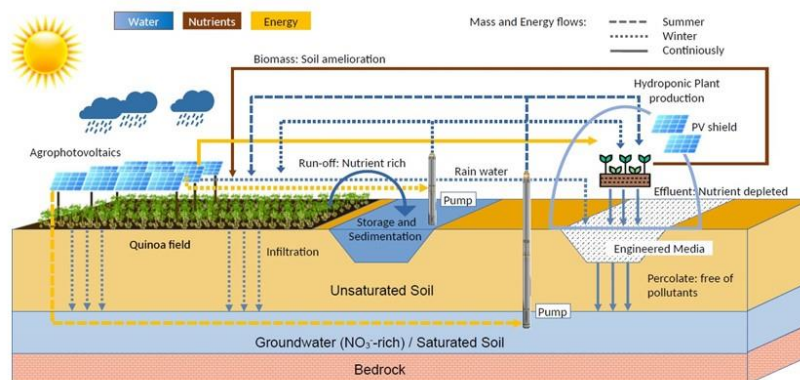


Agriculture Cluster

“PureCircles project: Maximising resource use efficiency within the water-nutrient-energy nexus for sustainable agriculture in marginal environments”



© Uni Hohenheim/Pure Circles Project

Realization	On-site Event
Location	DAAD Regional Office Cairo 11 El Saleh Ayoub St. Zamalek, Cairo, Egypt
Date	Thursday, 30 th November 2023 from 6.00 p.m. to 9.00 p.m. (Cairo Local Time)
Guests	Researchers and Scientists working in the agricultural field that are resident in Egypt
Duration	3 h
Coordinator and Contact Person	Nermine Abdelaty (abdelaty@daadcairo.org)
Organiser	DAAD Regional Office Cairo German Academic Exchange Service URL: www.daad.org

Concept Note

In the Mediterranean, freshwater availability is put under increasing pressure by global warming, land use changes, and water abstraction. Moreover, deteriorating water and soil quality put agricultural productivity and safe water supply for the population at further risk and urgently demand sustainable solutions. PureCircles wants to realize such solutions at four Mediterranean study sites by integrating water technology with agrotechnical setups and management strategies. For the first time, the project will demonstrate the power and effectiveness of a combination of agrophotovoltaics, hydroponics, smart irrigation and innovative water storage and treatment technology, all of which are intelligently linked and regulated through Artificial Intelligence (AI). Sophisticated, but robust technology (e.g., flexible greenhouse photovoltaics (PV), water-harvesting, AI-assisted farm management) will meet nature-based and sustainable water treatment solutions (hydroponics, microbial bioremediation) and shall be assembled and activated dependent on need and framing conditions (financial resources, availability and quality of water, crop choice, weather forecast).

The event is organised within the framework of the DAAD Regional Office Cairo project “Clusters of Scientific Innovation in the Middle East and North Africa” (COSIMENA), which aims to strengthen and initiate scientific cooperation and to make networks of researchers and universities between Germany and the MENA region visible. As a result, existing cooperation is made visible and potential synergies are initiated.

Biography of the Speakers



Dr. Jörn Germer is engaged in the closure of rural-urban nutrient cycles and water conservation and has been able to build up a wealth of experience through his lead participation in thematically relevant projects (e.g., PureCircles, EXALT, HypoWave, HypoWave+, RiSaWa, TransSEC, INNOVATE). His research focus in the field of Management of Crop Water Stress in the Tropics and Subtropics centers around closing water and nutrient cycles between urban and rural areas. In addition to soil-based management strategies, he has increasingly emphasized the use of hydroponic systems for both utilization and purification of marginal water sources. By engaging with experts from various fields, he aims to promote holistic solutions to address complex problems related to water availability and quality. This collaborative approach allows him to explore innovative strategies and leverage the collective expertise of different disciplines to drive sustainable agricultural development and water resource management.



Prof Aziz Abouabdillah holds a Phd in hydrologic modeling, a Master of Science in irrigation and an agriculture engineering diploma. He worked at the Water Research Institute in Italy for 4 years where he was involved in different European projects dealing with water management and climate change. He spent more than 2 years as a postdoctoral research associate at the Texas Agrilife Blackland Research Center in Texas, USA where he gained experience in water management. He is covering a position of full professor at National School of Agriculture of Meknès, Morocco. He is in charge of teaching different lectures (Irrigation scheduling and design, Water resources Management, Climate change and horticulture production and agrometeorology. He is a team leader of many projects dealing with Smart and precise Agriculture and digitalization in agriculture. He developed with his team a smartphone application for precise irrigation (IRRI-Smart) available for free on the Play Store.



Programme

Thursday, November 30th, 2023, from 6.00 a.m. to 9.00 p.m. (Cairo Local Time)

5.30 p.m. – 6.00 p.m. Registration

Greeting Words

Dr Carsten-Michael Walbiner
Director of the DAAD Regional Office Cairo

6.00 p.m.- 6.15 p.m.

Lorena Mohr
Head of Science and Protocol at the Embassy of the Federal
Republic of Germany in Cairo

6.15 a.m. – 7.15 p.m.

Presentation “PureCircles project: Maximising resource use efficiency within the water-nutrient-energy nexus for sustainable agriculture in marginal environments”

Dr Joern Germer
University of Hohenheim

Prof. Dr Aziz Abouabdillah
Institut Agronomique Hassan II, Rabat, Maroc & Ecole Nationale
d’Agriculture de Meknès, Maroc

7.15 p.m. – 7.45 p.m. Q & A Session

7.45 p.m. – 9.00 p.m. Joint Networking Dinner

End of Event