayu@gmail.com

ACCOMPANING PERSONS

No	Name	Country	
1	LaMoreaux, Nicole, Mrs	USA	cultural program

BUSINESS Meeting

held in CMTW session during 5th Slovenian Geological Congress,
3-5 October 2018, Velenje, Slovenia

Due to the fact that a lot of CMTW members was not able to participate at the Congress in Daejeon, another CMTW meeting was organized during the 5th Slovenian Geological Congress in Velenje, Slovenia. The CMTW meeting in Slovenia

was focused on the regular CMTW members participation to vote actual organizational issues connected with CMTW activities.

The Congress was officially Organised by the Geological Survey of Slovenia ([GeoZS](#)) and the Slovenian Geological Society ([SGD](#)) with partners: Velenje Coal Mine ([PV](#)), Faculty of Civil and Geodetic Engineering ([FGG](#)), Slovenian Mining Association of Engineers and Technicians ([SRDIT](#)), International Association of Hydrogeologists - Slovene Committee ([SKIAH](#)), and Municipality of Velenje ([MOV](#)).

Activities connected with CMTW meeting, scientific session regarding mineral and thermal water as well as organization of post-congress field trip was prepared by the CMTW members from Slovenian and Croatian chapters of IAH – dr Nina Rman and dr Tamara Marković.

Congress summary

The Slovenian Geological Congress was, apart from exchanging new research results, also focused on the importance of geoscience for the wider society and its development. It fostered dialogue between scientists and professional geologists on the one hand, and end users of results on the other hand. Another goal of the Congress was to increase the visibility of geology as a basic natural science, and the cornerstone of all activities related to the management, supervision and planning of sustainable development or the transition to a circular economy, some of those being: (1) planning the sustainable use of mineral resources, groundwater and energy resources, (2) careful planning of infrastructure facilities, such as roads, pipelines, power lines, landfills, including hazardous and radioactive waste repositories, (3) assessing the environmental impacts of a wide range of spatial interventions, (4) estimating geologic hazards, (5) assessing the geothermal potential for planning the use of geothermal energy.

This Congress was the opportunity to make policy makers aware of the problematic current (unregulated) legal status of geological expert work. With a wide range of side-programme activities, we presented the mining industry and geology to the inhabitants of Velenje and its surroundings, highlighting their importance and bringing this issue closer to the general public.

Presentations during the scientific session “Hydrogeology and geothermics”

Hidrogeologija in geotermija (1. del) Hydrogeology and geothermics (1st part)	
Mala dvorana / Small hall	Vodja / Chair: Barbara Čenčur Curk
Petra Žvab Rožič, Ana Grkman, Timotej Verbovšek et al.	Pomen razumevanja litoloških in strukturnih značilnosti vodonosnikov: primer kraškega vodonosnika doline Učje
Ana Selak, Ivana Boljat, Josip Terzić et al.	Vulnerability mapping criteria identification for karstic part of Kupa river catchment area within CAMARO-D project
Matko Patekar, Jasmina Lukač Reberski, Ivana Boljat et al.	Efficient land use practices as tools of drinking water protection in complex karst environment – Dalmatia case study
Tamara Marković, Martina Šparica Miko, A-M. Đumbir et al.	Variations of nitrate concentrations in ground and surface waters of Varaždin alluvial system
Sonja Cerar, Joerg Prestor, Brigita Jamnik et al.	Napovedovanje trenda pojavov novodobnih onesnaževal v sledovih v podzemni vodi
Anja Koroša, Nina Mali, Primož Auersperger	Določanje organskih onesnaževal v podzemni vodi

Hidrogeologija in geotermija (2. del) Hydrogeology and geothermics (2nd part)	
Mala dvorana / Small hall	Vodja / Chair: Mitja Janža
Dušan Rajver, Joerg Prestor, Simona Pestotnik et al.	Ugodne geološke danosti za postavitev naprav za izkoriščanje plitve geotermalne energije – primeri dobrih praks
Mitja Janža, Andrej Lapanje, Dejan Šram et al.	Ocena plitvega geotermalnega potenciala na območju Mestne občine Ljubljana
Luka Serianz, Nina Rman, Mihael Brenčič	Analiza iztoka termalne vode iz geotermalnega karbonatnega vodonosnika v plitvi medzrnski vodonosnik na Bledu
Nina Mali, Lidija Levičnik, Timotej Pepelnik et al.	Uporaba GIS orodja za pripravo zaščitnih ukrepov, prepovedi in omejitev pri določanju vodovarstvenih območij
Simon Mozetič, Tomislav Matoz, Andrej Lapanje	Uporaba karotažnih meritev v hidrogeologiji

