

NEWS LETTER of WESET

Issue 2: July 2019

About WESET:

The WESET Project is supported by the Erasmus + Programme Key Action 2 Capacity Building in Higher Education, CBHE to help reduce the lack of skilled engineers in wind engineering in Egypt and Tunisia, which hinders the use of wind as a reliable, cost-effective and pollution-free source of energy.

OUTCOMES OF THE WESET PROJECT:

Under WP1 the Consortium has prepared some surveys which have been completed by academic staff and students from Egyptian and Tunisian universities, as well as local stakeholders working in wind energy. These surveys have provided relevant information about the needs of the universities and the market in terms of wind engineering.

Four modules have been produced in WP2: Fundamentals of Wind Engineering; Mechanical Systems in Wind Engineering; Mechatronics in Wind Conversion Process; Implementation of Wind Energy Systems. These modules will be tested in Master programmes in the area of wind engineering in the WESET partner institutions in Egypt and Tunisia between September 2019 and February 2020.

WESET Activities September 2018 to July 2019:

Second Management Meeting: Valladolid 27-28 February and 1 March 2019

The second management meeting took place in Spain, at the University of Valladolid, in February 2019 with the representation of all the partner institutions.



During the three-day meeting, management aspects were discussed and the activities of the project were presented. The contents of the courses to be developed were defined. Staff Mobility from beneficiary countries to EU Countries has been also discussed.

Development of Open Training material for Learning Wind Engineering

Four modules (Fundamentals of Wind Engineering; Mechanical systems in Wind Engineering; Mechatronics in Wind Conversion process and Implementation of Wind Energy Systems) have been developed that could be freely used by lecturers in Master Engineering courses in South-Mediterranean countries. Each of the modules would be the equivalent of 3 ECTS: Module 1 would be compulsory for such courses, whereas Modules 2, 3 and 4 fully independent, for flexibility.

Staff Mobility from EG and TN to EU Countries

As part of the WESET Project activities, AAU-ET have successfully delivered the planned 3 weeks training program for 12 faculty member from Tunisia (ENICarthage and USFAX) and Egypt (ASU, BUE and AASTMT from 18th February 2019 till 6th of March 2019.

In week a comprehensive Course organized by Prof. Zhe Chen were given to introduce intensively the wind energy generation and integration.

In week 2, participants were enrolled into an industrial training program, delivered by DNV.GL's Senior Engineers at ET department.



Wind Engineering Skills in Egypt and Tunisia

The 3rd week was delivered by sharing industrial experience and knowledge from wind energy leading companies Vestas and Dong Energy. Experience from a service provider and from operator point of views were given. In addition, an industrial site visits to the blades factory of Siemens Gamesa in the city of Aalborg and the refurbished wind-mills factory of Wind-Tech located in Herning was done.

Two weeks stay by EG and TN staff at a laboratory of the EU institutions has been started to gain capacity in laboratory work and learning methodologies of the programme countries. These academics would gain application-oriented experience in order to later impart the modules developed in WP2 as part of master courses, and to create the Wind Energy centers part of WP5.

A selection committee has been formed at second PMP meeting in UVa in Spain led by the Project Coordinator, which took care of fixing the procedure for selecting candidates and substitutes, and the mechanisms for substitutions. This procedure aimed to ensure that the most adequate participants are selected, with at least one participant from each candidate institution (AASMT, ASU, BUE, ENICarthage, USFAX).

Training of trainers at Sapienza University of Rome

In the framework of the "Training of trainers" activity of WESET project, Sapienza University of Rome hosted for 3 weeks the researcher Julia Petro from the Ain Shams University. During her stay at the DIMA - Department of Mechanical and Aerospace Engineering, Julia had the opportunity to learn more about FAST software developed by NREL thanks to the support of Prof Alessio Castorrini. FAST was used for the simulation of 5 MW wind turbine for offshore applications.



The modelling of the wind turbine blade required the layout to be reverse-engineered based on the structural properties published in the turbine report. In addition, she was trained to use the software Modes, for the calculation of the blade and the tower modes, which was necessary for FAST input files. She has the opportunity to visit the wind gallery located in the DIMA Laboratory. Julia will continue the collaboration with Sapienza, completing the numerical analysis and the simulation for an optimization of the blade's structure with the prospective to future publication of results.

Renergy Alliance Workshop in British University in Egypt (BUE)

The WESET project was presented in a workshop organized at the BUE by the ASRT Renewable Energy Alliance in April 2019. The workshop theme was "Capacity building in renewable energy". The BUE WESET team had a one-hour presentation during which they introduced the project objectives and activities. The staff members who attended Aalborg training shared their experiences with audience who represented all alliance members.



Inauguration of Wind Engineering Centre (WEC) at ASU:

On 14 January 2019, Ain Shams University's energy technology and climate change (ETCC) lab inaugurated the new wind engineering centre (WEC) funded by project WESET. Thanks to GE Renewable Energy for contributing to the day. The lab can be followed at this link:

<http://www.weset-project.eu/inauguration-of-asus-wind-engineering-centre/>

Wind Engineering Skills in Egypt and Tunisia



Workshop on thermography technology for the wind sector in Ain Shames University in Egypt

On 16 July 2019, the Wind Engineering Centre at Ain Shams University hosted a workshop on thermography technology for the wind sector. The workshop introduced the industry's best practice in thermal imaging and its optimization for uses in wind turbines' prognosis studies. The workshop included a hands-on session using the acquired thermal camera with generous support of Erasmus+ programme.



Workshop in Wind Engineering in Tunisia

The second WESET Tunisian workshop on Wind Engineering took place in Sousse on 25th March 2019. Around 90 participants from 24 different international institutions have attended this workshop which was organized by the Univ. of Sfax-Tunisia with the assistance of the Univ. of Valladolid-Spain. The main goal of this workshop was to present and discuss on the Tunisian Wind Energy Centres and the WESET training Modules.



Aix Marseille University team has published a dissemination paper about WESET

The french partner AMU published an article on the Polytech school newsletter explaining the objectives of the Weset project, its spin-offs and the opportunities offered to eligible students to apply. This article was read by all engineering students from all 15 Polytech engineering schools in all regions of France (80,000 engineering students), and by the staff of the 15 universities to which these schools belong. The link of this article can be found at this link:

<https://intra-polytech.univ-amu.fr/polybreve-201820197-du-31032019>

Coming in July 2019 (WESET in UnivExpo)

The WESET project will be disseminated in the 21st session of UnivExpo on 09-10-11 July 2019 at the fair of Sfax which will be organized by the University of Sfax in Tunisia. This event aims at further consolidating the integration of the university in its socio-economic environment. It represents a great opportunity for university-industry communication. This event can be followed at this link:

<http://univ-expo.com>

Coming in Oct 2019: University meets the market

One "University meets the market" meeting will be organized in each beneficiary University in Egypt (AASTMT, BUE and ASU) and Tunisia (ENICarthage and USFAX) for facilitating the match of master students with companies from Egypt and Tunisia. It will be advertised in University radio, TV, newspapers.

Coming in Dec 2019: Third PMP meeting in Egypt

The Third management meeting will be held in the AASTMT in Egypt in December 2019 with the representation of all the partner institutions.

During the three-day meeting, management aspects will be discussed and the activities of the project were presented.

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