



**ARAB ACADEMY FOR SCIENCE, TECHNOLOGY
& MARITIME TRANSPORT**
Report 20/21



INTRODUCTION

The Arab Academy for Science, Technology and Maritime Transport adopts the goals of the "Times Higher Education" for sustainable development (SDGs) as one of the educational institutions, to implement them in the 2030 Agenda through cooperation, education, research and activities.

Universities need to develop plans and initiatives aimed at advancing the goals and aspirations of the world through scientific research and innovation.

In addition, universities should prioritize efforts to create more inclusive teaching and learning environments that ensure students from all walks of life have the opportunity to develop an interest in and appreciation for science.

Given the diversity of nations and cultures that make up today's world, it is essential to recognize the important role that science and technology can play in promoting dialogue and cooperation across cultural and geographic boundaries. It is particularly important for universities to strengthen educational partnerships between schools and higher education institutions in the region and beyond.

As one of the educational institutions in Egypt with social responsibility as a primary objective, the Arab Academy for Science, Technology and Maritime Transport plays a leading role in addressing the sustainable development goals in four ways:

- Impact of research.
- Research impact and students learn
- Audience participation and activity
- Responsible campus operations

We hope to stimulate more ideas, actions, opportunities for collaboration and partnerships so that we can play a full role in achieving the world's sustainable development goals by 2030.



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Goal 1 - No Poverty

1 NO
POVERTY



Our Aim

In order to contribute to achieving the primary goal of SDG1 which is eradicating poverty in all its forms everywhere, AASTMT has attempted to fulfill the following objectives:

1. Increasing the proportion of students receiving financial aid
2. Developing university anti-poverty programs
3. Developing community anti-poverty programs

Last Year Recorded

Worldwide: 401 - 600

Egypt: 9

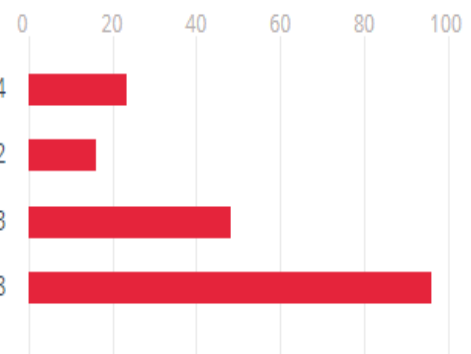
1 

NO POVERTY

RANK
401-600
SCORE
43.8

out of 769
institutions

SDG1 research	23.4
% financial aid (poverty)	16.2
Anti-poverty prog - uni	48.3
Anti-poverty prog - community	95.8





Progress during 2020/ 2021

1. Increasing the proportion of students receiving financial aid

Within the framework of social responsibility, AASTMT has been playing a supportive role for the parents who are struggling financially and are unable to fulfill the academic merits. This type of support encourages many Egyptian families to enroll their sons in the Academy so that they are offered financial aid. Non-Egyptian students are provided with services related to obtaining legal residency in the country. The Student Support department has contributed to solving students' and parents' financial problems and submitting them to the AASTMT President with some recommendations in addition to forming grants and discounts committees at the beginning of each semester.

https://www.aast.edu/en/affairs/student-affairs/contenttemp.php?page_id=48600023

Number of low-income students receiving discounts by the Academy during 2020/ 2021 is 3212 students.

2. Developing university anti-poverty Programs

Protocols and Partnerships with Charities Institutions have been conducted by the Agreements and International Cooperation Centre (AASTMT).

https://www.aast.edu/en/centers/aicc/contenttemp.php?page_id=42400032

3. Developing Community anti-poverty Programs

Community service and continuing education programs in Alexandria

برامج خدمة المجتمع والتعليم المستمر بالأسكندرية

Training courses & programs to improve access to services

Fundamental to eradicate poverty in all its forms everywhere in the academic year
2020/2021

Course	No. of Courses	No. of Students
English courses for college students at 20% discount	25	420
Microsoft Office courses at 25% off	19	350



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

English language courses for kids at 30% discount for a number of schools	4	380
English courses for kids at 20% discount for a number of schools	4	200
English courses for kids at 20% off for a number of Sports and social clubs	4	220
PMP courses at 50% off	6	91
Primavera courses at 40% off	5	31

http://www.aast.edu/en/deaneries/csp/web/contenttemp.php?page_id=39200027

Training courses offered by the Institute of Technical and Vocational Studies at the Industrial Service Complex

Electrical and Electronic Engineering

- Electronic maintenance of factories
- Electrical maintenance of factories
- AC and DC machines
- Maintenance and protection of transformers
- Identifying faults in electrical power systems
- Electrical switches
- Analysis and protection of electrical power systems
- Traction equipment for AC motors and their applications
- Traction equipment for DC motors and their applications
- The electrical and electronic theory



Car Engineering

- Operation and maintenance of diesel engines
- Identifying car malfunctions using the fault analysis device
- Gasoline engines
- Mechanical clutch and manual gearbox
- Electronic injection systems for gasoline engines
- Car air conditioning systems
- Advanced Brake System (ABS)





Occupational Safety and Health

- General qualification to work in the field of occupational safety and health (general industries - construction industries - risk management - first aid)
- Occupational safety and health according to OSHA standards for general industries 10 hours
- Occupational safety and health according to OSHA standards for general industries 30 hours
- Occupational safety and health according to OSHA standards for construction industries 10 hours
- Occupational safety and health according to OSHA standards for marine industries 30 hours
- First Aid (accredited by the American Heart Association)
- Risk Management
- Safety standards for working in confined and closed places
- Design of firefighting systems

Mechanical Engineering

- Principles of Air Pressure Circuits
- Principles of hydraulic circuits
- Boiler operation and steam generation
- Operation and maintenance of pumps
- Maintenance of home appliances, cooling and air conditioning
- Rotating Equipment
- Fuse
- Lubrication and lubrication technology
- Bearings
- Boilers
- Heating, ventilation and air conditioning systems
- Refrigeration and air conditioning systems
- Pumps and compressors

Controls and Measurements

- Embedded Systems
- Automation and its applications
- Control systems for air pressure and hydraulic circuits
- Advanced control systems in pneumatic and hydraulic circuits
- Programmable logic controllers



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- Advanced Programmable Logic Controllers
- Programmable Logic Controllers Applications
- Design and manufacture of electronic circuits
- Identifying and analyzing electronic faults
- C programming for industrial applications
- Industrial Applications of AVR Microcontrollers
- Industrial applications of PIC microcontrollers
- Uses of the microprocessor in measuring and control devices
- Modular and digital electronics and introduction to microcontrollers
- Industrial sensors
- Robotic ROV submarines

Occupational Safety and Health Courses



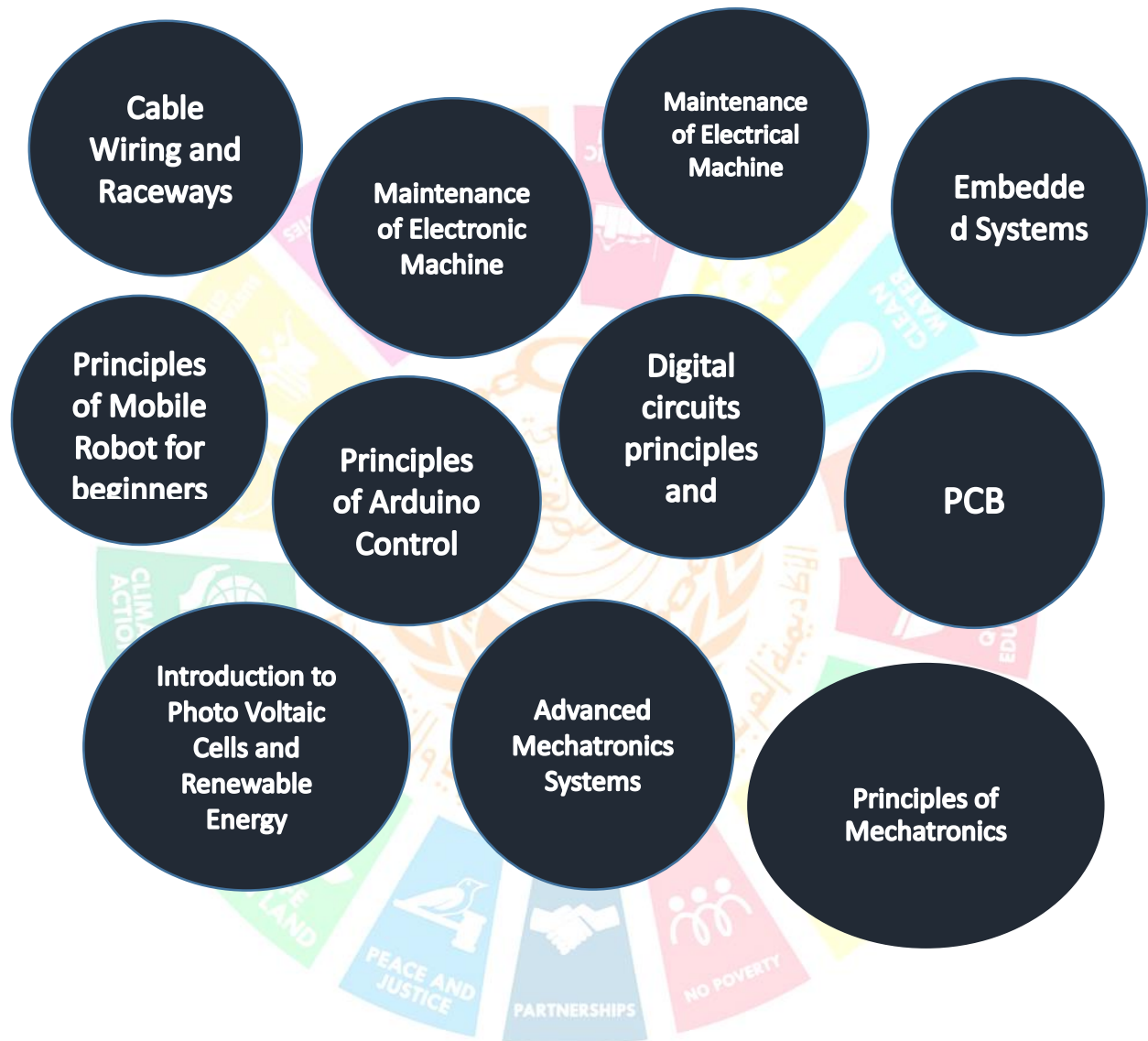


Mechanical Courses





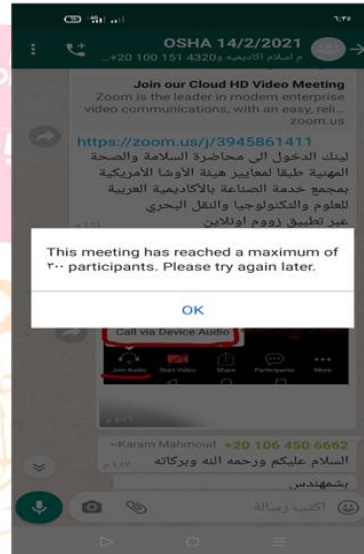
Electric Courses





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Free training courses were held in the field of occupational safety and health

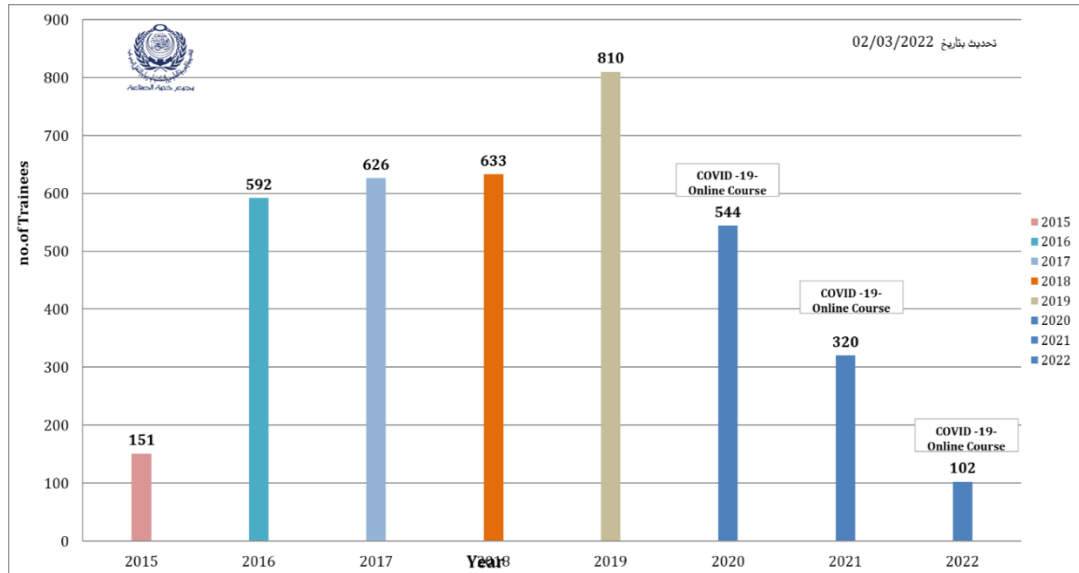


الدورات التدريبية أثناء 19 Covid

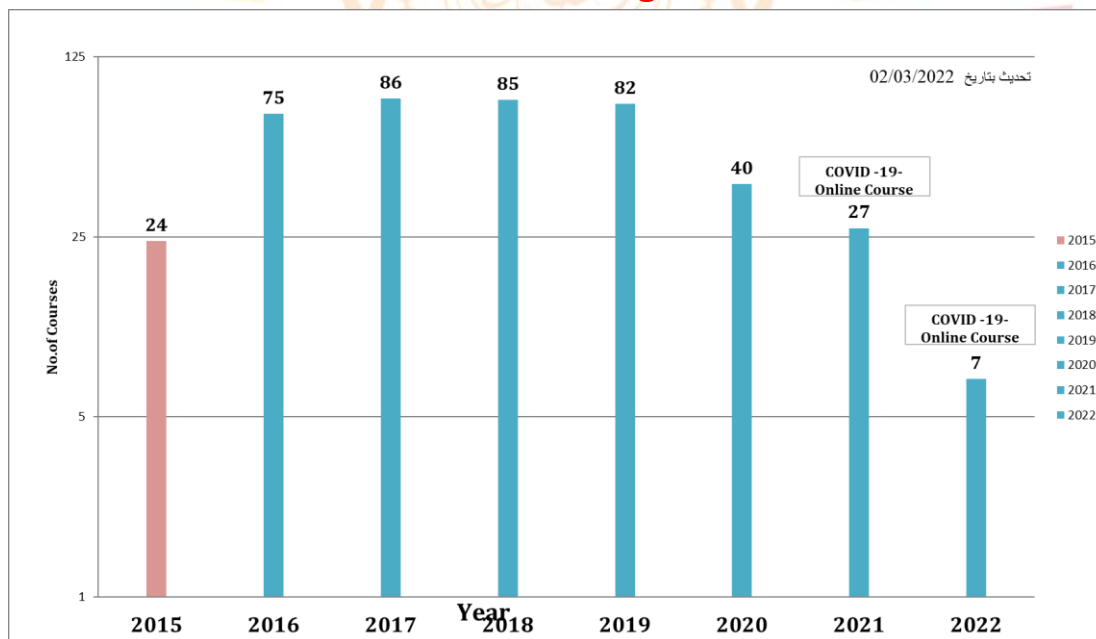
The number of trainees attended exceeded 300 trainees per session



A statement of the number of trainees from 2015 to 2022



A statement of the number of training courses from 2015 to 2022





Number of student got training in factories and companies

Training period	Factory/ Company Name	No. of students
2020	Mitsubishi Lancer	10
	Toyota	4
	Mercedes	7
	Skoda	3
	Petro jet	4
	Jaguar	2
	Leader Pack	2
	Samsung	2
	Abaza	3
	Applications Beyond Technology	6
	Oil petroleum	5
	Venus	7
	Container and Cargo Handling	1
	Port said Port	19
	Select – Alex	7
	El Mamoun Automotive	1
2021	Mercedes	3
	Nissan	30
	Abu-Qir Power Plant	1
	Bedo	3
	Skoda	9
	Mitsubishi Lancer	1
	Hilton King's Ranch	4
	Jaguar	4
	Mahmodeya Power Plant	1
	Audi	4
	OMSI Group	3
	Samsung	2
	Toyota	3
	AMOC Mineral Oils	3



Scholarships for students of the Institute of Technical and Vocational Studies Industry Service Complex

- Contribution of businessmen by providing a grant from the Baserati Foundation for 10 students to study at the Institute of Technical and Vocational Studies in the Industry Service Complex and obtain a technical diploma in the mechanics and mechatronics programs.



