

# German-MENA University Network

## for Waste Management and Circular Economy

<b>Period</b>	01.2021–09.2022
<b>Countries</b>	Algeria, Egypt, Jordan, Morocco
<b>Project partners</b>	University of Rostock, Dresden University of Technology, Hamburg University of Technology, Constantine University 3, Ain Shams University, JUST University, Cadi Ayyad University

### Capacity building through university cooperation

Improper waste management has become one of the major environmental problems in the Middle East and North Africa (MENA). Many countries in the region face the challenges of illegal dumping and open burning of waste. The problem worsened over the past few years with sharp increases of waste generation and changing compositions. To establish integrated waste management systems in low- and middle-income countries, a skilled workforce is needed in the public and private sector. However, many countries lack comprehensive and up-to-date academic programmes in waste management and circular economy. In addition, the private sector, especially small and medium-sized recycling companies, often lack the financial and technical capacity to improve their business. The aim of the “German-MENA University Network for Waste Management and Circular Economy” is to develop an online study programme for waste management and circular economy to qualify future personnel of the public and private sector with regard to improved and integrated waste management solutions for a sustainable circular economy.

### The project

Establishing a collaborative network between universities from Germany and from the MENA

region proved to be a successful approach to generate qualified personnel for the political, regulatory, municipal and private sector. The network developed an online educational programme on state-of-the-art technologies in waste management and circular economy for under-graduate and graduate students. Its practical format minimised the



gap between theoretical knowledge and practical application in this field.

The online programme was scaled to other universities, educational institutions and decision-makers in the MENA region to create a critical mass of experts for circular economy. In total, almost 300 Bachelor and Master students participated in the 38 online lectures on best practices in waste management and circular economy delivered over 1.5 years with the support of practitioners and experts.

The network published “Wastiepedia”, learning material for both bachelor and master lectures, which contains:

- General technical lectures (characterization and treatment of waste, etc.)
- Handling specific waste fractions (WEEE, construction waste, etc.)
- Framework (LCA, financing, regulations, etc.)

## Achievements

1. A collaborative German-MENA university network was established
2. An online educational programme on state-of-the-art technologies in waste management and circular economy for under-graduate and graduate students was developed and implemented – in total 300 students of all four MENA partner universities participated in approximately 38 lectures.
3. The online programme was scaled to other universities, educational institutions and decision-makers in the region, e. g. in Tunisia, Lebanon, Saudi Arabia.
4. PREVENT members, public institutions and industry experts from Germany were involved in the online courses and accompanied students' research projects and theses.
5. Research activities related to marine litter prevention, EPR, recycling, mitigation of CO<sub>2</sub> from landfill, waste to hydrogen, cost recovery, or institutional framework increased.
6. A study tour was organised for the partner universities, which included international networking at IFAT Munich and on-site experiences at waste management facilities and research institutes in Germany.
7. 15 online lectures on best practices of waste management and circular economy (which can be used for education and know-how transfer worldwide) were published and are accessible on Hamburg Open Online University.

Through the online programme, the German-MENA University Network transfers know-how to create a more sustainable future for waste management in the region.

### PREVENT Waste Alliance

The PREVENT Waste Alliance serves as an international 'think and do tank' for circular economy practitioners. As a platform for knowledge exchange and international cooperation, it brings together organisations from the private sector, academia, civil society and public institutions. PREVENT's mission is to advance the circular economy in low- and middle-income countries by minimising waste, eliminating pollutants, and maximising the reuse of resources in the economy worldwide.

This project was selected in a call for innovative and scalable solutions to build a circular economy.

The PREVENT Waste Alliance was launched in 2019 by the German Federal Ministry for Economic Cooperation and Development.



### Imprint

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More information: [www.prevent-waste.net/en/](http://www.prevent-waste.net/en/)