



Academy of Sciences of Moldova
Austrian Academy of Sciences



PROGRAM

INTERNATIONAL CONFERENCE

**WATER:
HISTORY, RESOURCES,
PERSPECTIVES**



*5-6 November 2010, Chisinau, Republic of Moldova
Academy of Sciences of Moldova, 1 Stefan cel Mare Str.*



INTERNATIONAL CONFERENCE WATER: HISTORY, RESOURCES, PERSPECTIVES



SCOPE

The conference will focus on recent communication in the overall water research. The benefits for the participants will be following: keep up-to-date on the latest advances in the field; presentation of research within a unique forum; collaboration with experts from different countries.

ORGANIZERS

- Academy of Sciences of Moldova (ASM)
- Austrian Academy of Sciences (AAS)

CO-ORGANIZERS

- Ministry of Environment of Moldova
- Institute of Chemistry of ASM
- Regional Environmental Centre-Moldova
- Moldovan Research and Development Association (MRDA)
- National Museum of Ethnography and Natural History
- Department of Chemistry and Physics, UnASM
- Department of Industrial and Ecological Chemistry, USM

TOPICS

1. **Physics, chemistry, and the evolution of water**
2. **The cultural role of water**
 - a) Water as a symbol
 - b) Water in traditional culture (folklore, music)
 - c) Water in literature and poetry
3. **Water and technology**
 - a) The technology of water supply
 - b) The technology of water treatment
4. **Environmental aspects of water**
 - a) Quantity and quality of water
 - b) Water shortage and water-borne diseases as hazards
5. **Water and waters of Moldova**

LOCATION

5-6 November 2010, Chisinau, Republic of Moldova
Academy of Sciences of Moldova, 1 Stefan cel Mare Str.

CONTACT INFORMATION

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5-6 November 2010, Chisinau, Republic of Moldova
Academy of Sciences of Moldova, 1 Stefan cel Mare Str.



Dear colleagues,

The availability of fresh, safe drinking water is essential to human and other life forms. It is one of the most important things in everyday life and although, in many parts of the world, it has improved steadily and substantially over the last decades, there still are areas with no secure access to a source of water. According to the Food and Agriculture Organization of the United Nations, 1.1 billion people have no access to clean water.

Furthermore, water plays an important part in the global economy: it functions as a solvent for a wide range of chemical substances and facilitates industrial cooling and transportation. Agriculture would be absolutely impossible without water and its role in climate change is obvious. Ecologists warn that water resources are dwindling. Mankind is facing a water crisis whose ramifications will exceed those of the existing financial crisis and which may further destabilize the world economy. In addition, related issues such as contamination, the rising sea level, and floods pose serious threats to human health. For instance, over 2.2 million individuals die of waterborne diseases each year.

When speaking about water, we usually refer to its liquid form or state, but the solid (ice) and the gaseous (vapor, steam) states of the substance are all connected in the hydrological cycle.

Consequently, the Academy of Sciences of Moldova and Academy of Sciences of Austria organize the international conference "Water: History, resource, perspectives" so as to emphasize the importance of ongoing efforts to provide pure water for consumption, to identify problems and their solutions, as well as to explore the cultural role of water.

The international conference aims to bring together researchers from different disciplines (scientific areas), ranging from chemistry and physics to humanities. The issue is usually approached through segmented sciences, and the international conference aims to bridge this gap.

Acad. Gheorghe DUCA,
President of the
Academy of Sciences of Moldova

Acad. Sigrid JALKOTZY-DEGER,
Vice-President of the
Austrian Academy of Sciences



INTERNATIONAL CONFERENCE WATER: HISTORY, RESOURCES, PERSPECTIVES



INTERNATIONAL COMMITTEE

1. **Gheorghe DUCA**, Acad., President of the Academy of Sciences of Moldova
2. **Sigrid JALKOTZY-DEGER**, Acad., Vice-President of the Austrian Academy of Sciences
3. **Michael METZELTIN**, Acad., Austrian Academy of Sciences, Austria
4. **Thede KAHL**, Prof., Austrian Academy of Sciences, Austria, Germany
5. **Bernhard PLUNGER**, Dr., Austrian Academy of Sciences, Austria
6. **Herbert G. BOECHZELT**, Dr., Joanneum Research, Austria
7. **Muefit BAHADIR**, Prof., Institute of Environmental and Sustainable Chemistry, Germany
8. **Vladislav GONCHEARUC**, Acad., National Academy of Ukraine
9. **Iuriy SCURLATOV**, Prof., Institute of Chemical Physic, Russia
10. **Matei MACOVEANU**, Prof., Technical University „Gh. Asachi”, Romania
11. **Serghey PHILIPENKO**, Transnistrian State University, Tiraspol, Moldova
12. **Margareta NICOLAU**, Dr., ECOIND, Romania