- Contribution of businessmen by providing a grant from the Edita Foundation for Social Development in cooperation with the Baserati Foundation for Social Development for 20 students to study at the Institute of Technical and Vocational Studies at the Industry Service Complex and obtain a technical diploma in the mechanics and mechatronics programs - Smart Village Branch for the year 2021.





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cooperation protocol

Cooperation with the Egyptian House of Zakat and Charity, the Training Department of the Armed Forces and the Ministry of Social Solidarity in establishing a vocational training center in Belbeis under the name of "Homeless Children", which is under construction and 10 educational materials have been prepared.



Institute of Productivity and Quality

A remote training course entitled "Understanding the general requirements of ISO 22000:2018 for food safety management systems"

Online Course

P&Q INSTITUTE

**Understanding ISO 22000:2018
Food Safety Management Systems
Requirements
for any Organization in the Food Chain**

Special Discount 50%

01274007900
01207355555

mqmegypt
pqj-marketing@aast.edu

Case Study

Giving out Iftar meal in Ramadan to a number of poor families by Academy El-kheir (April 2021)



In fulfilling the role of social responsibility by the Academy, this is part of community anti-poverty programs. Such charity acts contribute to relieving people with low income.



Goal 2 – Zero Hunger

2 ZERO HUNGER



Our Aim

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Last Year Recorded

Worldwide: 207

Egypt: 6

Our Progress through 20/21

We came up with a revolutionary solution based on restoring the soil's ability to fight salinization through utilizing live bacteria mixed with agricultural waste to enliven the inactive bacteria within Egyptian soil. Through multiple national and international collaborations, we developed a formula with an efficiency of 87% in restoring salt-damaged lands. We impacted 7 governorates in Egypt. We also positively influenced the lives of over 100 thousand individuals and raised over 1.1 million Egyptian pounds in revenue. We also helped raise incomes for unemployed agriculture engineers and increased the incomes of poverty-stricken farmers achieving the SDG of zero hunger.

We also participated in a big event in Port Said Governorate Diwan in the presence of cooperation parties of common interest; namely, Ministry of Planning and Economic Development, Ministry of Communication and Information Technology, Port Said Governorate, Civil Society Organizations, and a group of industrialists and businessmen in the Industrial Zone in Port Said. We presented a number of environmentally friendly projects related to the agricultural sector which is a cornerstone for achieving food self-sufficiency. In order to achieve SDG No.2, the meeting discussed projects related to the recycling of food waste, as well as projects to raise awareness of the Egyptian farmer about the dangers of climate change and its expected negative effects on: 1) decreasing the area of agricultural land due to erosion, 2) increasing rates of desertification and soil salinity, and 3) a decrease in the productivity of agricultural crops. This



was in presence of one of the farmers in order to find out the most critical details and interests of the Egyptian farmer and his needs according to his priorities.

Policy

1. Actions Dealing with Student Hunger

a. Programs to help food insecurity

AASTMT has a partnership with grocery stores to give low-cost food for students in need.

b. AASTMT take steps forward to provide food bank for students in need

c. Food provided on campus

The university provides healthy, affordable, and sustainable food options for all students, workers, and staff, including vegetarians, vegans, and pescatarians.

2. Actions Dealing with National Hunger

a. Events provided for local farmers

Agriculture is the single largest employer in the world, providing livelihoods for 40 per cent of today's global population. It is the largest source of income and jobs for poor rural households. Women comprise on average 20 per cent of the agricultural labor force in Egypt. This is why at AASTMT we care about the local farmers (including women) and producers, one of the events that we assure to make is visiting the agricultures and give them a better medium to start their journey into the big industry, give them support, safety, and a medium where they can excel.

b. Helping local farmers gaining access to knowledge and skills

Our mission is to connect with the local farmers (including women), understand the hardship they are facing and the health issues that are straining them from having a healthy life. Our insight is to understand the constraints they may face while working in agriculture. The problems that they face are our goals to solve. We ask them to elaborate more on the issues they have. We consult some experts as a nutritionist, gynecologist, and an official expert in agriculture to discuss the complaints of the farmers and suitable solutions are elaborated. We also give them food security knowledge, skills, and technology.



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

c. Providing local farmers an access to our facilities

Together, working hand in hand provides a roadmap for day-to-day operations. That's why we started to take a crucial step into creating a medium between the agricultures and AASTMT. On campus, we grow the Moringa which is a fast-growing, drought-resistant tree. Such plant has a really high demand from the pharmaceutical companies because of its amazing usages and benefits. It has the ability to increase the protein in milk by 30%. We want to help our local community. We couldn't find a better way to support them so we supply them with a sufficient amount of the moringa on a frequent basis. We explain to them how to plant, harvest, and take care of the plant itself. We also give them our past experience with planting the moringa. Adding to that we offer them organic plant pots that the team of Enactus AAST Port said produced on campus. This plant pot is organic, and only uses the agriculture waste so it can also be used as a fertilizer for the soil. Moreover, we offer them the suitable facilities that they will need so they can get all the resources from campus.

d. Prioritizing purchase of our products from local farmers

We have an agreement where we buy our food on campus from the local farm that we have a partnership with. We buy from them rice and we signed an agreement to buy other organic vegetables on the long run.





Goal 3 – Good Health and Well-Being

3 GOOD HEALTH AND WELL-BEING



Our Aim

SDG 3 aspires to ensure good health and promoting well-being for all. This goal addresses all major health priorities at all ages; reproductive, maternal, newborn, child and adolescent health. It focuses on key targets that boost the health of the country's overall population by achieving adequate health coverage, and providing access for all to safe, effective and affordable medicines and vaccines. SDG 3 is concerned with the eradication of pandemics, communicable and non-communicable diseases like; AIDS, tuberculosis, malaria. Supporting research and development in the health field is an essential part of this process as well as the investment in health financing and health risk reduction and management.

Last Year Recorded

Worldwide: 623

Egypt: 19

Our Progress through 20/21

Teaching:

Out of the 17 SDGs, SDG 3 is ranked the fifth where 7% of courses offered throughout all AASTMT colleges and campuses comply with this SDG. By nature, the courses offered by the medical hub at AASTMT are strongly related to the implementation of SDG 3. They increase the awareness of good health and well-being through different educational and professional techniques.

techniques. https://aast.edu/en/sdg/goals.php?menutab=3&unit_item=1203&page_id=120300006



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Initiatives:

Diabetes Awareness Campaign:

The World Health Organization announced that the death from diabetes is estimated to be three deaths per minute, or a staggering 4,300 every day. As part of the Academy's efforts to participate in its active role in achieving the Sustainable Development Goals, EPSF-AAST -under the supervision of the College of a Pharmacy- made an awareness campaign about Diabetes which had a supreme goal of raising awareness and education -especially at a very young age- which is pivotal to success in combating such menace to this global issue that needs our immediate attention. The awareness was conducted, with alignment with Egypt 2030 initiative, with the objective of aspiring to ensure health and well-being for all.

The campaign awareness took place in Somuah club and its main goal was to raise awareness to the public, and we have educated and raised awareness to more than 400 people.

Awareness message included:

- Diabetes: types, symptoms, diagnosis, treatment and side effects.
- Blood glucose (Testing blood glucose level, what do numbers means, high/low blood sugar symptoms, management, and monitoring).
- Diabetes with lifestyle (travelling, fasting, working, elderly, exercise).
- Foot care.
- Managing diabetes with diet (weight loss benefits) and exercise.
- Relation to other illnesses (infections, heart problems, risk of eye and kidney problems, heart attack and stroke, kidney dysfunction).
- Diabetes complications and how to avoid them.

https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1203&page_id=120300013

PHocus:

As part of the Academy's efforts to participate in its active role in achieving the Sustainable Development Goals, EPSF-AAST under the supervision of the College of a Pharmacy, to consolidate the idea of spreading awareness and education about oncology PHocus with the attendance of Dr. Mohamed Onsy, President of Alexandria pharmacy syndicate made PHocus to serve as a bridge linking students to one of their most important fields of work, which is clinical pharmacy. This Project works on three pillars



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first is The Pharmacy education by advancing the students' knowledge and skills and directing pharmacy students to providing direct patient care through giving sessions and workshops to the students. The second, is spreading the awareness of the pharmacist's role among the community. Third, the advocacy and policy about medication errors that would happen from a written prescription.

The education aspect is focused on Clinical Oncology especially lung & breast cancer and divided to three parts;

Sessions & Workshops (lung and breast cancers, oncology pharmacist journey, etc.)

Local competition (case presentation and solving in AAST)

National competition (case presentation and solving between 38 universities in Egypt)

https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1203&page_id=120300011

World Heart Day:

As keeping on the celebration World Heart Day, the scientific foundation for Heart and Arteries, in cooperation with the Expand Company organized a session to raise the awareness of heart diseases. The session was held in AbuKir campus, AASTMT, under the patronage of H.E. Prof. Dr. Ismail Abdel Ghafar, AASTMT President and Prof. Dr. Mahmoud Al-Zalabany, Chairman of the Executive Council of AASTMT Medical Sector, and Prof. Dr. Mohamed Sobhy, Professor of Cardiology at Alexandria University.

https://aast.edu/en/news.php?language=1&view=1&unit_id=1&event=7196&get_event_type=1

Autism orientation day:

An awareness event was held on 5th June 2021 on El Alamein campus where the audience included the academy students from different faculties and the visitors of the branch on this day.

The activity included an oral presentation delivered by a first-year student and about 100 brochures distributed among the audience with the basic information about its diagnosis and social support for the affected persons. A Facebook page with detailed information was initiated to help the families and provide them with lines of contact with the specialized centers.



Research:

Inauguration of Advances in Medical, Pharmaceutical and Dental Research Journal (AMPDR):

AMPDR journal is open-access with a liberal Creative Commons Attribution-Non-Commercial 4.0 International License which preserves the copyrights of published materials to the authors and protects it from unauthorized commercial use.

The AMPDR journal is free of charge for authors and readers, and operates an online submission with the peer review system allowing authors to submit articles online and track their progress via its web interface.

The journal is financially supported by the Arab Academy for Science, Technology and Maritime Transport AASTMT in order to maintain quality open-access source of research papers on Medical, Pharmaceutical and Dental research.

The journal has an outstanding editorial and advisory board of eminent scientists, researchers and engineers who contribute and enrich the journal with their vast experience in different fields of interest to the journal.

It is bi-annual journal where the first 2 issues were published in December 2021 and June 2022.

Research Publications:

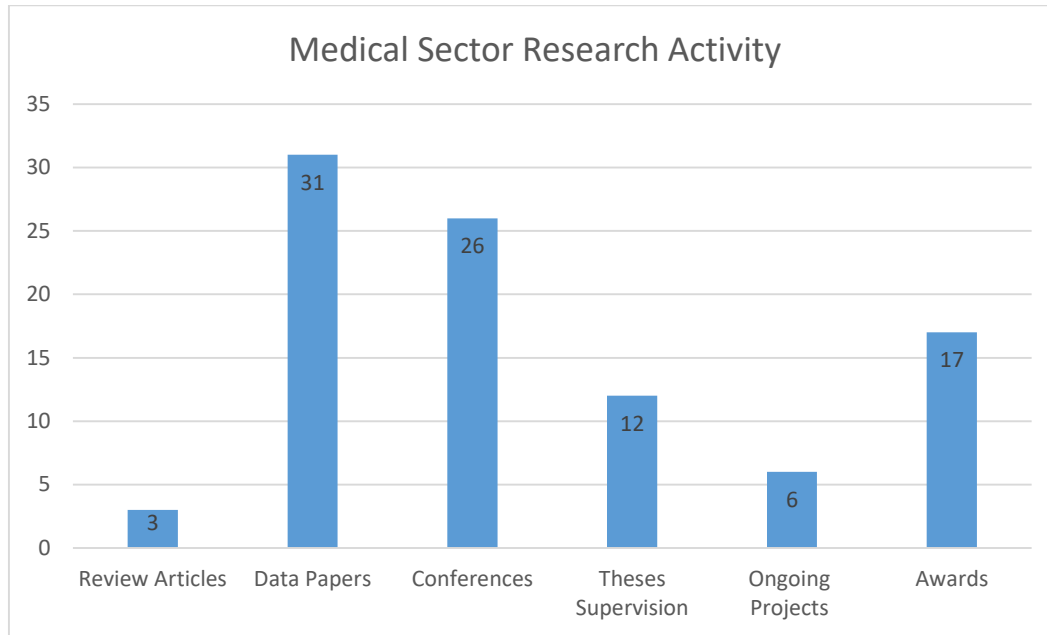
College of Pharmacy, AASTMT, has a very active role in experiential training and research. Although it is relatively new, only 2 graduating cohorts, but its effective role in health care research cannot be neglected sharing a very good impact on AASTMT publications ranking. An inspiring example is Prof. Dr. Nazik Elguindy, College of Pharmacy staff member and expert in laboratories establishment, who was listed among the world's top 2% scientists according to Stanford University ranking for the year 2022.

College of Pharmacy has successful cooperation's with different national and international prestigious institutes. National collaborations such as; Alexandria, Cairo, Ain Shams, Damanhour, Kafr Elsheikh and Zagazig universities. While international College of Pharmacy collaborators are; University of Basque Country (Spain), Université Sorbonne Paris Nord (France), Ryerson University and Memorial University (Canada) and University of Toyama (Japan).



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AASTMT El-Alamein campus comprises the medical hub, with the new valuable additions; College of Dentistry and College of Medicine. The medical sector is growing bigger every day by giving special interest to research activities and community services.



Public Engagement:

Full Medical Screening Day and Dental Health Convoys:

The college of Dentistry has sent 7 convoys over a year starting from August 2021 till September 2022. The convoys have provided minor dental treatment procedures that were carried out in the mobile dental clinic provided by the Faculty of Dentistry - Alexandria University (according to AASTMT-Alexandria University partnership agreement). This was in addition to a full oral screening and oral health education. The main aim of the convoys is to share dental health awareness among disadvantaged people as they covered: orphanages in Alexandria, Down's Syndrome patients' guest houses, Old Alamein City rural areas, in addition to the workers' camp in New Alamein City.

The screened patients were given "Patient's ID" cards with their medical and dental conditions that would give them access to the clinic back in our college to receive full treatment.



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The college has also held a "Full Medical Screening Day" for all workers and personnel working at the AAST Alamein Campus, providing a full medical and dental screening within the campus in a joint work with the AAST Medical Administration. And the patients were again provided with cards to provide them with treatment in our clinics.

The overall number of patients screened and served during those events was 600 patients.

https://aast.edu/en/news.php?language=1&unit_id=656&event=431&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=656&event=392&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=656&event=432&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=656&event=621&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=656&event=670&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=656&event=682&get_event_type=1

Case Study

Blood Donation Campaign:

Many people are afraid of donating blood, especially after the spread of Coronavirus, it is important to know that every bag of blood can save up to 3 people whose lives were in danger.

As part of the Academy's efforts to efficiently participate in achieving the Sustainable Development Goals, specifically SDG3, EPSF-AAST seeks under the supervision of the college of Pharmacy to consolidate the idea of permanent blood donation to fill the shortage of blood bags in Egypt and reach self-sufficiency according to Egypt's vision 2030.

Over the past 2 years, EPSF-AAST have educated more than **2,000** people about the importance of blood donation and collected about **500** blood bags from people who are eligible to donate. The 2021 campaign lasted for three days and included raising awareness about the importance of blood donation and its benefits.

The campaign took place in both Abu Qir and Miami campuses, as well as the secondary school in Miami. Students of all levels highly welcomed and effectively participated in the campaign. Being a successful campaign

https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1203&page_id=120300010



Goal 4 – Quality Education

4 QUALITY EDUCATION



Our Aim

Enhancing enrolment; Enhancing equitable access to education; Enhancing infrastructural development; reduced financial burdens on parents; Recruitment of teachers; and human resource development; promote lifelong learning opportunities for all.