Hidrogeologija in geotermija (1. del) Hydrogeology and geothermics (1st part)	
Mala dvorana / Small hall	Vodja / Chair: Barbara Čenčur Curk
Petra Žvab Rožič, Ana Grkman, Timotej Verbovšek et al.	Pomen razumevanja litoloških in strukturnih značilnosti vodonosnikov: primer kraškega vodonosnika doline Učje
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Post-Congress field trip organized in collaboration with CMTW:

**SATURDAY - MONDAY,
6 - 8 Oct. 2018**

POST-CONGRESS FIELD TRIP

IAH CMTW field trip: Geology, hydrogeology and geothermy of NE Slovenia and N Croatia

Guided by: Nina Rman, Mihael Brenčič, Tamara Marković

Saturday, 6 October 2018

We will begin the trip driving from Velenje and listening to an explanation on geology and hydrogeology of NE Slovenia. We will then visit the *Ivanjševska slatina* spring and the Strmec mofettes. This will be followed by a presentation of the Radenska natural mineral water bottling factory. Then, we will visit a greenhouse and/or a geothermal doublet in Lendava, and after that the Vinarium Tower (with wine tasting). Check-in and bathing at the Lendava Spa.

Sunday, 7 October 2018

First, we will go to Peklenica in Croatia, where we will hear a presentation on oil and natural gas production. After that, we will visit the geothermal power plant in Velika Ciglena. Afterwards, we will head to Krapinske Toplice and see thermal water cascade use in *Aquae vivae*. Check-in and dinner.

Monday, 8 October 2018

On this day, you will learn about the geology of the Croatian Zagorje Region and visit thermal springs in the Stubičke spa and health resort. This will be followed by a presentation at the Krapina Neanderthal Museum, and a tour of outcrops of Miocene and Triassic rocks on the way back to Slovenia. We will also stop at the natural mineral water sites in Rogaška Slatina. Finally, we return to Velenje.

The registration fee covers the following costs: bus transport, accommodation (2 nights, breakfast included), 3 lunches, 2 dinners, all entry fees.

CMTW meeting Agenda (Open Meeting)

1. Welcome of the participants and members:
Chairman: Jim Lamoreaux
Secretary: Natalia Vinograd (in replacement for Adam Porowski)
2. Short information about current activities of the CMTW for IAH members
Chairman: Jim Lamoreaux
3. Information about CMTW Meeting at the IAH Congress, Daejeon, Korea, 9 – 14 September 2018
4. CMTW Minutes from Villa de Luso, Portugal, 2017:
Chairman: Jim LaMoreaux – short info.

Acceptance of the Minutes and voting

5. Information about current and upcoming publication activities coordinated by the CMTW and the Chairman – Jim Lamoreaux
 - d) New Zealand Mineral Waters: Andy Shugg and Jim Lamoreaux
 - e) New publication of Special Issue of Sustainable Water Resources Management with papers from CMTW meeting in Rome, 2015, and Portugal, 2017: guest editors Vincenzo Piscopo, Jose Marques and Paula Carreira
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 - 14. Mineral and Thermal Waters (Adam Porowski – published)**
6. New IAH member invitation to participate in the CMTW activities.

CMTW BUSINESS Meeting Agenda

1. Information about the CMTW website.

Secretary – Adam Porowski

2. Information about preparation the elections for new leaders of the CMTW
Chairman – Jim Lamoreaux
Secretary – Adam Porowski

3. Discussion about new activities and new meeting in 2019.

Dr Natalia Vinograd: proposition of the CMTW Meeting during International Conference “Groundwater” which will be held in Pyatigorsk, Russia in October 2019.

4. Discussion about new and actual regular members: actualization of the members list.

5. Miscellaneous