LOCAL COMMITTEE

1. **Ion GUCEAC**, Dr. Hab., committee chairman
2. **Diana PORUBIN**, Dr., secretary of committee
3. **Lazar CHIRICA**, Dr.
4. **Tudor LUPASCU**, Dr.Hab.
5. **Dumitru UNGUREANU**, Dr.Hab.
6. **Tudor COLAC**, Dr.
7. **Lidia ROMANCIUC**, Dr.
8. **Viorica GLADCHI**, Dr.
9. **Elena ZUBCOV**, Dr.Hab.
10. **Sergiu PORCESCU**
11. **Dorin LOZOVANU**, Dr.
12. **Varvara BUZILA**, Dr.
13. **Igor COJOCARU**
14. **Lucia NASTASIUC**

ACKNOWLEDGEMENTS

The Organizing Committee of the International Conference “WATER: HISTORY, RESOURCES, PERSPECTIVES” highly appreciate the financial support and assistance, provided by:

- **The Academy of Sciences of Moldova (ASM)**
- **The Austrian Academy of Sciences (AAS)**
- **Institute of Chemistry of ASM**
- **Ministry of Environment of Moldova**
- **Regional Environmental Centre-Moldova**
- **Moldovan Research and Development Association (MRDA)**
- **National Museum of Ethnography and Natural History**
- **Department of Chemistry and Physics, UnASM**
- **Department of Industrial and Ecological Chemistry, USM**
- **«Gelibert» Company**
- **« Apă Bună » SRL**
- **Other institutions and individuals contributing for the successful organization of this event**



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PROGRAM

4 November 2010

Arrival of participants

19.00

Welcome Reception (Hotel Cosmos),
Address: 2 Negruzzi Sq., Chisinau, MD-2001, Moldova

5 November 2010

8.30 – 9.00

Participants registration

9.00 – 9.30

Official opening

Blue Hall,
ASM

- Acad. Gheorghe DUCA, President of the Academy of Sciences of Moldova
- Acad. Sigrid JALKOTZY-DEGER, Vice-President of the Austrian Academy of Sciences, Austria
- Gheorghe SALARU, Minister of Environment of the Republic of Moldova
- Acad. Michael METZELTIN, Austrian Academy of Sciences, Austria

9.30 – 11.30

Moderator: Acad. Sigrid JALKOTZY-DEGER

Gheorghe SALARU

Plenary session

Blue Hall,
ASM

- Management of water quality, Acad. Gheorghe DUCA, Moldova
- Water in folklore, Prof. Thede KAHL, Austria, Germany
- SOS: drinking water, Acad. Vladislav GONCHEARUC, Ukraine

11.30 – 12.00

Coffee-break

12.00 – 13.00

Moderator: Acad. Vladislav GONCHEARUC

Acad. Yuri SCURLATOV

Session 1. Physics, chemistry, and the evolution of water

Blue Hall,
ASM

- The useful complexes for water photolysis in dye-sensitized solar cell (DSSC), Cor.Mem. Constantin TURTA, Moldova
- The electrical conductivity of various natural still waters, Prof. Constantin IONESCU-TIRGOVISTE, Romania

13.00 – 14.00

Lunch, Poster Session



INTERNATIONAL CONFERENCE WATER: HISTORY, RESOURCES, PERSPECTIVES



5 November 2010

14.00 – 16.00

*Moderator: Prof. Thede KAHL,
Dr. Dorin LOZOVANU*

Session 2. The cultural role of water

**Blue Hall,
ASM**

- **The role of water sources in human life in neolithic cultures of Moldova**, Dr. Olga LARINA, Moldova
- **Curative waters attested in interwar Bessarabia**, Dr. Elena SISCANU, Moldova
- **Water and its role in valuing the geographical position of a State**, Dr. Radu SAGEATA, Paul SERBAN, Romania
- **Rivers as ways of communication in the Moldo-Polish economic reports (the second part of the XVIIIth Century)**, Valentin ARAPU, Moldova
- **Hydrographic frame for the borders of counties of Moldova State**, Dr. Valentin CONSTANTINOV, Moldova
- **Water as a Symbol in Islam**, Dr. Valeria HEUBERGER, Austria
- **Water and its geopolitical stakes. Case-Study: African-Asian Space**, Dr. Radu SAGEATA, Dr. Vasile SIMILEANU, Romania
- **Words for the water sources in Indo-European, Thraco-Dacian and Romanian languages**, Ecaterina PLEȘCA, Moldova

14.00 – 16.00

*Moderator: Dr.hab Tudor LUPASCU,
Dr. Margareta NICOLAU*

Session 3. Water and technology

**Small
room,
ASM**

- **Towards Balancing Safety, Security and Sustainability of Water Globally**, Prof. Ashok VASEASHTA, USA
- **Advanced Technologies for Wastewater Treatment**, Prof. Dumitru UNGUREANU, Moldova
- **Some considerations regarding the relationships between composition of water resources and applied potabilisation technologies**, Dr. Margareta NICOLAU, Romania
- **Conditioning of natural waters for technical and drinking water supply**, Dr. Victor COVALIOV, Moldova