Last Year Recorded

Worldwide: 112

Egypt: 1

Our Progress through 20/21

Teaching

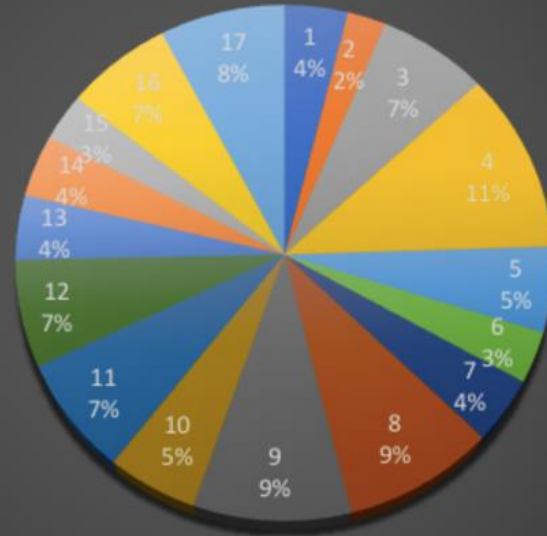
Mapping the Courses Studied at the AASTMT with SDGs

At the university level, Mapping the curriculum to SDGs resulted in the courses achieved different percentages, as shown in the chart, the curriculum of AASTMT covers almost all SDGs, noting that there are some SDGs need to be more coherent in the curriculum, which are: SDG1, SDG2, SDG6, SDG7, SDG13, SDG14, SDG15. This is the first phase, and in current term we are planning to further developing of SDGs in the curriculum. In addition, we found that it would be better to execute this study in a more accurate way, by implementing it at the college and department levels.



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Mapping the Courses Studied at the AASTMT with SDGs



Scholarship initiative — CCNA Preparation Course with certificate for public

Scholarship program initiative by IEEE-HKN Mu Beta Chapter-AAST, and certificates have been sent to all 82 recipients.

#IamHKN

Scholarship Program
CCNA Certificate Preparation Course

- 1** Scholarships are provided by Dr. Mohamed Mahmoud, CCIE Cisco Certified Internetwork Expert CCIE # 18220 since 2007
- 2** 80 scholarships available for students and fresh graduates.
- 3** Awardees will be selected based on an entry test. The test and course will be held virtually.
- 4** Three weeks, 3 Session / Week. Starting on Monday Sept. 13th. Every Mon - Tues - Wed

IEEE-Eta Kappa Nu

Mu Beta Chapter
Arab Academy for Science, Technology & Maritime Transport (AASTMT)

Smart-Tech Gadget Workshop Series and Hackathon with certificate for public

A two-day workshop and resource sharing for three months We were very delighted to organize our first episode of the hands-on smart tech gadgets' series and celebrate the Arduino Day 2021 titled "Undistancing: Open Makes Us Close". We would like to thank our



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

speakers Prof. Heba Shaban (our faculty advisor), Mohamed Ashraf and Emad Taher (our chapter members) for the valuable information and activities they provided. And special thanks to Eng. Mariham Rezk and Eng. Saji Alaa for volunteering with us in organizing the workshop!!



Free Webinar with certificate under title “Mobile Technology Evolution”



https://m.facebook.com/HKN.Mu.Beta/posts/pfbid0VC8wrHWdMb59Y8CFADGgeav22nw446Y63o7CP9TQ8RUzUV1jqJiGT3b4TLVsHsAol?_cft=%5B0%5D=AZWtVue06jogZw5eyqi1Zwvf2z1qGWzbBau3fPkEb9c-t7nM7F9F_rAGV6Va_SUhkqmnQUaTgCy9EhfWwgOHUPYOBnzTw1yMJvzAbxrKZ-1ZRZTvURAQI7yCbncSRVcqX8bz8EleQnTySg2kurSfq1J9Kx5X-QG_x-wjRBOs0JJKOE8h4LId-eExNM5YICfdjK7NH65XoBCJtH6XFzbH6IP&_tn=%2CO%2CP-R&dl_redirect=1



Opening Session of the 30th International Conference on Computer Theory and Applications (ICCTA 2020)

https://aast.edu/en/news.php?unit_id=1&language=1&page=146&event=4995&get_event_type=1

AASTMT College of Artificial Intelligence - Bibliotheca Alexandrina "Workshop"

https://aast.edu/en/news.php?unit_id=1&language=1&page=154&event=4892&get_event_type=1

Initiatives

1. AI4SDG Initiative

AASTMT will organize the first annual hackathon "AI 4 SDGs" to create solutions to some of the world's toughest problems using data.

During this hackathon, we will be on the lookout for disruptive and innovative solutions that use data, machine learning and artificial intelligence to fast track progress towards the UN Sustainable Development Goals (SDGs).

We are looking for enthusiastic data people - students and professionals in the broad field of AI, Deep Learning and Data Science. There are no strong requirements other than the strong interest in contributing to the UN SDGs.

In the global attempts of achieving sustainability, and more notably, meeting the UN Sustainable Development Goals (SDGs), AI can become a powerful weapon towards a circular economy and more sustainable living.

2. SDGs Curriculum Pilot

This is the second phase for "Mapping the Courses Studied at the AASTMT with SDGs"

In this phase, we need to investigate the curriculum associated with SDGs in AASTMT at the department, college and university levels. The objectives of this study are:

- (1) establishing a baseline status of sustainability in the overall curriculum of AASTMT through the distribution of SDGs-related courses at different levels,
- (2) understanding the interdisciplinary capacity of the faculty members in pursuing the SDGs
- (3) offering evidence-based practice for departments to reform their curriculum by integrating SDGs. The SDGs course inventory provides opportunities to gain insights into the



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whole structure of the curriculum framework, such that a university may plan its strategy for sustainability accordingly.

Research

- 1) The International Maritime Transport and Logistics Conference - MARLOG 9
https://aast.edu/en/news.php?unit_id=1&language=1&page=154&event=4894&get_event_type=1
- 2) Fifth Technical Education Forum" at AASTMT Industry Service Complex
https://aast.edu/en/news.php?unit_id=1&language=1&page=92&event=6011&get_event_type=1
- 3) The International Telecommunications Conference (ITC-Egypt 2021)
https://aast.edu/en/news.php?unit_id=1&language=1&page=119&event=5602&get_event_type=1
- 4) Final conference of "INNOLEA PROJECT" at AASTMT Aboukir Campus
https://aast.edu/en/news.php?unit_id=1&language=1&page=121&event=5540&get_event_type=1
- 5) IATF" – "Afreximbank" Virtual Event On "The role of AASTMT in Maritime Education and Training"
https://aast.edu/en/news.php?unit_id=1&language=1&page=128&event=5430&get_event_type=1
- 6) Maritime Transport and Logistics Conference, Marlog 10, "Digitalization in Ports & Maritime Industry"
https://aast.edu/en/news.php?unit_id=1&language=1&page=112&event=5689&get_event_type=1

Public Engagement

- 1- Beaver Challenge is an international initiative aiming to promote informatics and computational thinking among school students at all ages. It is organized in over 50 countries (3 million participants) and designed to get all students excited about computing. Each participant gets 45 minutes to answer 12 questions that focus on logical thinking and computing.

<https://www.beaveregypt.org>

<https://www.youtube.com/watch?v=gjHyHoUUQHM>

- 2- The EOI is the biggest programming contest for school students since 2003 under the patronage of the Ministry of Communication and Information Technology and Arab Academy for Science and Technology. The contests are hosted by AASTMT every year.

<https://www.youtube.com/channel/UC6zxNvvWUzSyW0spixXH7Pw>



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https://mcit.gov.eg/en/Media_Center/Latest_News/News/66451

<https://www.facebook.com/eoi.eg>

- 3- ECPC (Egypt Collegiate Programming Contest), ACPC (Arab & African Collegiate Programming Contest) programming contest. The contest fosters creativity, teamwork, and innovation in building new software programs, and enables students from different universities in Egypt and Arab region to test their ability to perform under pressure. Quite simply, it is the oldest, largest, and most prestigious programming contest in the world. The contests are hosted by AASTMT every year.

https://www.youtube.com/c/ACPCNews1/videos?app=desktop&view=0&sort=p&shelf_id=0

https://aast.edu/en/colleges/coe/alex/coe-news.php?unit_id=65&last_id=76&get_event_type=1

https://aast.edu/en/news.php?unit_id=65&language=1&page=7&event=81&get_event_type=1

https://mcit.gov.eg/en/Media_Center/Latest_News/News/63256

<https://www.facebook.com/EgyptCPC>

<https://www.facebook.com/AfricaArabCPC>

- 4- ROV (Remotely operated underwater vehicle) which is a Competition is made for building new generations of Arab Rovers to make university and school students compete in design and build ROV or underwater robot to achieve mission underwater, which is simulation to real mission.

<http://www.aast.edu/en/centers/ric/rov/index.php>

https://aast.edu/en/news.php?unit_id=65&language=1&page=7&event=80&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=411&event=7&get_event_type=1

- 5- RoboCup was founded in 1997 with the main goal of “developing by 2050 a Robot

Soccer team capable of winning against the human team champion of the FIFA World Cup”. In the next years, RoboCup proposed several soccer platforms that have been established as standard platforms for robotics research. RoboCupJunior is a project- oriented educational initiative that support local, regional and international robotic events for young students. It is designed to introduce RoboCup to primary and secondary school children, as well as undergraduates who do not have the resources to get involved in the senior leagues. The focus in the junior league is on education.

<https://www.rcjegypt.org>

- 6- Summer School

Community service and continuing education programs provide training courses for general public- young people from 4 to 16 years old-Through the summer program, a program that was prepared by a group of experts in the scientific and educational field in order to provide scientific and recreational content together to develop the skills of young people and discover



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their talents and explore their skills and capabilities that have not yet been discovered. The courses are in different fields like:

- Computer courses
- Graphic design courses
- Languages courses
- Design & craft
- Robot building
- Skills building
- Arabic calligraphy
- Engineering for kids

<https://aast.edu/en/deaneries/csp/alex/>

<https://www.facebook.com/CSP.aastalex/>

Case Study

1- NASA Space Apps Challenge

NASA Space Apps Challenge co-organized by NASA Space Apps Alexandria and IEEE Eta Kappa Nu (IEEE-HKN) Mu Beta Chapter. The three-day event was held on 22-24 September 2022, and sponsored by Alexandria Governorate, EGSA- Egyptian Space Agency وكالة الفضاء المصرية and Arab Academy for Science, Technology and Maritime Transport, and hosted by College of Engineering and Technology Main Campus Alexandria-AASTMT.

Day one featured public figures as well as professionals from academia and the industry. First panel of speakers included Major General Mohamed Elsherif (Alexandria Governor), Prof. Mohamed El-Quosy (Past President of EGSA), Prof. Alaa Abdel Bary (Vice President at AASTMT), Prof. Hassan Elnomany (Vice President of Sohag University) and Prof. Akram Soliman Elselmy (Dean of College of Engineering and Technology, AASTMT, Abu Kir Campus).

Following that, the day featured multiple panels and talks from NASA Space Apps Alexandria advisors Dr. Nagham Elsherif and Dr. Marwa Hamad, IEEE-HKN Mu Beta Advisor Prof. Heba Shaban, Dr. Ayman Mahrous, Eng. Ahmed Aboulela, and success stories from past participants and entrepreneurs.



2- Tech-Innovation Challenge

Under the auspices of Professor Ismail Abdel Ghafar, President of AASTMT, the College of Computing and Information Technology - Smart Village, under the deanship of Professor Aliaa Youssif, had the pleasure to launch its annual challenge, the Tech-Innovation challenge, organized by Professor Nahla Belal, Vice Dean for Education and Student Affairs, targeting the youth in different schools of Egypt to join the field of computing, this year the challenge was about solutions for sustainable development goals. The challenge targeted many schools with a total number of participants of over 50 students joined the challenge from different



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schools, among which are El Alsson school, Modern Education School, Leaders and others. The prize giving ceremony was held on Thursday, 2nd of June, 2022, in the Smart Village campus.





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3- PACES Project Team Visits school

Within the leading role of the Arab Academy for Science, Technology and Maritime Transport (AASTMT) in serving the Egyptian society and in qualifying students in various fields, AASTMT PACES (Progression of Accessibility Centers in higher Education for Students with disabilities in North Africa) Project Team under the auspices of AASTMT Deanery of Student Affairs and in cooperation with Fayoum University carried out "Pop-Up" Visits of PACES Project on 29th - 30th of December 2020, as to present "PACES" project activities as funded by the European Union's Erasmus+ program.

It's worth to mention that during the current situation of the COVID-19 pandemic and the last days of the year 2020, PACES Project Team held the "Pop-Up" Visits by applying all the precautionary and preventive measures, these visits took place to some National Schools in Alexandria under the auspices of the Deanery of Student Affairs at AASTMT & PACES Project Team. The visits include visiting "Al-Nour School for the Blind in Fayoum Governorate", "Al Fayyum Manarat Al-Ataa Association", and "El Amal for Deaf & Hearing Impaired School in Fayoum Governorate", Victory College (VC), El-Nasr Girls College (E.G.C.), EL Nasr Boys School (E.B.S.), these visits provide awareness sessions about students with special needs and the introduction of assistive technology devices(AT) that assists these students in the educational process. More visits to a number of universities, schools, associations and conferences, please check Annex 2 for more details and visits in national schools.



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<https://aast.edu/en/centers/ac/>

https://aast.edu/en/centers/iprc/contenttemp.php?page_id=52500022

4- Summer Youth Camp

This is a summer training program, and any Egyptian or Arab student at any university has the right to join the program according to the specialization that is announced by the training sector, and the Academy hosts students of this program every year for 3 days within the training program.

a) First Summer Training Youth Camp

The opening of the first training camp for students of the summer training program of the League of Arab States for the year 2021, which was held during the period from 13-16/8/2021 at the headquarters of the Arab Academy for Science, Technology and Maritime Transport in Alexandria.



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b) Second Summer Training Youth Camp

In order to keep Arab Academy for Science, Technology and Maritime Transport (AASTMT) role as a house of Arab experience and a pioneer of academic excellence, AASTMT has hosted the second summer training camp program of the General Secretariat of the League of Arab States during the period 22 - 25 September 2021, at AASTMT Aboukir Campus – Alexandria, where the program was held under the auspices of H.E Mr. Ahmed Aboul Gheit - Secretary General of the League of Arab States, and H.E Prof. Dr. Ismail Abdel Ghafar Ismail-AASTMT President.

It's worth to mention that AASTMT held the opening ceremony of the summer training camp program at AASTMT Aboukir Campus, in the presence of H.E Plenipotentiary Minister Majid Al-Mutairi - Director of Training and Development of Work Methods of the General Secretariat of the League of Arab States, and H.E AASTMT Officials.

During the Second Summer Training Youth Camp, the students visited AASTMT Alamein City Campus with the educational buildings and laboratories, where they praised the level of AASTMT capabilities and the current position at the local and international levels, then Prof. Dr. Ali Fahmy - Dean of AASTMT College of Artificial Intelligence presented a seminar on "Artificial Intelligence Recent trends and its future in the Arab region".

https://aast.edu/en/news.php?unit_id=1&language=1&page=91&event=6023&get_event_type=1



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A visit to the Academy's branch in El Alamein on Thursday, September 23, 2021 within the activities of the Arab League Student Camp Program - Summer Training Program. Dr. Ali Fahmy, Dean of the College of Artificial Intelligence, Academy Branch in El Alamein, gave a lecture on recent trends in artificial intelligence and its future in the Arab region.



Goal 5 – Gender Equality

5 GENDER
EQUALITY



Our Aim

The UN 2030 agenda for sustainable development promises fair human rights for every human. It has got 17 goals and gender equality runs across all of them. The Arab Academy for Science, Technology and Maritime Transport has endeavored to inculcate gender equality and inclusive excellence in higher education, scientific research and ground-breaking innovation. Now that we are 50 years old, we are celebrating 50 years of excellence. As a world-class educational institution, we strive for a world free from discrimination based on gender whereby every human being irrespective of sex, ethnicity, religion, disability and social status can fulfil their potential unhindered by discriminating laws, economic and social structures. We spare no effort in ensuring that gender equality is fully mainstreamed into all programs through social engagement in a series of sustainable projects and initiatives.

