

GJU Symposium series on Sustainable Development

# 1<sup>st</sup> GJU Symposium on Sustainable Development 2022

## Water, Energy and Environment German-Jordanian/MENA Cooperation

12. – 14. October 2022  
German Jordanian University  
Amman Madaba Street, Madaba 11180, Jordan

### Wednesday, 12. October, GJU Campus

<b>08:30</b>	<b>Registration</b>
<b>09:00</b>	<b>Opening/Greetings/Introduction</b> Opening Speeches: President of German Jordanian University <b>Prof. Ala'aldeen Al-Halhouli</b>
	Opening Speeches: Higher Ministry of Water and Irrigation <b>H.E. Eng. Mohammed Alnajjar</b>
	Technische Universität Berlin / German Water Partnership <b>Prof. Dr.-Ing. Sven-Uwe Geissen, Julia Braune (online)</b> Solutions bei German Water network: German Water Partnership e.V.
<b>09:50</b>	<b>Session 1: Water Supply</b> Moderation: Prof. Dr. Sven-Uwe Geissen 15 min presentation + 5 min discussion
	<b>Dr. Jihad Mahamid</b> , Higher Ministry for Water and Irrigation Water sector challenges in Jordan
	<b>Dr. Johannes Wellmann</b> , TU Berlin and GJU AGREEMed: Groundwater and aquifer Management – Examples from Tunisia, Morocco and Jordan
	<b>Eng. Tharwh Qutaish</b> , Royal Scientific Society (RSS) Real-Time Water Quality Monitoring System: A tool for Water Sources Sustainability in Jordan
<b>11:00</b>	<b>Coffee break</b>
<b>11:30</b>	<b>Thomas Gester (online), ATB GmbH, Nabil Wakileh</b> Experiences from two SBR pilot plants for wastewater treatment and reuse
	<b>Dr. Joachim Koschikowski</b> , Fraunhofer ISE, Freiburg Closed-loop reverse osmosis: challenges and opportunities for the MENA region
	<b>M.Sc. Lina Streckwall</b> , TU Berlin HighRec Project: Brackish water desalination in Qatar and Iran
	<b>Dr. Madher Bdour</b> , German Jordanian University, Brackish water desalination with adaptation of renewable energy resources
	<b>Podium discussion:</b> Chances and limitations of wastewater as an alternative water resource in Jordan: Dr. Jihad Mahamid, Prof. Latifa Bousselmi, Prof. Dr. Kerstin Wydra, Eng. Tamer Al-Assad (USAID Water Governance Authority)
<b>13:00</b>	<b>Networking Lunch</b>

<b>14:00</b>	<b><i>Session 2: Municipal and industrial wastewater treatment</i></b> Moderation: Prof. Dr. Mohammad Al-Addous 15 min presentation + 5 minutes discussion
	<b>Karam Koudary, Haitham Kilani</b> , Hamburg Wasser, Experiences of the utility partnership with MIYAHUNA and hanseWasser in Jordan
	<b>Prof. Dr. Martin Denecke</b> , Universität Duisburg Essen, Nitrogen removal by deammonification from wastewater – how far are we?
	<b>Prof. Dr. Sven-Uwe Geissen</b> , Technische Universität Berlin, Industrial water management
<b>15:00</b>	<b>Coffee break</b>
<b>15:30</b>	<b>Dr. Nesrine Barbana</b> , TU Berlin, Mining industries wastewater treatment
	<b>Eng. Shefa'a Mubideen</b> , Phosphate Company, Wastewater treatment in the phosphate industry in Jordan
	<b>Eng. Waleed Adaileh</b> , Arab Potash Co. Water challenges in Arab Potash company within the envelope of water scarcity in Jordan
	<b>M.Sc. Christian Stankov</b> , TU Berlin, Selective crystallization from brines
	<b>M.Sc. Norman Schweimanns</b> , TU Berlin, Predictive operation of industrial WWTPs with digital twins
	<b>Podium discussion:</b> Sustainable municipal and industrial water management in Jordan; Karam Koudary, Prof. Dr. Martin Denecke, Prof. Dr. Sven-Uwe Geissen, N.N.
<b>17:30</b>	<b>Closing</b>
<b>19:30</b>	<b>Symposium Dinner</b>