16.00 – 16.30 *Coffee-break*



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5 November 2010

16.30 – 18.00

Moderator: Prof. Thede KAHL,

Dr. Dorin LOZOVANU

Session 2. The cultural role of water

**Blue Hall,
ASM**

- **Hydronymy as an identity marker**, Dr. Dorin LOZOVANU, Moldova
- **Symbolic and ritual significance of water in orthodox South-Eastern Europe**, Prof. Walter PUCHNER, Greece
- **The diversity of water wells and the singleness of representations about water in traditional culture**, Dr. Varvara BUZILA, Moldova
- **The death of Ștefan cel Mare and overflowing of waters. Archaic interpretations of floods**, Andrei PROHIN, Moldova
- **The representation of water in objects of popular art**, Dr. Elena POSTOLACHI, Moldova
- **Water and the cult of the dead in traditional village life**, Manole BRIHUNETȚ, Moldova
- **Water creatures in traditional imaginary**, Maria CIOCANU, Moldova
- **Water as a ritual element in the context of calendaristic celebrations**, Maria ZUBCO, Moldova

16.30 – 18.00

Moderator: Dr.hab Tudor LUPASCU,

Dr. Margareta NICOLAU

Session 3. Water and technology

**Small
Room,
ASM**

- **New carbonic adsorbents for water treatment**, Dr.Hab. Tudor LUPASCU, Moldova
- **Treatment of textile wastewater by chemical coagulation combined with H₂O₂/UV oxidation**, Dr.Hab. Maria GONTA, Moldova
- **The use of potable water in the alimentary system**, Valentina IAROVOI, Moldova
- **Pisciculture in towns of The Country of Moldova (XVI-XVII Century)**, Nicolae DUDNICENCO, Moldova
- **The typology of water mills in Bessarabia (XIX-XX century)**, Eugen BÂZGU, Moldova

18.30

Cultural program



INTERNATIONAL CONFERENCE WATER: HISTORY, RESOURCES, PERSPECTIVES



6 November 2010

9.00 - 11.00

*Moderator: Prof. Othmar NESTROY,
Dr.Hab. Ion GUCEAC*

Session 4. Environmental aspects

Small
Room,
ASM

- **The constitutionalization of the right to water, an indispensable condition for the access to water as a source of life and dignity,** Dr.Hab. Ion GUCEAC, Moldova
- **Protection of the human right to water under international law: the need for a new legal framework,** Dr. Jordan DACI, Albania
- **Contribution on the Soil Water Balance of an agrarian Site,** Prof. Othmar NESTROY, Austria
- **Role of the soil in water quality,** Dr. Ecaterina KUHARUK, Moldova
- **Groundwater contamination by nitrates, salinity and pesticides: case of the unconfined aquifer of triffa plain (eastern Morocco),** Prof. Yassine ZARHLOULE, Morocco

9.00 - 11.00

*Moderator: Dr. Hab. Elena ZUBCOV,
Dr. Viorica GLADCHI*

Session 5. Water and waters of Moldova

Silver
Room,
ASM

- **Current ecological state of Dniester and Prut rivers,** Dr.Hab. Elena ZUBCOV, Moldova
- **The influence of tributaries on the Dniester river water quality,** Dr. Viorica GLADCHI, Moldova
- **History and dynamic of ground water use in the Republic of Moldova,** Dr. Constantin MORARU, Moldova
- **The state of surface water use in the Republic of Moldova,** Dr. Nicolae ARNAUT, Moldova
- **“The springs of Bac river – 2010” expedition conclusion,** Cristina CIOBANU, Rodica SÎRBU, Moldova

11.00 – 11.30 *Coffee-break*



6 November 2010

11.30 – 14.00

*Moderator: Prof. Othmar NESTROY,
Dr.Hab. Ion GUCEAC*

Session 4. Environmental aspects

Small
Room,
ASM

- **Quality of water resources as index of the development of human settlements,** Dr. Vladimir MOGÂLDEA, Moldova
- **Antropic impact on surface waters in Ialoveni,** Viorica TURCANU, Moldova
- **Floods in Moldova – the problems in their study,** Dr.Hab. Orest MELNICIUC, Moldova
- **Spatial and temporal flood risk assessment in Republic of Moldova: perspectives of using available remote sensing imagery,** Sergiu BUDESTEANU, Moldova
- **Flood risk in small basins of northern Romanian Carpathians,** Dr. Marcel MINDRESCU, Romania
- **Can the inhomogeneity of pure water by means of 2D DOSY NMR spectroscopy be investigated?** Cor.Mem. Ion GERU, Moldova

11.30 – 14.00

*Moderator: Dr. Hab. Elena ZUBCOV,
Dr. Viorica GLADCHI*

Session 5. Water and waters of Moldova

Silver
Room,
ASM

- **Regional assessment of groundwater supply in karst areas of Moldova,** Dr. Lilia CALMÎC, Moldova
- **Evaluation of children's health morbidity caused by water from rural areas,** Dr.Hab. Grigore FRIPTULEAC, Moldova
- **Drinking water of Budjak,** Liudmila FEDOTOVA, Moldova
- **Historical and geographical issues of hydraulic energy use on the territory of Moldova,** Diana BRAGA, Moldova
- **Monitoring of the atmospheric precipitation on pH in Dniestr region,** Vitaly COLVENKO, Moldova

14.00–14.30 **Conclusions**

14.30 **Reception**