We do so by focusing on:

- Gender balance and inclusion in research, innovation and training
- Support for persons with disabilities via a wide range of formal and informal interventions
- Campaigns within and outside the institution to make women's contribution to research and gender diversity in research teams more visible;
- Enactment and development of courses to promote gender mainstreaming and improve gender visibility, self-confidence and leadership skills
- A synergy in reciprocal learning and action based on student led initiatives, continuous dialogue among concerned stake holders and community participation

Last Year Recorded

Worldwide: 415 / 938

Egypt: 7 / 27



Our Progress through 20/21

We took several initiatives toward women empowerment and gender equality. The Arab Institute for Leadership Development at AASTMT led the preparation of Egypt's National Youth Strategy in collaboration with the UNFPA & the Ministry of Youth and Sports, through facilitating a series of workshops across Egypt for youth activists in student unions, young parliament, NGOs, Scouts, etc., and preparing a full proposal with youth challenges and solutions through initiatives. The youth strategy reflects the UN's SDGs which include gender equity. The Institute launched the first gender diploma in the Middle East "Gender and Governance Diploma" in partnership with Arab Women Organization and several male staff members have conducted a creative writing workshop on "Women in the Era of Equality & Freedom", speaking at "Success Women Summit" representing AILD, and publishing a play discussing modern feminism "When Women Unite".



<https://women-summit.org/mahmoud-mansi/>

On a different note, students at the College of Language & Communication across all branches have dedicated a huge part of their graduation projects to sustainability, namely Women Empowerment through media productions (TV shows, documentaries, songs, and TV advertising campaigns) that are published on the official Website of SDG5.



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<https://www.youtube.com/playlist?list=PLPzGhv-x8dR6y9LmTYSNHNEF1ryVNY4vu>



Young female entrepreneurs, graduates and undergraduates, look for special support that can fulfill their needs through youth incubation programs and competitions hosted by the Entrepreneurship Center at AASTMT and win several awards.





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Several distinguished female students have taken active part in the Egyptian Space Agency “Asteroid Egypt” initiative and competition and won several awards.



Female students with special needs are afforded genuine opportunities for inclusion and predominantly feature in renowned Egyptian TV shows and festivals held under the auspices of the Egyptian. President Abdel Fattah El-Sisi.

<https://www.youtube.com/watch?v=bkEf1R8SjME>





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In keeping with the role AASTMT plays as an exceptional leading educational institution and as part of its efforts to achieve worldwide gender equality, an MOU with the Arab Women in Maritime Association (AWIMA) was signed. This agreement comes under the IMO's gender program. It serves the Arab society and gives visibility and recognition to the role of women in the maritime sector.



Policy

1. Actions Dealing with Arab Women Empowerment

International Maritime Organization (IMO) has held a conference for Arab Women in its framework to support women's role in Maritime sector, according to the goals of the sustainable development of UN especially the SDG 5. They have decided to establish Arab Women in the Maritime Association (AWIMA) during this conference.

IMO and AASTMT have provided the technical support and the formulation of this resolution; it was related to the establishment of this association.

They have adopted this resolution and worked on it, they have agreed that the permanent headquarter of the General Secretariat of AWIMA must be in one of the Arab countries, AASTMT as a representative of all Arab countries has offered to host the General Secretariat, the Director of the General Secretariat must be a permanent member in the Governing Council of this association. Annual elections must be held to elect the President of the association as well as the rest of the members of the Council.



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2. Actions Dealing Women in the Maritime Field

IMO International Day of Women in the Maritime Field

In implementation of IMO General Assembly Resolution No. A.1147 (31) titled "Preserving the legacy of the 2019 Global Maritime Emblem and achieving a barrier-free work environment for women in the maritime sector". It was adopted at the Assembly's 31st session at the end of 2019.

In 2021, the International Maritime Organization adopted a resolution declaring the celebration of the International Maritime Organization's International Day of Women Working in the Maritime Field on May 18 of each year. The first day takes place in 2022.

This day celebrates women in industry and aims to promote women's employment, retention and sustainable employment in the maritime sector, raise the profile of women in the maritime domain, advance IMO's commitment to UN Sustainable Development Goal 5 (gender equality) and support action to address the current gender imbalance in the maritime domain.

IMO Member States, Maritime Women's Associations and the Maritime Industry, and all other maritime actors are invited to promote and celebrate International Maritime Women's Day in an appropriate and meaningful manner.

In this context, the Arab Academy for Science, Technology and Maritime Transport and the Maritime Transport Sector in the Arab Republic of Egypt celebrate this day at the headquarters of the Arab Academy in El Alamein, which includes two workshops and presentation of successful experiences.



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Goal 6 – Clean Water and Sanitation

6 CLEAN WATER AND SANITATION



Our Aim

Expand local & international collaboration and capacity-building support to communities in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies as well as wise agriculture.

Last Year Recorded

Worldwide: 208

Egypt: 7

Our Progress through 20/21

Teaching:

❖ Water, Energy and Environmental Programs

M.Sc. in Renewable and environmental energy:

https://aast.edu/en/colleges/coe/alex/dept/programtemp.php?program_id=245&unit_id=74

M.Sc. in Water Resources Engineering:

https://aast.edu/en/colleges/coe/alex/dept/programtemp.php?program_id=240&unit_id=62

❖ Water-related graduation projects 2020

- **Graduation Projects of Mechanical Engineering Department- Alexandria Campus**

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=5300011

Irrigation system combined with solar panel

Desalination power and hydrogen production using fuel cell



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Graphical waterfalls

Improving the productivity of solar still water desalination

Design and economic feasibility of a solar powered atmospheric air water generator

- **Graduation Projects of Construction & Building Department- Alexandria Campus**

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=6200029#Fall%202020-2021

Remote Sensing Applications in Water Resources

- **Graduation Projects of Mechanical Department- Smart Village Campus**

https://aast.edu/en/colleges/coe/smartvillage/dept/contenttemp.php?page_id=43500011

Design and control of a smart Aquaponic System

❖ Student Trips

A Field Visit to the New Abu Qir Steam Power Station (2021)



A site visit to the 1300MW New Abu-Qir Steam Power Station has been organized by the College of Maritime Transport for students in the Electrical Machines course. The New Abu-Qir station is the largest steam power station in Egypt that relies on sea water desalination for electricity power generation. Students were able to understand the



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entire generation process and how the wastewater is being returned back to sea according to the environmental regulations of the Egyptian Law

❖ Competitions

1- 1st Place in Enactus AAST Portsaid & Food and Agriculture Organization of the United Nations (FAO)

Enactus AAST Port Said team won first place in the Enactus FAO Food and Agriculture Organization of the United Nations (FAO) competition conducted by the United Nations. The Enactus team competed against the Enactus teams of Tunisia, Egypt and Morocco. The presentation was about their MycoTech project which includes mycobrick and mycopottian, and will be presented in the UAE on February 24-25 at Dubai Expo 2020



Initiatives:

1- Invent for the Planet Event:

Invent for the Planet global challenge has been held in AASTMT Smart Village Campus February 2020 for the second time after 2018. Invent for the Planet is hosted by Texas A&M University and it is a 48-hour intensive design competition, which took place at more than 30 universities around the world. Students developed solutions for major issues facing society that have arisen as our world continues to modernize and become more populated. Over the course of two days, students at each campus formed teams, developed a plan and prototype, created a business plan and pitched it to a panel of judges.



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These students' activities and challenges cultivate the ability of the students to communicate and work effectively in teams and also to teach students how to analyze and implement interdisciplinary engineering projects.

https://aast.edu/en/colleges/coe/smartvillage/dept/contenttemp.php?page_id=52900026



Picture of the command center video wall where all universities had a livestream of their local competitions.

2- February 2020: AASTIANS go Green” Campaign at AASTMT Smart Village Campus

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) social responsibility, as well as, AASTMT and the Egyptian Ministry of Local Development "Protocol Of Cooperation" on organizing the planning and implementation of the campaign AASTMT Green that was held on Wednesday 21- 1- 2020, the activities of "AASTIANS go Green" campaign has been started on Monday 10- 2- 2020, at AASTMT Smart Village Campus, in the presence of H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President, Prof. Dr. Mona Fouad - AASTMT Smart Village Campus Academic Dean, and Prof. Dr. Enas Barsoum - Advisor to AASTMT President for Student Affairs.

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4120&event_type=1&language=1



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3- March 2020: AASTMT Smart Village Campus Marathon of "AASTians go Green" Campaign

With the achievement of "Egypt Vision 2030" sustainable development goals, as in keeping with the Arab Academy for Science, Technology and Maritime Transport (AASTMT) social responsibility, as well as, AASTMT and the Egyptian Ministry of Local Development "Protocol Of Cooperation" on organizing the planning and implementation of "AASTians go Green" campaign that was held in January 2020, AASTMT organized a Marathon on Thursday 5- 3- 2020, at AASTMT Smart Village Campus, under the patronage of H.E Mr. Ahmed Aboul Gheit - Secretary General of the League of Arab States, H.E Major General Mahmoud Shaarawy – Egyptian Minister of Local Development, H.E Prof. Dr. Ashraf Sobhy - Egyptian Minister of Youth and Sports, and H.E Prof. Dr. Yasmine Fouad - Egyptian Minister of Environment.

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4160&event_type=1&language=1

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4161&event_type=1&language=1

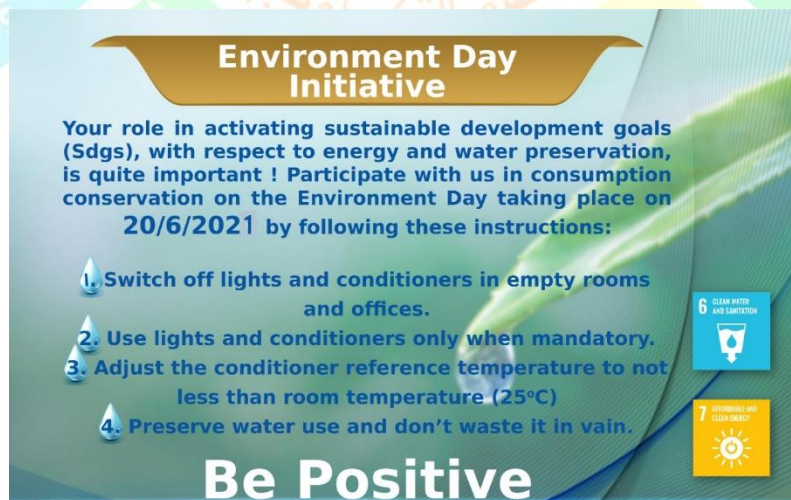


4- February 2021: Energy Research unit announces the foundation of NET ZERO Emission Community to spread green energy awareness and encourages energy conservation initiatives.

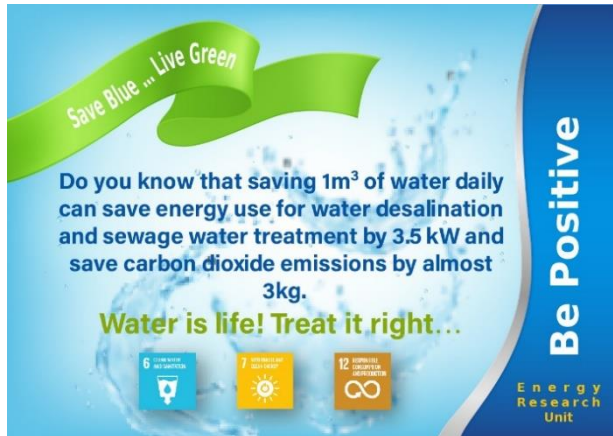


5- June 2021: Environment Day Initiative by Energy Research Unit

In concern of realizing and activating sustainable developments goals, the energy research unit in AAST, Abukir announces the environment day initiative which will take place on Monday the 20th of June, 2021 as demonstrated in the poster below



6- Awareness campaigns for energy conservation initiated by Energy Research Unit





7- November 2021: SDG Awareness session on November 2021

https://aast.edu/en/news.php?unit_id=656&language=1&page=33&event=469&get_event_type=1

An introductory session on entrepreneurship to raise awareness of the sustainable development goals

An introductory session on the field of entrepreneurship to encourage and educate students about the goals of sustainable development through active participation in the Enactus competition, which is interested in encouraging and educating university youth to find new ideas that help in sustainable development

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TAGS: SUSTAINABLE, EDUCATING, ENCOURAGING





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Research:

8 Funded Research projects which includes:

- MAIA TAQA (2019- present):
<http://www.enicbcmed.eu/projects/maia-taqa>
- An Innovative Solar Powered Water Desalination System using Fiber Membranes (Solar-Water):
http://www.aast.edu/en/scientific-research/contenttemp.php?page_id=47300104
- Knowledge exchange in sustainable Fisheries management and Aquaculture in the Mediterranean region:
http://www.aast.edu/en/scientific-research/contenttemp.php?page_id=47300106
- Smart Autonomous lot Agricultural Monitoring System:
https://aast.edu/en/scientific-research/projects/project.php?uid=352&proj_id=1
- Mediterranean Quadruple Helix Approach to Digitalization:
<https://www.enicbcmed.eu/projects/med-quad>
- Smart Wireless Sensor Network to Detect and Purify Water Salinity and Pollution for Agriculture Irrigation:
http://www.aast.edu/en/scientific-research/contenttemp.php?page_id=47300104
- Monitoring, Assessment and Innovative Treatment Technology to Enhance Groundwater Quality For Irrigation Toward Climate Change Adaptation:
https://aast.edu/en/scientific-research/projects/project.php?uid=409&proj_id=1

Public Engagement:

- Alexandria Sewage Company Signs Contract with the Productivity & Quality Institute
- The Drinking Water Alexandria Company Obtains ISO 26000 with the help of The Productivity & Quality Institute of AAST

1- The Arab Academy for Science, Technology and Maritime Transport signs an MOU with Alexandria Company for Drinking Water



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The MOU aims to find the appropriate framework through which the joint cooperation between the company and the AAST in the field of training technical consultations and joint scientific research takes place



مذكرة تفاهم
بين كل من
شركة مياه الشرب بالإسكندرية
و
الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

2- The Arab Academy for Science, Technology and Maritime Transport, Sharjah Branch, launches a partnership with the Ministry of Climate Change and Environment

The Arab Academy for Science, Technology and Maritime Transport, Sharjah Branch, signed a memorandum of understanding with the Ministry of Climate Change and Environment in the United Arab Emirates, to employ all its academic capabilities and the expertise of its educational cadres in order to serve and develop the protection of the marine environment and align the activities of the shipping sector with work requirements in order to meet the challenge of climate change And strengthening the protection of the delicate ecological balance in the waters of the Arabian Gulf and the Arabian Sea, which the UAE overlooks.

Abdul Ghaffar also explained: "We have vowed ourselves in the Sharjah branch of the Academy to be the first to respond to the call of His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces, who was launched at the 2015 government summit, declaring the need to secure Drinking water in the UAE is for future generations after the oil depletion, in an area devoid of rivers and fresh water resources, thus protecting the marine environment and



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keeping its water free from chemical or biological pollution represents the biggest challenge, as well as developing and owning the latest desalination technologies at the lowest operational costs. Employing clean marine energy and its sustainable resources is one of our top priorities as a national educational institution.”



3- TWT (Tanmeya wa Tatweer) Project by AAST Entrepreneurship Center in Collaboration with Academy of Scientific Research & Technology & Funded by the Danish Arab Partnership Program and managed by the African Development Bank

TWT Project objective is to enhance and support the entrepreneurship ecosystem in Egypt to Enable empowerment of existing and potential entrepreneurs, particularly youth and women, to establish, manage and operate successful innovation-driven businesses in 3 priority sectors: 1. Agribusiness 2. Clean and Green 3. Creative Industries, with a focus on handicrafts and performing arts. This will be achieved by supporting the implementation of incubation programs, giving focus to disenfranchised areas such as Upper Egypt and New Valley, as well as to women and youth. TWT have helped 50 graduated startups and conducted about 60 training sessions



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4- Protocol Signing between The Arab Academy for Science, Technology and Maritime Transport and The Drinking Water and Sanitation Company in Aswan

Within the framework of the AASTMT's role in developing the industry and engineering sectors in the South-Valley, the College of Engineering and Technology-South Valley Branch organized on Thursday 06/10/2021 the first meeting of the Advisory Council for Industry in the South Valley Branch (Aswan) and that in the presence of the President of the Syndicate of Engineers in Aswan, chairmen of companies' boards of directors, and directors of sectors of a number of different bodies in Upper Egypt.