**Thursday, 13. October 2022, GJU Campus**

<b>08:30</b>	<b>Registration</b>
<b>09:00</b>	<p><b>Session 3: Energy- Water- Nexus</b> Moderation: Dr. Madher Bdour 15 presentation + 5 min discussion</p> <p><b>Eng. Sahel Bani-Mustafa</b>, Royal Scientific Society (RSS) Water, Energy and Food "WEF" security: a case study of renewable energy integration in the agricultural sector.</p> <p><b>Dr. Johannes Wellmann</b>, TU Berlin ATLANTIS: Development of WWTPs towards power stations</p> <p><b>Dipl.-Ing. Manuela Charatjan, Maher Al-Hammoud</b>, Binder GmbH Precise air control valves for improved DO-control at lowest power consumption</p> <p><b>Eng. Hatem Sadek</b>, AERZENER Maschinenfabrik GmbH Examples for energy savings by optimized blowers</p>
<b>10:30</b>	<b>Coffee break</b>
<b>11:00</b>	<p><b>Martin Graesl</b>, Rudolph Messner Umwelttechnik GmbH Innovative aerators</p> <p><b>Prof. Dr. Kerstin Wydra</b>, Fachhochschule Erfurt, Safe, decentralized wastewater re-use in rural areas: combining vertical flow constructed wetlands (VFCW) and solar-driven electro-chlorination</p> <p><b>Dr. José Ordonez</b>, MARTIN Systems Water supply in rural areas by membrane filters</p> <p><b>Doris Korthaus</b>, Korthaus Pumpen GmbH and KLEINE Solutions GmbH, Saving of Resources due to Optimized Rotary Lobe Pumping Systems</p> <p><b>Podium discussion:</b> Which steps are necessary to develop WWTPs to power stations? Markus Leidinger, Martin Graesl, Prof. Dr. Martin Denecke, N.N.</p>
<b>12:30</b>	<b>Networking Lunch</b>

<b>13:30</b>	<b>Session 4: Utilization of organic residues and sludge</b> Moderation: Dr. Johannes Wellmann 15 min presentation + 5 min discussion
	<b>Dr. Peter Kornatz</b> , Deutsches Biomasse Forschungszentrum (DBFZ) The utilization of residual and waste materials from agriculture and food processing for biogas production - opportunities and challenges
	<b>Dr. Markus Lenhardt</b> , Deutsches Biomasse Forschungszentrum (DBFZ) Urban and rural Management of organic waste: Guideline of urban and rural organic waste in the African countries using the example of Ethiopia
	<b>M.Sc. José Cunto</b> , TECHNOCON GmbH High performance digestors for energy generation
	<b>Prof. Latifa Bouselmi</b> , CERTE, <b>M. Philipp</b> , TU Berlin, SUSPIRE: Low-energy slaughterhouse wastewater recycling
<b>15:00</b>	<b>Coffee break</b>
<b>15:30</b>	<b>Session 5: Water reuse in irrigation</b> Moderation: Dr. Johannes Wellmann 15 min presentation + 5 min discussion
	<b>Prof. Dr. habil. Kerstin Wydra, Philipp Otter</b> , FH Erfurt Agrivoltaic - win-win-win...: renewable energy, climate adaptation for crops, soil protection and water saving
	<b>Dr. Ali Boubakri</b> , CERTE, <b>Mohamed Seifeddine Azzabi</b> , ISTIC From smart to precision irrigation
	<b>M.Sc. Carl Trebesius</b> , AKUT Umweltschutz GmbH Constructed wetlands for wastewater treatment and water reuse in irrigation
	<b>Podium discussion:</b> What are the challenges to reuse wastewater in irrigation? Presenters + moderator
<b>17:00</b>	<b>DAAD Hybrid Summer School: Poster presentation 5 min pitch</b>
<b>18:00</b>	<b>Closing</b>

### Friday, 14. October 2022

<b>09:00</b>	<b>Excursions and on-site visits (optional)</b> <ul style="list-style-type: none"> <li>• Jordan Valley project site</li> <li>• Others</li> </ul>
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