



Regional Workshop on

Water - Energy - Food - *NEXUS* in MENA Region

Aswan, Egypt

November 11-17, 2018

Organized by

Faculty of Agriculture, University of Zagazig



Funded by



Federal Ministry
for Economic Cooperation
and Development



DAAD

Overview

Water-energy-food *NEXUS* is central to sustainable development in MENA region. Demand for these domains is increasing, driven with a rising global population, changing diets, rapid urbanization and economic growth. Agriculture considers the largest consumer of the world's freshwater resources, and hence more than one-quarter of the energy consumed globally is expended on food production and supply. The linkages between these essential domains require a suitably integrated approach to ensuring water and food security, and sustainable agriculture and energy production worldwide.

Water is a finite resource having to serve exponentially more people and usages, and so ensuring that everyone has access to a reliable supply and sustainable progress. As water resources become more stretched, the energy and food sectors' dependence on water, means that decision-makers are now increasingly focusing on water resource management, ecosystem protection and water supply and sanitation as part of their policy and practice for sustainable developments goals. In addition, there will need development of less water-intensive renewable energy, such as hydropower and wind, before it makes a significant impact on water demand. For instance, geothermal energy has great potential as a long-term, climate independent resource that produces little or no greenhouse gases and does not consume water.

As agriculture set to remain the biggest user of water into the middle of this century, efficiency measures along the entire agri-food technologies can help save water and energy, such as precision irrigation based on information supplied by water providers, which can motivate farmers to invest in their systems to ensure the best returns from their water investment

Objectives

The experts are engaged with addressing key challenges that will require a Nexus approach which include:

- Agriculture can produce 30-50% more food by 2030
- Energy needs will increase by 40% by 2030
- Demand for water will exceed global availability by 40 % in 2030

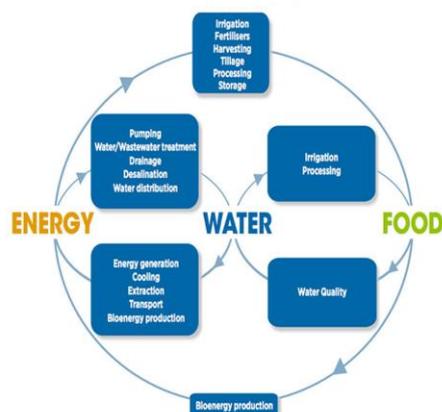
International cooperation should reinforce the links between research centers, universities, stakeholders, and decision makers. It is of particular importance to encourage scientists to work on joint projects, to contribute to knowledge transfer and to enhance the societal dialogue. Thus, expert workshop aims to:

- Exchange knowledge and share information in water-energy-food challenges and solutions
- Establish a sustainable network of water experts in the MENA region.

Topics

The workshop addresses the following sub-topics:

- 1- Nexus from the water perspective related to energy and food
- 2- Governance challenges in the Water-Energy-Food *Nexus*
- 3- Appropriate water/wastewater technologies for developing countries;
- 4- Advanced technology and/or Nature based solutions for water scarcity and drought management;
- 5- Wastewater/waste to energy;
- 6- Energy needs for water supply and agriculture; extraction, transportation, and disposal of water, fertilizer production, and irrigation
- 7- Agriculture and land-use impacts on future energy systems;
- 8- Future urban energy systems with considerations of water and food security;
- 9- Non-conventional water resources in MENA region
- 10- Precision Agriculture applications in water resources management
- 11- Water-food *nexus* footprint analysis



Workshop Organization

The workshop will take place in Aswan, Egypt. Zagazig University will host the workshop. The workshop is carried out within the framework of the Exceed-Swindon project located at the Technical University of Braunschweig, Germany. The project is funded by the German Academic Exchange Services (DAAD).

SCHEDULE

Day	Date	Time	Activity
Sunday	11.11.2018	ARRIVAL	
Monday	12.11.2018	09.00 – 17.30	Expert Workshop
Tuesday	13.11.2018	09.00 – 17.30	Expert Workshop
Wednesday	14.11.2018	09.00 – 17.30	Expert Workshop
Thursday	15.11.2018	09.00 – 17.30	- Technical excursion
Friday	16.11.2018	09.00 – 11.30 Workshop (summary/conclusions) 13.30 – 17.30 Regional Meeting	
Saturday	17.11.2018	DEPARTURE	

Target Audience:

Water engineers and experts, technical and administrative personnel of water, energy, food utilities and relevant ministries as well as academicians in partner countries of EXCEED-SWINDON in the Middle East & North Africa region.

Number of participants:

The number of participants is limited to 25.

Application:

Please apply online until **15 August 2018** under

<http://mena.exceed-swindon.org/apply-for-a-workshop/>

Selection and Notification to the applicants until **31 August 2018**

Deadline for Full Paper submission: **05 November 2018**

Workshop Book:

The authors of the accepted presentations (based on the abstracts submitted) are also requested to submit a full paper and copyright agreement. The submission of the full paper is made with the registration (electronic copy of the full paper) during the first day of the workshop.

The authors are further requested to prepare the full paper according to the guidelines (see the announcement on the website: <http://mena.exceed-swindon.org/announcements/>).

The full papers are printed in a Workshop Book with associated ISBN number and is published by Cuvillier Publisher, Germany.

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