Prof. Dr. Mohamed Fahmy Shehadeh, Dean of the Faculty of Engineering and Technology, presented the capabilities of the Faculty of Engineering and Technology in Aswan, and the heads of educational departments gave an overview of the available capabilities and the expertise available in each department. Then the council witnessed a series of discussion sessions and opportunities for industry support, consultations and mutual training with industrialists in the South-Valley. Some companies provided more than 100 training opportunities in the south of the valley. The council also included the signing of a cooperation protocol between the Arab Academy for Science, Technology and Maritime Transport and a water company Drinking and sanitation in Aswan.



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5- Protocol Signing between The Arab Academy for Science, Technology and Maritime Transport and The Drinking Water and Sanitation Company in Matrouh

Prof. Dr. Mustafa Hussein - Director of the Arab Academy branch in El Alamein - and Dr. Suhair Al-Halfawi - Advisor to the President of the Academy for material and logistical affairs - received a delegation headed by Dr. Eng. Khaled Ibrahim Gabr - Chairman of the Board of Directors of the Drinking Water and Sanitation Company - in Marsa Matrouh Governorate. In order to sign a cooperation protocol between the two parties to provide training, advisory and postgraduate services.



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Publications:

1. Renewable Energy and Sustainable Development (RESD) journal

<http://apc.aast.edu/ojs/index.php/RESD>

The journal is **financially supported by the Arab Academy for Science, Technology and Maritime Transport** in order to maintain quality open-access source of research papers on renewable energy and sustainable development.

The RESD journal is a biannual international peer-reviewed journal featuring open-access and free charge fees. It presents a global forum for dissemination of research articles, case studies and reviews focusing on all aspects of renewable energy and its role in sustainable development for authors and readers.

The journal aims to present to the international community important results of work in the fields of renewable energy and sustainable development research to help researchers, scientists, manufacturers, institutions, world agencies, societies to keep up with new developments in theory and applications. Experimental, computational and theoretical studies are all welcomed to RESD. The topics of focal interest to RESD include, but are not limited to, all aspects of wind energy, wave/tidal energy, solar energy, Hydropower, Geothermal Energy, Hydrogen & Fuel Cells as well as energy from biomass and biofuel. The Energy Savings and efficient energy is a major interest of the RESD



journal. The integration of renewable energy technologies in electrical power networks and smart grids is another topic of interest to RESD.

❖ **AASTMT Energy Consultancy**

1. Energy Management Service of AASTMT Productivity and Quality Institute (PQI)

AASTMT PQI has a great role in supporting energy-efficient systems and offering energy management services by introducing the following;

➤ **ISO 50001 Energy management Systems Consultancy Service (EnMS)**

https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=342&page_id=34200027

The purpose of the EnMS is to enable organizations to establish or re-structured the systems and processes necessary to improve energy performance, including energy efficiency, use, consumption and reduce running cost. ISO 50001 (Energy Management System) is based on the ISO management system model familiar to more than a million organizations worldwide who implement standards such as ISO 9001 (quality management), ISO 14001 (environmental management), ISO 22000 (food safety), ISO/IEC 27001 (information security). ISO 50001 can be implemented individually or integrated with other management system standards.

Benefits of ISO 50001 Application:

- Improves existing management systems.
- Leverages existing continual improvement processes.
- Develops a baseline of energy use.
- Actively manages energy use and costs.
- Reduce emissions without a negative impact on operations.
- Continual improvement of energy uses versus product output over time.
- Potential for savings to be used for emission credits.
- Improves maintenance process culture in all types of organization.
- Generates a new source of thinking in energy Consumption model.



➤ **Energy and Environmental Management courses**

Environmental Management System (EMS) and Energy Management System (EnMS) helps sustainable businesses and help to reduce an organization's impact on the environment while improving operating efficiency, controlling, and reducing your organization's energy consumption, which reflects on, reducing product manufacturing costs as energy costs rise. Thus, AASTMT offers the following courses

➤ **Environmental management training courses**

Environmental management courses focus on how to mitigate the adverse effects of business and industrial operations on the Earth's environment.

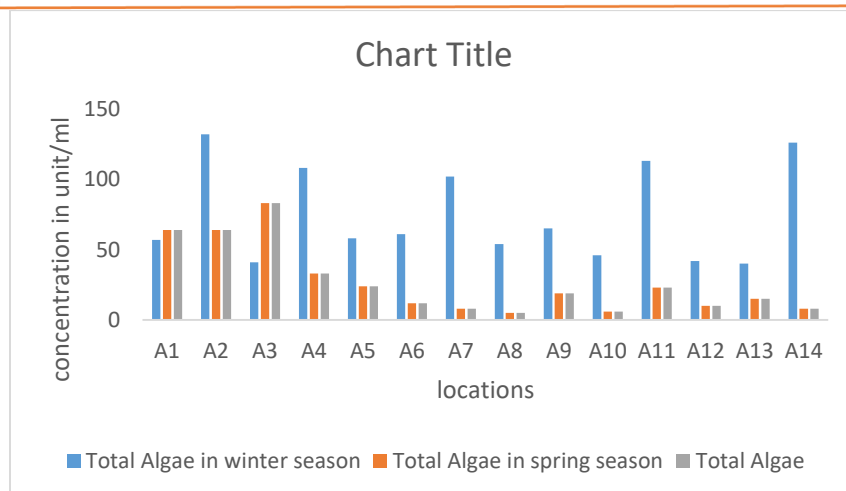
https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=343&page_id=34300113

Case Study

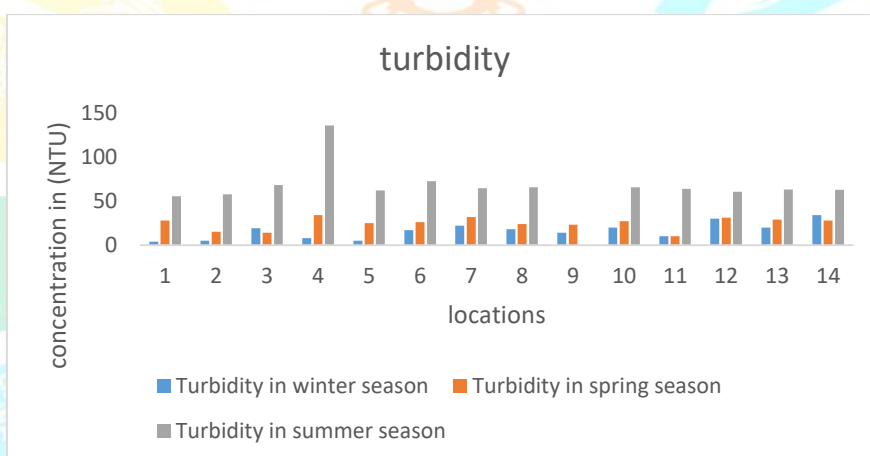
Mention brief Details about one of the research or initiatives and then mention the output
(note: try to add statistics for any of the above points)

“Monitoring, Assessment and Innovative Treatment Technology to Enhance Groundwater Quality for Irrigation toward Climate Change adaptation” Funded Project

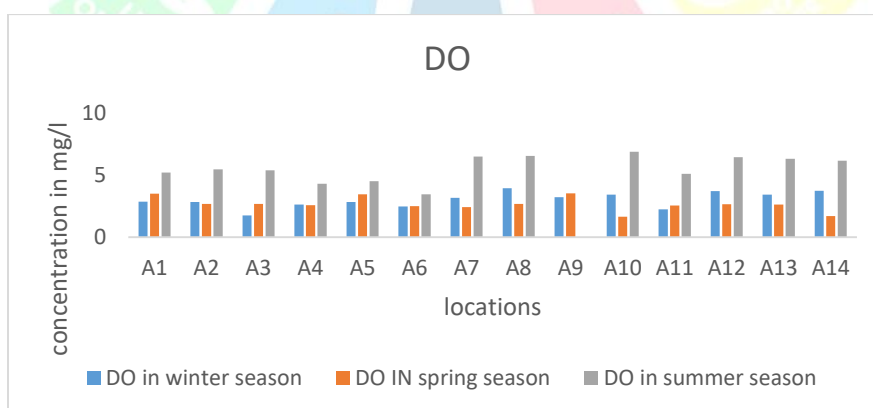
Increasing pollution in aquatic resources and climate changes are important concerns leading to deterioration of freshwater resources, which affects drinking, food industry, and irrigation. This has prompted concentrating on ground water as a potential option for drinking and irrigation, which must fulfil particular standards to attain the requisite quality, especially in arid places where ground water is the only source. A project in AASTMT -AbuQir Campus has been established which intends to improve the irrigation and/or drinking quality of water from 13 borehole ground wells at Abu Qir Campus near the eastern shore of Alexandria City (Abu Qir Area). Physical, chemical, and biological water samples have been collected and analyzed to determine pollution status regionally and temporally (monthly for a year) and relate them to environmental and climatic conditions. Then, nanotechnology will improve water quality. The project has been fully funded by the AASTMT with sample of seasonal water samples and improvements which have started by taking readings in Summer, then Winter and followed by Spring.



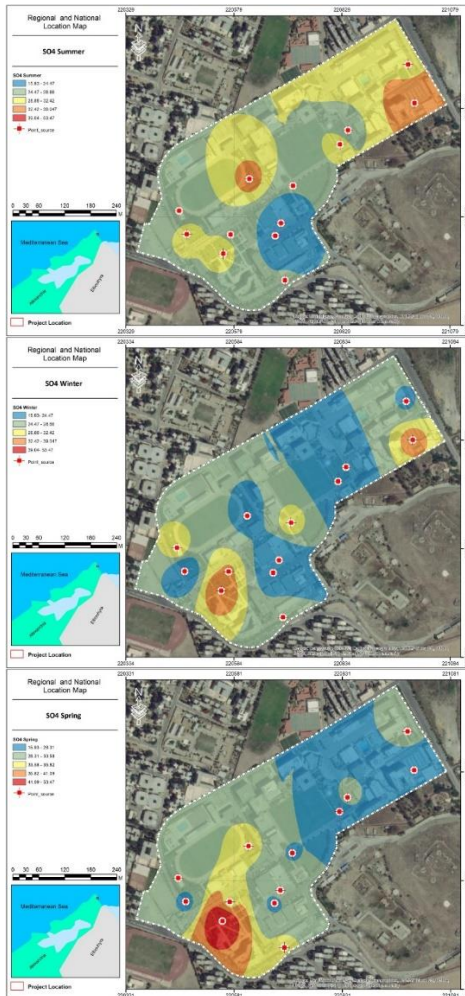
Sample of Total Algae concentration in three seasons



Sample of Turbidity Analysis in three seasons



Sample of Dissolved Oxygen Analysis in three seasons



GIS Photos of SO4 in Summer

GIS Photos of SO4 in winter

GIS Photos of SO4 in Spring





Goal 7 – Affordable and Clean Energy

7 AFFORDABLE AND
CLEAN ENERGY



Our Aim

Ensure access to affordable, reliable, sustainable and modern energy and link energy-related research with the current needs and future plan of the AAST and community. Moreover, make AAST a center of excellence in the field of energy by following an Energy Management and Environment policy which implies;

- Applying strategies and building standards for conscious energy consumption, planting and energy management.
- Utilizing renewable energy sources through several solutions to provide a clean and efficient energy for future generations
- Serving the community efficiently and resourcefully
- Developing cooperation with government and public enterprises towards green energy.
- Developing collaborative strategies and agreements with the local, national and international entities to support green energy innovations.
- Supporting focused research in environmental design, green architecture and sustainability through the encouragement of multi-discipline project to deliver an innovative solution.

Last Year Recorded

Worldwide: 22

Egypt: 3

Our Progress through 20/21

Teaching:

❖ Energy Program

Energy Program B.Sc., Meng. and M.Sc. programs include:



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- **B.Sc. of Energy Engineer, (smart village)**

http://www.aast.edu/en/colleges/coe/smartvillage/dept/index.php?unit_id=529

- **Meng in Renewable energy and environment engineering (Alexandria)**

https://aast.edu/en/colleges/coe/alex/dept/programtemp.php?program_id=251&unit_id=74

- **M.Sc. in Renewable energy and environmental engineering (Alexandria)**

https://aast.edu/en/colleges/coe/alex/dept/programtemp.php?program_id=245&unit_id=74

- **M.Sc. in Electrical Smart Grid engineering (Alexandria)**

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=4500050

- **M.Sc. of Smart Control Systems for Energy Management (Alexandria)**

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=7400022

There are also energy-related training courses offered by AASTMT

- **Training courses**

1. Renewable Energy System
2. Solar energy
3. Practical fundamental solar energy
4. Wind Energy System
5. Energy Management and Auditing (EMA)
6. Building Management system (BMS)

50 kW Solar Power Plant (On-Grid) with Weather Station. (ABB)

- On-grid
- Off-grid
- Hybrid
- For education, research and training purpose in addition to energy efficient and management





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

❖ Energy-related graduation projects 2020

1. Graduation Projects of Electrical and Energy Eng. Department- Smart Village Campus

https://aast.edu/en/colleges/coe/smartvillage/dept/contenttemp.php?page_id=52900035

• Academic Year 2019-2020

- Modeling, Analysis, Fabrication and Experimental Investigation of Small Horizontal Axis Wind Turbine
- Digital IoT Based Multi-Function Relay

• Academic Year 2020-2021

- Planning and designing a long-term charger positioning plan in Egypt and Implementation of a commercial low-cost Electric Vehicles Level 2 charging.
- Blind Solar Tracker.
- Smart Low Voltage Switch Gear
- Solar Energy System with IOT Automation
- Optimization System of Environmentally Friendly Micro Grids.

2. Graduation Projects of Marine Engineering Department-Abukir campus (2020-2021)

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=4800011

- Ocean thermal energy application technologies for Autonomous Underwater Vehicle.

❖ Energy-related graduation projects 2021

1. Graduation Projects of Electrical and Control Engineering Department-Abukir campus (2021-2022)

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=4500057

- Electric Automated Guided Vehicle
- Solar powered CCTV system
- Energy Management System for Smart Hotel Project

2. Graduation Projects of Mechanical Engineering Department-Abukir campus (2021-2022)

https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=5300011

- Irrigation system combined with solar panel
- Desalination power and hydrogen production using fuel cell
- New methods for improving the efficiency of photovoltaic
- Improving the productivity of solar still water desalination
- Hybrid vertical axis wind turbine



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- Design and economic feasibility of a solar powered atmospheric air water generator
- Design of geothermal –solar combined chimney power plant for continuous power generation
- 3. **Graduation Projects of Marine Engineering Department-Abukir campus (2021-2022)**
https://aast.edu/en/colleges/coe/alex/dept/contenttemp.php?page_id=4800011
- **Energy-Efficient Ship Operation through the Ship Speed Prediction**

Initiatives

❖ 2020 Initiatives

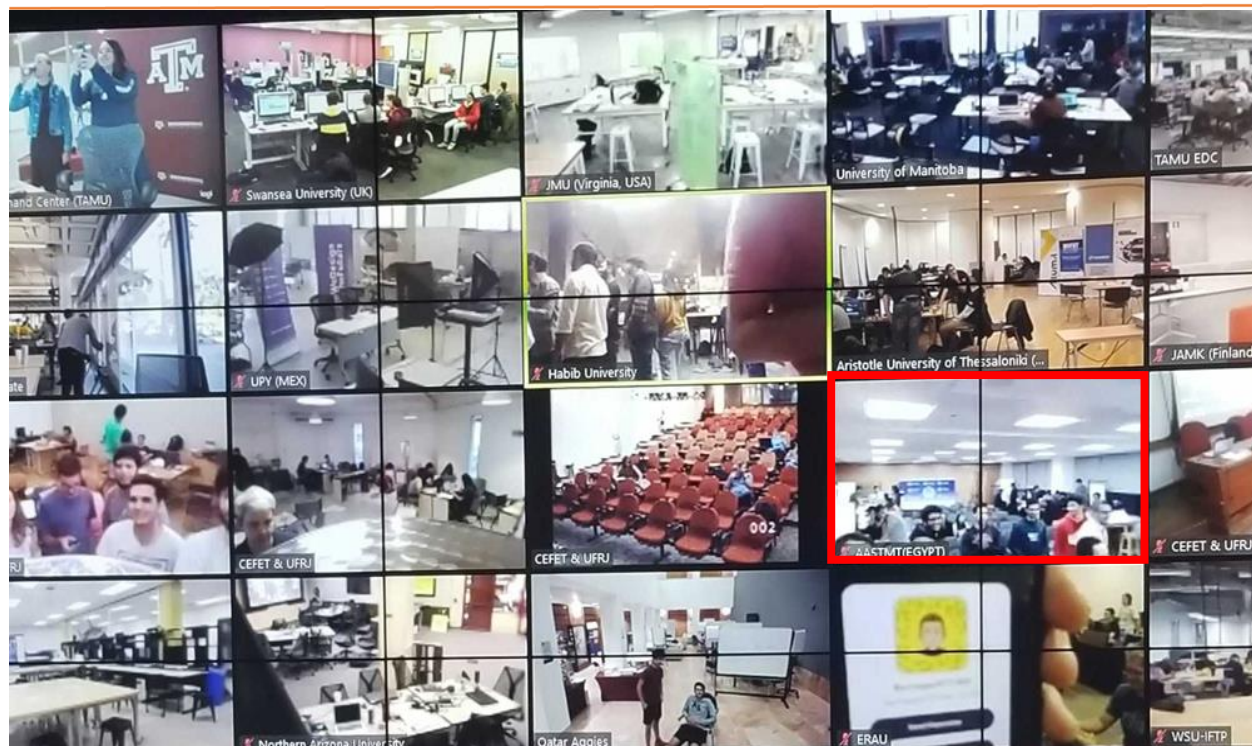
February 2020: Invent for the Planet

Invent for the Planet global challenge has been held in AASTMT Smart Village Campus February 2020 for the second time after 2018. Invent for the Planet is hosted by Texas A&M University and it is a 48-hour intensive design competition, which took place at more than 30 universities around the world. Students developed solutions for major issues facing society that have arisen as our world continues to modernize and become more populated. Over the course of two days, students at each campus formed teams, developed a plan and prototype, created a business plan and pitched it to a panel of judges. These students' activities and challenges cultivate the ability of the students to communicate and work effectively in teams and also to teach students how to analyze and implement interdisciplinary engineering projects.

https://aast.edu/en/colleges/coe/smartvillage/dept/contenttemp.php?page_id=529000
26



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Picture of the command center video wall where all universities had a livestream of their local competitions.

February 2020: AASTIANS go Green” Campaign at AASTMT Smart Village Campus

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) social responsibility, as well as, AASTMT and the Egyptian Ministry of Local Development “Protocol Of Cooperation” on organizing the planning and implementation of the campaign AASTMT Green that was held on Wednesday 21- 1- 2020, the activities of “AASTIANS go Green” campaign has been started on Monday 10- 2- 2020, at AASTMT Smart Village Campus, in the presence of H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President, Prof. Dr. Mona Fouad - AASTMT Smart Village Campus Academic Dean, and Prof. Dr. Enas Barsoum - Advisor to AASTMT President for Student Affairs.

[https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4120&event_type=1&language=](https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4120&event_type=1&language=1)

1

March 2020: AASTMT Smart Village Campus Marathon of “AASTians go Green” Campaign

With the achievement of "Egypt Vision 2030" sustainable development goals, as in keeping with the Arab Academy for Science, Technology and Maritime Transport (AASTMT) social responsibility, as well as, AASTMT and the Egyptian Ministry of Local Development "Protocol Of Cooperation" on organizing the planning and implementation



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

of "AASTians go Green" campaign that was held in January 2020, AASTMT organized a Marathon on Thursday 5-3-2020, at AASTMT Smart Village Campus, under the patronage of H.E Mr. Ahmed Aboul Gheit - Secretary General of the League of Arab States, H.E Major General Mahmoud Shaarawy – Egyptian Minister of Local Development, H.E Prof. Dr. Ashraf Sobhy - Egyptian Minister of Youth and Sports, and H.E Prof. Dr. Yasmine Fouad - Egyptian Minister of Environment.

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4160&event_type=1&language=1

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4161&event_type=1&language=1



AASTMT Marathon of "AASTians go Green" Campaign

❖ 2021 Initiatives

February 2021: Energy Research unit announces the foundation of NET ZERO Emission Community to spread green energy awareness and encourages energy conservation initiatives.



June 2021: Environment Day Initiative by Energy Research Unit

In concern of realizing and activating sustainable developments goals, the energy research unit in AAST, Abukir announces the environment day initiative which will take place on Monday the 20th of June, 2021.



Awareness campaigns for energy conservation initiated by Energy Research Unit





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



November 2021: SDG Awareness session on November 2021

https://aast.edu/en/news.php?unit_id=656&language=1&page=33&event=469&get_event_type=1

An introductory session on entrepreneurship to raise awareness of the sustainable development goals

An introductory session on the field of entrepreneurship to encourage and educate students about the goals of sustainable development through active participation in the Enactus competition, which is interested in encouraging and educating university youth to find new ideas that help in sustainable development

PUBLISHED ON: MONDAY, 01 NOV 2021

TAGS: SUSTAINABLE, EDUCATING, ENCOURAGING





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

December 2021: Orientation seminar on The Importance of GOING GREEN and the benefits of reducing plastic consumption on the environment

[https://aast.edu/en/news.php?unit_id=656&language=1&event=511&get_event_type=](https://aast.edu/en/news.php?unit_id=656&language=1&event=511&get_event_type=1)

1



A seminar for students of the Faculty of Management under the Department of Environmental Conservation and the benefits of reducing energy consumption on the environment

An Orientation session for students of College of Management and Technology Alamein Hull on Sunday 12th December 2021 about "The Importance of Going Green and the benefits of reducing plastic consumption for the environment" presented by Dr. Mahmoud El Bishbishy – Former President of Rotary Alexandria West.

Research

❖ 2020 Funded Research Projects

1. High Level Renewable and Energy Efficiency Master Courses (HEBA)

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=5

Acronym:

HEBA

Full title:

High Level Renewable and Energy Efficiency Master Courses

Project Duration:

46 Months

Project Start Date:

2017-11-01 00:00:00

Project End Date:



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

2021-10-30 00:00:00

HEBA is a three years' project started on October 15, 2017, and funded by the European Union through Erasmus+ program. The project aims to reform and improve existing master programs in Energy Efficiency (EE) and Renewable Energy (RE) on single technology and energy systems level, improving existing or establishing Centers/Laboratories of EE+RE in Jordan, Lebanon, and Egypt. The consortium will help the society to protect the earth. It will help in providing qualified professional resources capable of sustaining and managing the huge effort of EE+RE infrastructure development. Special emphasis will be given to advanced energy management. HEBA will be oriented to further development of the process of interaction with professional communities and reflects their requirements in the developed curriculum. The EU experience is a major component in the success of the HEBA project. The courses/modules and adapted curricula within HEBA project should be based on the needs and challenges of the building/industry/energy sectors.

Moreover, an online regional webinar on "High Level Renewable Energy and Energy Efficiency – HEBA" on July the 2th 2020.

This webinar is a deliverable of the Erasmus Plus Project entitled: **High Level Renewable Energy and Energy Efficiency Master Courses** whose partners are universities from Austria, Italy, Germany, Cyprus, Lebanon, Jordan and Egypt for building capacity of Egypt in renewable energy and energy efficiency to build a model for the environment change in Egypt and use that to draw a roadmap for the renewable energy and urban planning.

Referring to MAIA-TAQA's work package 4 which will focus on capacity building for sustainable services, attending the HEBA webinar provided MAIA-TAQA team with information about local experts in the fields of renewable energy who can be potential trainers and assist in the capacity building activities of MAIA-TAQA.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



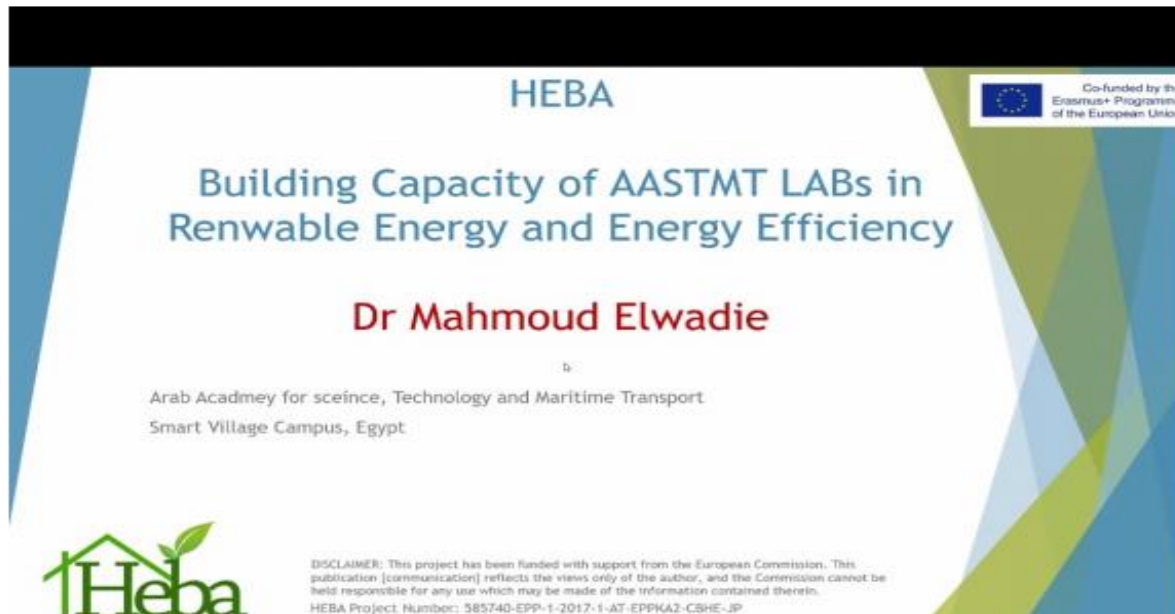
ENI
CBCMED
Cooperating across borders
in the Mediterranean



Programme funded by the
EUROPEAN UNION



REGIONE AUTONOMA DE SARDIGNA
REGIONE AUTONOMA DELLA SARDEGNA



2. AASTMT participation in "Green Land: GREEN-skills for a sustainable Development" Project funded by European Union (GREENLAND)

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=5406&event_type=1&language=1

Acronym:

GREENLAND

Full title:

GREEN-skills for a Sustainable Development

Start date:

16 October 2020

End date:

15 April 2023



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

The project objective is to increase the employability of NEETs (up to 30 years old) and women (all ages) by providing them with marketable skills and qualifications to prepare them for skill-based occupations within the Green and Circular Economy sectors and reduce skill mismatches in rural areas particularly affected by the climate change.

AASTMT has participated in this project that promotes social inclusion and fight against poverty by providing unskilled and underprivileged young people with marketable skills in the Green and Circular Economy, with the potential to generate thousands of jobs. To reach its objective, the project will create new curricula based on market needs, skills transfer to NEETs and women, media-based training tools, and cultural exchanges among young people, as the Mediterranean area suffers from extremely high rates of youth and female unemployment. AASTMT cooperates with the project partners from Lebanon, Jordan, Egypt, Palestine, Italy, Portugal, and Greece, as to achieve the requirements and objectives of the GREENLAND project, where the thematic objective is the Promotion of social inclusion and the fight against poverty, as AASTMT main role is to manage the work package 4 (WP4), which represents the essence of the project, by establishing an e-platform containing specialized curricula based on market needs to transfer skills to NEETs in addition to providing advanced training tools, GREENLAND project is the creation of new employment opportunities that will be reinforced by the sector-skills alliances between the Technical and Vocational Education and Training institutions (TVETs) and the Small and Medium Enterprises (SMEs).

3. AASTMT student activities and research projects on "clean energy - advanced and sustainable technology" at AASTMT Smart Village Campus

https://aast.edu/en/sites/port_saeid/news.php?unit=1&event=4162&event_type=1&language=1

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) strategy of achieving Excellence in Education, H.E Prof. Dr. Ismail Abdel Ghafar Ismail Farag - AASTMT President welcomed H.E Prof. Dr. Ashraf Sobhy - Egyptian Minister of Youth and Sports on Thursday 5- 3- 2020, at AASTMT Smart Village Campus, where AASTMT student presented their activities, as well as, AASTMT students and academic staff members research projects on "clean energy - advanced and sustainable technology", then H.E Egyptian Minister of Youth and Sports visited AASTMT Smart Village Campus modern laboratory complex, where all the attendees praised level of AASTMT educational services and students.



❖ **2021 Funded Research Projects**

1. Research on Optimizing the Effect of Loads on Characteristics of Power Electronics Converters for Renewable Energy Applications

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=28

Project Duration:

12 Months

Project Start Date:

2021-10-01 00:00:00

Project End Date:

2022-09-30 00:00:00

The main objectives of this project proposal are to: -Perform mathematical analysis on the effect of different loads when connected to the renewable via the interface of power electronics converter. - Better understanding of the load effect on overall performance of power electronics converters and associated control techniques such maximum power tracking with PV or wind applications. - Implement a prototype setup for experimental study for different system topologies for practical validation - Develop a standardized method of the selection and design of the suitable converter and control technique for a given load within renewable energy applications for enhanced overall system performance.

2. MULTIDIMENSIONAL STUDY OF WIND ENERGY POTENTIAL IN ALAMEIN

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=15

Project Duration:

12 Months

Project Start Date:

2021-10-01 00:00:00

Project End Date:

2022-09-30 00:00:00

The Egyptian economic transformation vision foresees the north coast as one of the main pillars for future economy and development. Transformational urban and economic development is being carried out along the 400 km length coastline from New Alamein eco-city to Al-Salloum. The north coast region The World Bank global wind atlas shows that the average energy density in that region is in the range of 0.5 to 1 kW/m² and average wind velocity higher than 5 m/s. These estimations show promising potential of wind energy. This project presents the first comprehensive evaluation of wind energy viability and feasibility in Egypt's north coast. The project adopts a multidimensional approach to reproduce the spatiotemporal wind field over the north coast utilizing status quo GIS-BIM-CFD



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

integrated simulation systems. The project's primary goal is to identify the best wind energy systems for power generation in the region and estimate its economic feasibility. Secondary objectives include identification of the main characteristics of atmospheric boundary layer and urban aerodynamics of Alamein city. The outcome of this project will be the first comprehensive evaluation of wind energy potential in Alamein city and region.

Publications

2. Renewable Energy and Sustainable Development (RES D) journal

<http://apc.aast.edu/ojs/index.php/RES D>

Link for publications in journals

https://www.scilit.net/articles/search?offset=0&q=container_group_id%3A%2868381%29

The journal is **financially supported by the Arab Academy for Science, Technology and Maritime Transport** in order to maintain quality open-access source of research papers on renewable energy and sustainable development.

The RES D journal is a biannual international peer-reviewed journal featuring open-access and free charge fees. It presents a global forum for dissemination of research articles, case studies and reviews focusing on all aspects of renewable energy and its role in sustainable development for authors and readers.

The journal aims to present to the international community important results of work in the fields of renewable energy and sustainable development research to help researchers, scientists, manufacturers, institutions, world agencies, societies to keep up with new developments in theory and applications. Experimental, computational and theoretical studies are all welcomed to RES D. The topics of focal interest to RES D include, but are not limited to, all aspects of wind energy, wave/tidal energy, solar energy, Hydropower, Geothermal Energy, Hydrogen & Fuel Cells as well as energy from biomass and biofuel. The Energy Savings and efficient energy is a major interest of the RES D journal. The integration of renewable energy technologies in electrical power networks and smart grids is another topic of interest to RES D.

3. Samples of energy-related publications of AAST staff in international conferences

- **Power Flow Control of a Hybrid Battery/Supercapacitor Standalone PV System under Irradiance and Load Variations**



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

NE Zakzouk, RA Lotfi in 2020 10th International Conference on Power and Energy Systems (ICPES), pp. 469-474

➤ The use of double skin and photovoltaics in AAST Campus in South Valley, Egypt

Ahmed Fikry Abou El Wafa in 2021 8th international scientific conference on Digital technology in Architecture, Arts and Era Challenges

Agreements

Memorandum of Understanding (MoU) between AASTMT and other national and regional entities to support government intention towards green energy

➤ **MoU between AASTMT and British University in Egypt (BUE)-Wind Energy Division (15-17/4/2019 for 1 year)**

The Parties are part of the consortium of the Erasmus Plus “WESET” project “Wind Engineering Skills in Egypt and Tunisia”, Project Number: Project Number: 586039-EPP-1-2017-1-ES-EPPKA2-CBHE-JP, recognize the many benefits of an academic partnership in an increasingly interdependent world, and therefore, they hereby register their intentions to establish formal links between their Wind Energy Centers built within the WESET project. For instance, the institutions put at the service of each other the facilities created within the established centers, at AASTMT and the BUE to carry out and support projects that promote the mutual interests of the two labs. The period of duration is one year.



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (“MoU”) is entered into as of the last date of signature (the “Effective Date”), by and between:

1. **The Arab Academy for Science, Technology and Maritime Transport (AASTMT)**, Wind Energy Center, Abu Kir Campus, in **Alexandria, Egypt** and represented for the purpose of this agreement by Professor Yasser Gaber Dessouky, dean of scientific research and innovation and coordinator of AASTMT for WESET Project, (hereinafter referred to as “AASTMT”),



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

2. **The British University in Egypt** CRE- Wind Energy Division, in **Cairo, Egypt** and represented for the purpose of this agreement by Professor Ahmed Reda El Baz, CRE deputy director wind energy division and coordinator of BUE for WESET Project, (hereinafter referred to as “BUE”).

➤ **MoU between AASTMT and Ain Shams University (ASU), Faculty of Engineering, Wind Energy Center (15-17/4/2019 for 1 year)**

The Parties are part of the consortium of the Erasmus Plus “WESET” project “Wind Engineering Skills in Egypt and Tunisia”, Project Number: Project Number: 586039-EPP-1- 2017-1-ES-EPPKA2-CBHE-JP, recognize the many benefits of an academic partnership in an increasingly interdependent world, and therefore, they hereby register their intentions to establish formal links between their Wind Energy Centers built within the WESET project. For instance, the institutions put at the service of each other the facilities created within the established centers, at AASTMT and the at ASU to carry out and support projects that promote the mutual interests of the two labs. The period of duration is one year.



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And,

2. **Ain Shams University, Faculty of Engineering** Wind Energy Center, in **Cairo, Egypt** and represented for the purpose of this agreement by Dr Amr Yehia Elbanhawey, coordinator of ASU wind engineering centre and coordinator of ASU for WESET project, (hereinafter referred to as “ASU”).

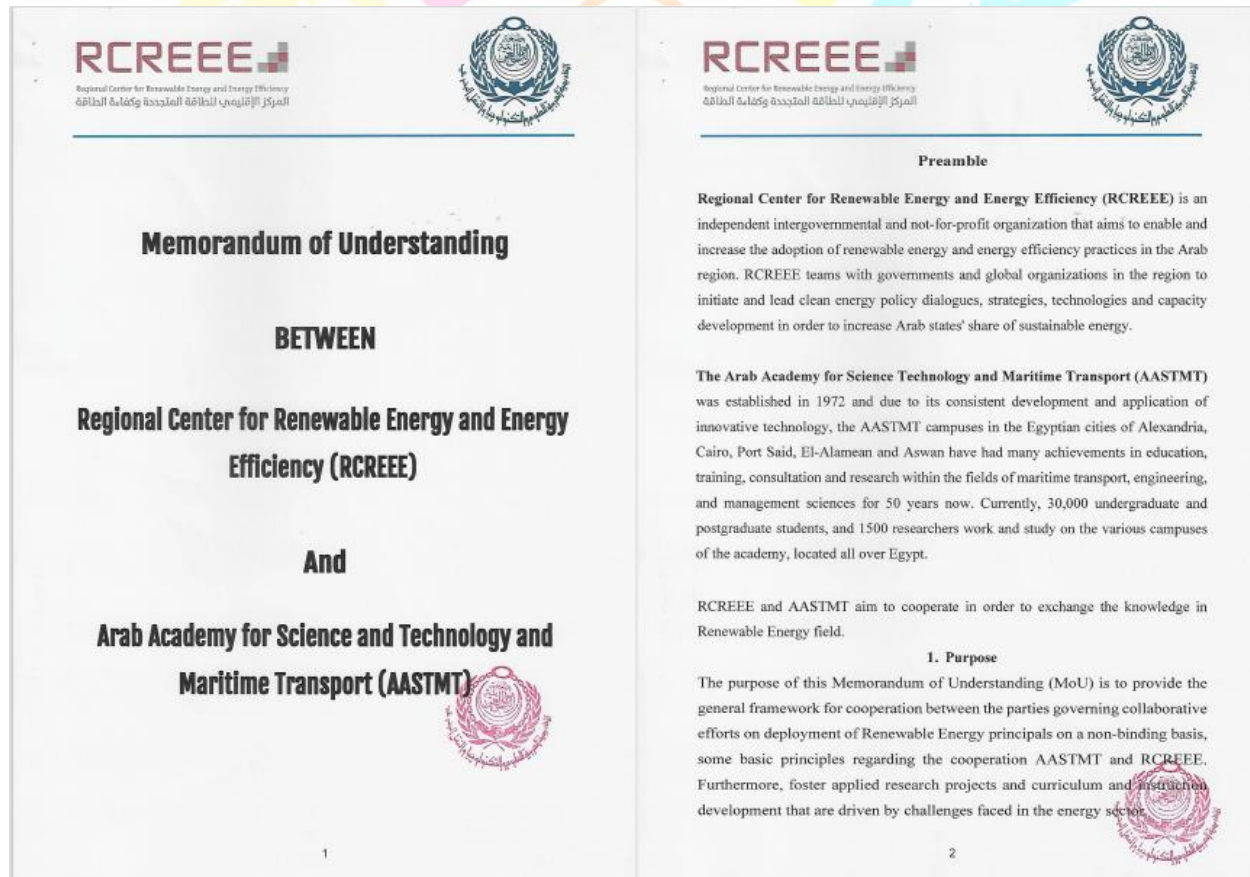


Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- MoU between AASTMT and Regional Center for Renewable Energy and Energy Efficiency (RCREEE) (21-2-2021)

1. Purpose

The purpose of this Memorandum of Understanding (MoU) is to provide the general framework for cooperation between the parties governing collaborative efforts on deployment of Renewable Energy principals on a non-binding basis, some basic principles regarding the cooperation AASTMT and RCREEE. Furthermore, foster applied research projects and curriculum and instruction development that are driven by challenges faced in the energy sector.





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

➤ MoU between AASTMT and Housing and Building National Research Center (HBRC) (12-10-2021)

The purpose of this Memorandum of Understanding (MoU) is to provide the general framework for cooperation between the parties governing collaborative efforts on deployment of Renewable Energy principals on a non-binding basis, some basic principles regarding the cooperation AASTMT and HBRC. Furthermore, foster applied research projects and curriculum and instruction development that are driven by challenges faced in the energy sector. The AASTMT is a part of the consortium of the Erasmus Plus “WESET” project “Wind Engineering Skills in Egypt and Tunisia”, Project Number: Project Number: 586039-EPP-1- 2017-1-ES-EPPKA2-CBHE-JP. The AASTMT and HBRC recognize the many benefits of an academic partnership in an increasingly interdependent world, and therefore, they hereby register their intentions to establish formal links between the Wind Energy Center built within the WESET project in the AASTMT and the HBRC.



Memorandum of Understanding

BETWEEN

Housing and Building National Research Center (HBRC)

And

Arab Academy for Science and Technology and Maritime Transport (AASTMT)



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Public Engagement

❖ Trainings and seminars organized by Energy Research Unit

- Free Wind Online Training

**13 - 14
October
2021
05:00 - 08:00**

Co-funded by the
Erasmus+ Programme
of the European Union













Project WESET's Online Wind Energy Training

Project WESET (Wind Engineering Skills in Egypt and Tunisia) is an Erasmus+ European Union funded project aimed at building capacity at higher education and governance institutions in Egypt and Tunisia.

Objectives

- Disseminate the outcomes of WESET Project.
- Enhance the stakeholder's knowledge about Wind Energy and its trend in Egypt
- Know the theoretical and practical aspects of wind turbine components, operation and control

Outlines

- Introduction and Wind Energy (WE) in Egypt
- Fundamentals of WE and Aerodynamics
- Wind Turbine Mechanics and Dynamics
- Pitch, Yaw, and Drivetrain systems
- Tower Design and Trends
- Wind Turbine Generators
- Wind Farm Power Transmission
- Grid Code and Regulation
- Lightening Protection of WF
- Control strategies and Control Anatomy
- Operation, Load Mitigation and Control


Meeting ID: 92500407638
Pass code: 857783

Contact: Prof. Mostafa Abdelgeliel,
Head of Energy research unit, AAST, Tel.
01220646998

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- PV market seminar



❖ **AASTMT Energy Consultancy**

2. Energy Management Service of AASTMT Productivity and Quality Institute (PQI)

AASTMT PQI has a great role in supporting energy-efficient systems and offering energy management services by introducing the following;

➤ **ISO 50001 Energy management Systems Consultancy Service (EnMS)**

https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=342&page_id=34200027

The purpose of the EnMS is to enable organizations to establish or re-structured the systems and processes necessary to improve energy performance, including energy efficiency, use, consumption and reduce running cost. ISO 50001 (Energy Management System) is based on the ISO management system model familiar to more than a million organizations worldwide who implement standards such as ISO 9001 (quality management), ISO 14001 (environmental management), ISO 22000 (food safety), ISO/IEC



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

27001 (information security). ISO 50001 can be implemented individually or integrated with other management system standards.

Benefits of ISO 50001 Application:

- Improves existing management systems.
- Leverages existing continual improvement processes.
- Develops a baseline of energy use.
- Actively manages energy use and costs.
- Reduce emissions without a negative impact on operations.
- Continual improvement of energy uses versus product output over time.
- Potential for savings to be used for emission credits.
- Improves maintenance process culture in all types of organization.
- Generates a new source of thinking in energy Consumption model.

➤ Energy and Environmental Management courses

Environmental Management System (EMS) and Energy Management System (EnMS) helps sustainable businesses and help to reduce an organization's impact on the environment while improving operating efficiency, controlling, and reducing your organization's energy consumption, which reflects on, reducing product manufacturing costs as energy costs rise. Thus, AASTMT offers the following courses

- Energy management training courses

Energy management courses focus on the proactive assessment and management of energy systems resulting in successful economic and environmental results.

https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=343&page_id=34300118

- Environmental management training courses

Environmental management courses focus on how to mitigate the adverse effects of business and industrial operations on the Earth's environment.



https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=343&page_id=34300113

3. Maritime Research and Consultation Center

Examples of projects developed by this center

- **Project I: Energy Audit for Green Port**

Purpose of work

Analyze the current state of Energy consumption and affordable green system. Then, determine the gap between current state and national and international the sustainable development goals (SDGs). Finally, provide the solution and specify road map for Green system

- **Project II: Electrification of River Vehicles**

Purpose of work

Transforming the Nile river vehicles to electrified ones powered by PV panels installed at their surface as a source of sustainable clean energy



PV-equipped electric river vehicle

❖ **AASTMT assistance to for start-ups that support green energy**

AASTMT provides assistances for start-ups that support a low-carbon economy or technology. Hereby, two foster startup cases are illustrated as follows;

1- Mobile solar charger

One student of the faculty of Engineering has been develop a company before graduation to build a Mobile solar system for different industrial and commercial application such as Super Markets, Moles, Hotels, etc. graduated student.



2- A team of some graduated has been established to build an electric vehicle and its part.



دعوة للانضمام لأسرة تكنولوجيا السيارات الكهربائية

في إطار تعظيم تنمية قدرات الطلاب لتعلم التكنولوجيات الحديثة في مجال السيارات الكهربائية ونظم الشبكات الكهربائية الذكية (Smart Grids) ينشر قسم الهندسة الكهربائية والتحكم بكلية الهندسة – أبو قير وتحت رعاية Egypt IEEE Power Electronics Society (PELS) Chapter أن يطلق نداء للراغبين للانضمام بواقع عدد (3) طلبة من كل سنة دراسية كمرحلة أولى.

The team will learn and contribute to the following areas:

- **Technology:** Vehicle, battery, and electric power systems, design, control and optimization
- **Consumer behavior:** technology adoption and driver behavior
- **Awareness of EV** benefits on individuals, community, and utility.
- **Participation** on the related activities and competitions.
- **Establishment** of the Egypt IEEE PELS Student Chapter



To join, please contact:
Prof. Mostafa Saad Hamad
Electrical and Control Engineering Dept.
College of Engineering- AASTMT
Chairman of Egypt IEEE PELS Chapter

Room G302
Mostafa.hamad@staff.aast.edu

Case Study

I. Energy Consumption Reduction in AASTMT Abukir Campus

In association with energy research unit, the Central Energy Committee carried out building upgrading and smart energy metering towards energy consumption reduction in AASTMT- Abukir Campus. This includes applying LED lighting technology, remote monitoring of the electrical loads in order to assign the priority as well as installing clean energy-efficient PV stations.

- Upgrading building B

[.././././openfiles/opencmsfiles/pdf_retrieve/cms.php?disp_unit=3/7-2-004-1.pdf](http://openfiles/opencmsfiles/pdf_retrieve/cms.php?disp_unit=3/7-2-004-1.pdf)

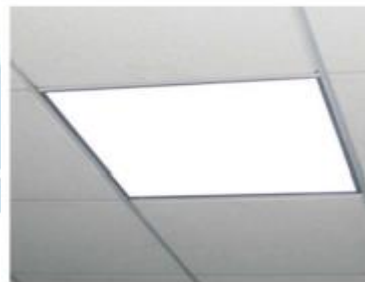
- Modernization of air-conditioners to energy-saving central air-conditioning



Installing smart electricity meters and updating panels



LED lighting





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

• Upgrading Building G

[../././openfiles/opencmsfiles/pdf_retrieve/cms.php?disp_unit=3/7-2-004-2.pdf](https://openfiles/opencmsfiles/pdf_retrieve/cms.php?disp_unit=3/7-2-004-2.pdf)

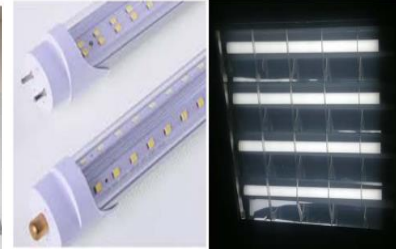
Central air conditioning (chiller)



Smart electricity meters.



LED lighting

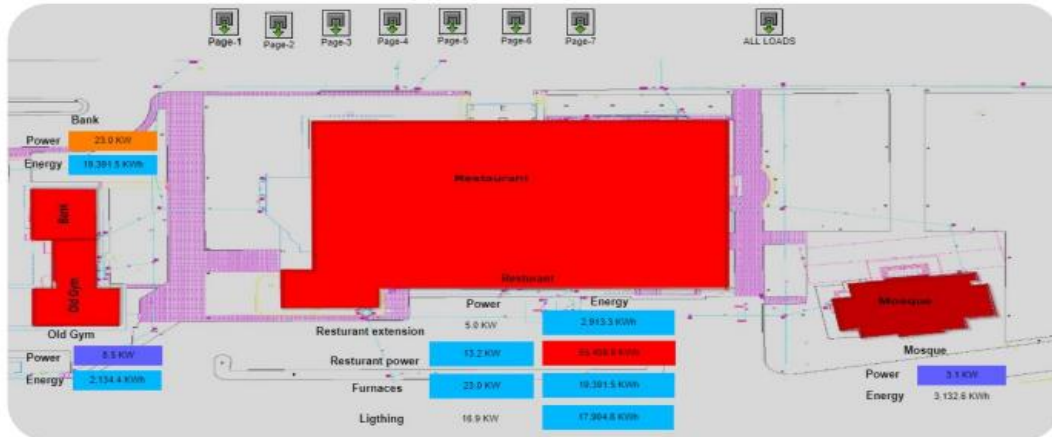


**50 kW Solar Power Plant (On-Grid) with Weather Station.
Installed on floor of building G.**

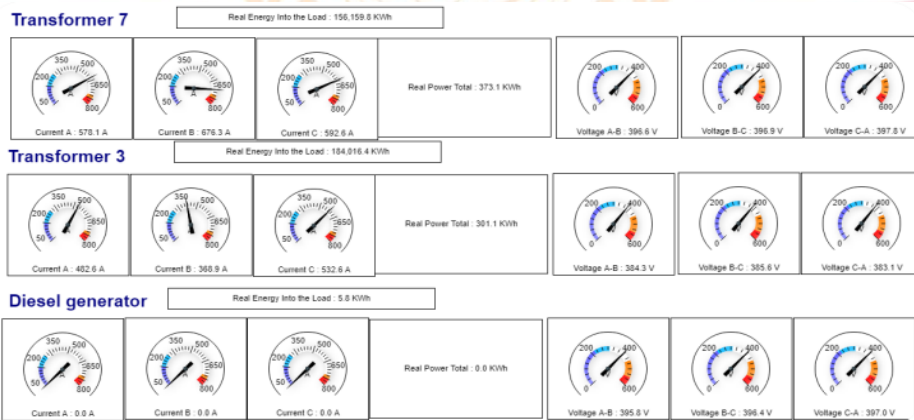


- **Monitoring**

Implement Online Monitoring of Energy Consumption in Abu-Kir Coumps



Energy Meters



[illegible]

- ## Sources Consumption Ranking



جدول تحليل الاستهلاك للطاقة الكهربائية للاكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

للعوام 2020/2019 لاي قير

الفرق في استهلاك KWH	نسبة الفرق في الاستهلاك %	عام 2020					عام 2019					اشهر المحاسبة
		اجمالي قيمة الاستهلاك بالجنيه	تعريفه الاستهلاك بالقرش	الاستهلاك الشهري KWH	تعريفه اقصى حمل بالجنيه	اقصى حمل	اجمالي قيمة الاستهلاك بالجنيه	تعريفه الاستهلاك بالقرش	الاستهلاك الشهري KWH	تعريفه اقصى حمل بالجنيه	اقصى حمل	
124706	22.3808327	1035712	1.15	681906	60	4192	803960	1.05	557200	50	4378	1 شهر
116810	17.1129372	1170822	1.15	799393	60	4192	926712	1.05	682583	50	4200	2 شهر
-348488	-47.45711	695229	1.15	385834	60	4192	981038	1.05	734322	50	4200	3 شهر
-302593	-40.264131	767786	1.15	448927	60	4192	999096	1.05	751520	50	4200	4 شهر
-146133	-22.296765	719697	1.15	509267	60	2234	898170	1.05	655400	50	4200	5 شهر
-224952	-34.791377	618905	1.15	421622	60	2234	888903	1.05	646574	50	4200	6 شهر
-400708	-41.562865	764302	1.15	563393	60	1940	1330416	1.15	964101	60	3695	7 شهر
-176531	-22.3663	821052	1.15	612741	60	1940	1129363	1.15	789272	60	3695	8 شهر
-189730	-19.65490	1008312	1.15	775576	60	1940	1331802	1.15	965306	60	3695	9 شهر
-122182	-12.47	1187370	1.15	857609	60	3352	1348460	1.15	979791	60	3695	10 شهر
-42007	-3.853	971947	1.15	670284	60	3352	1503878	1.15	1090311	60	4167	11 شهر
-258590	-33.2536	798016	1.15	519040	60	3352	1144295	1.15	777630	60	4167	12 شهر
اجمالي نسبة فرق الاستهلاك		-20.5377										

Reduction between 2019 and 2020=20.5%

Total energy used = 34538.4 GJ/2019 and 26084.1312 GJ/2020

University floor space = 218.400 m²

II. Energy Management training courses offered by AASTMT Productivity and Quality Institute (PQI)

These training courses are offered to industrial entities to focus on the proactive assessment and management of energy systems resulting in energy-efficient outcomes and successful economic and environmental results.

https://aast.edu/en/institutes/pqi/contenttemp_item.php?unit_item=343&page_id=34300
118



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الدورات التدريبية في مجال إدارة الطاقة

Training Courses in Energy Management

#	Course Title	Date	Trainees No.	Company Name
1	Understanding Energy Management System ISO 50001 & Internal Audit	Feb 2020	11	- Egyptian Ethylene & Derivatives Company
2	Internal Audit for Energy Management System ISO 50001 Requirements	April 2019	10	- Misr Petroleum
3	Energy Management System Awareness ISO 50001	Feb 2019	10	- Misr Petroleum
4	ISO 50001:2018 Energy Management System Lead Auditor Training Course	July 2020	8	- Samsung Masr
5	ISO 50001:2018 Energy Management System Lead Auditor Training Course	September 2020	5	- Misr Petroleum - Alexandria Electricity Distribution Co - Abu Qir fertilizers Co





Goal 8 – Decent Work and Economic Growth

8 DECENT WORK AND ECONOMIC GROWTH



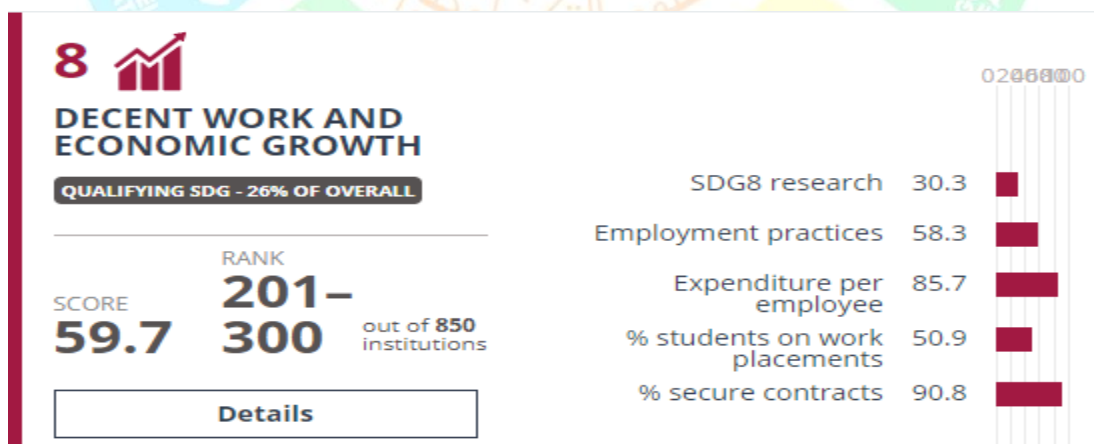
Our Aim

SDG8 aims to 'promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all', an area that the University is wholeheartedly committed to. The strategic goal of the SDG 8 team is to engage a global community of researchers and practitioners to promote inclusive and sustainable economic growth, employment and decent work for all. This is done by applied action research and policy interaction that focus on solutions to growth and work related challenges through collaboration among researchers and practitioners in local and global contexts. The ambition is to mobilize academic work and policy interaction in support of sustainable economic growth with good conditions for employees.

Last Year Recorded

Worldwide: 201-300

Egypt: 3





Our Progress through 20/21

8.1 Policies adopted by the Arab Academy for Science, Technology and Maritime Transport (AASTMT)

The AASTMT believes that one of its major strengths is the ability to attract, sustain and develop its human resources. The AASTMT has developed a group of policies that provide the AASTMT staff with a safe and healthy workplace that forbids any form of discrimination. These policies encourage the inclusion of women as one of the main pillars of the human resources at the AASTMT. These policies are revised on a regular basis by our human resources department and top management to make sure that AASTMT provides the best workplace to work in. These practices and policies have resulted in the satisfaction and loyalty of our employees, where the AASTMT has the less turnover rate among the universities in the region.

The following link provides the policies that are adopted by the AASTMT to ensure a healthy working atmosphere to its workforce:

https://aast.edu/en/sdg/goals.php?unit_item=1208

On the other hand, since one of the strategic goals of the AASTMT is **to prepare its students for the requirements of the local and international labor market**, thus it has conducted a number of practices to achieve this objective.

8.2 Providing internships and work placements to its students

The AASTMT has succeeded to provide its students with thousands of opportunities for internships and work placements. These internships and work placements help our students to link the theoretical concepts that they have learnt during their study with the practical skills needed in the job market both at local and international level. For that objective the AASTMT has conducted the following activities.

- 1) The AASTMT has updated its study regulations to make the practical training and work placements **a mandatory requirement before graduation**. In other words, each student has to take at least **1 month of work placement** before graduation. The academic advisors of the students make sure that the work placement is in the area of the specialty of the student. After the work placement is conducted, the students should give feedback about what they learnt during their work placement. Also, the employer has to give feedback about the performance of the students. Towards the achievement of that target, the



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

AASTMT provided the students with some forms that should be filled by the employers to ensure that the students had an adequate training that is not less than one month.

https://aast.edu/en/colleges/practical-training/contenttemp.php?page_id=100000011

- 2) Also, the practical work placements and training is an essential part of the study of the college of Maritime and Technology, where all students have a practical training on AIDA 4 ship that is owned by the AASTMT during their study for a whole academic year.



- 3) The AASTMT organizes a job fair twice a year to help its students and graduates to find a suitable job fair. The job fair is organized in all campuses of the AASTMT and has succeeded to offer its students with hundreds of job opportunities and work placements. Please visit the website of AAST alumni to see the list of job fairs that has been conducted to help students find a work placement:

https://aast.edu/en/alumni/contenttemp.php?page_id=38600019



Sustainable **Development Goals**
Arab Academy for **Science, Technology and Maritime Transport**

ASWAN Career Fair

(March 2020)



9th March 2020



10:00 am-4:00 pm

Arab Academy for science, Technology & Maritime Transport South Valley Campus

Diamond Sponsor



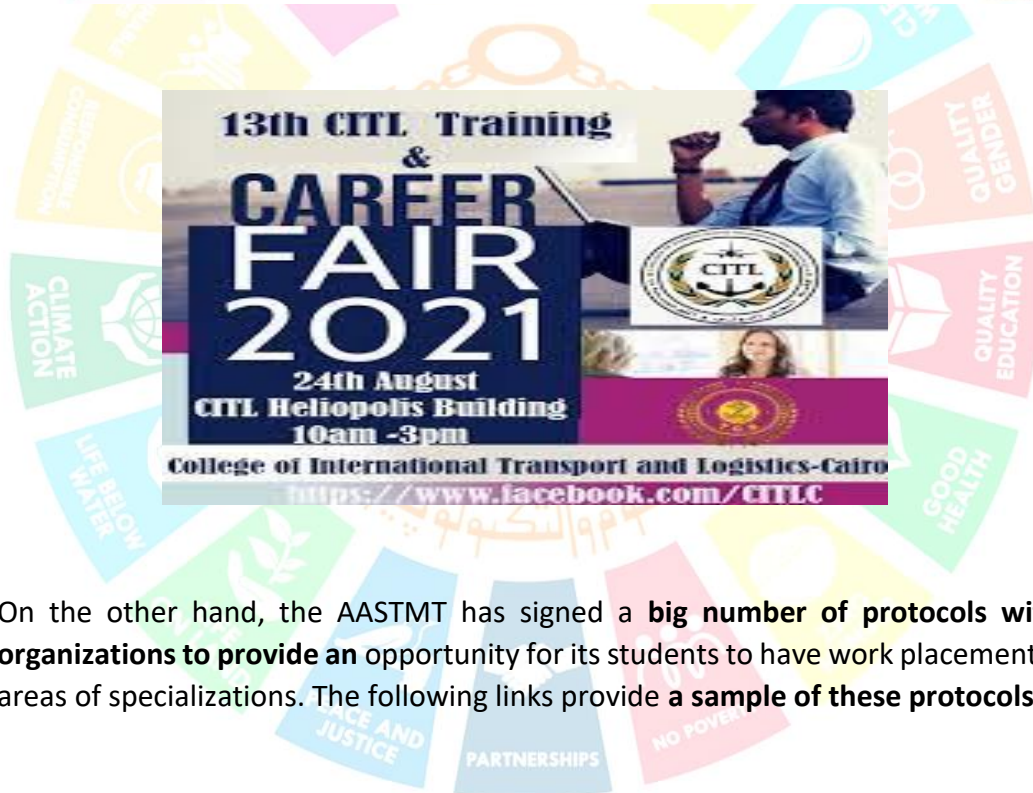
Silver Sponsor



Silver Sponsor



Career partner



- 4) On the other hand, the AASTMT has signed a **big number of protocols with many organizations to provide an opportunity** for its students to have work placements in their areas of specializations. The following links provide **a sample of these protocols**:

- I) **The AASMT signs a MOU with Huawei Egypt to provide work placements for AASMT students:**

Huawei Technologies Egypt has signed a memorandum of understanding with the Arab Academy for Science, Technology and Maritime Transport, to establish the Academy of Information and Communication Technology at the Arab Academy of Sciences, with the aim of developing the capabilities of young people and providing them with the



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

necessary skills to keep pace with the development requirements that Egypt is experiencing, thus contributing to achieving the development goals of Egypt's Vision 2030.

The memorandum of understanding includes Huawei Technologies Egypt's commitment to transfer technological knowledge, train students by experts and academics accredited by Huawei, and establish academies to cover the branches of the Arab Academy throughout Egypt.

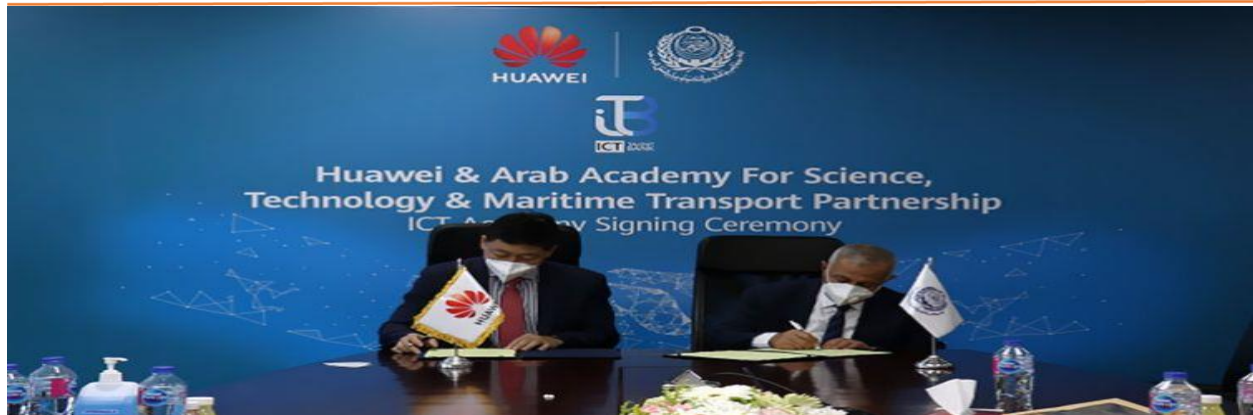
For more information about the MOU, please visit our website:

https://aast.edu/en/news.php?unit_id=1&language=1&page=114&event=5498&get_event_type=1





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Also, please visit the following link to learn more about the protocols that AASTMT has signed with the industry for student internships and work placements.

<https://aast.edu/en/colleges/practical-training/>

Also, please find a sample of news about our collaboration with industry to improve work environment at AASTMT and to provide internships and work placements for our students.

The AASTMT celebrates International Women in Maritime Day

https://aast.edu/en/news.php?unit_id=1&language=1&page=2&event=6664&get_event_type=1

Summer Camp in AASTMT

https://aast.edu/en/news.php?unit_id=1&language=1&page=1&event=7095&get_event_type=1

AASTMT signs a protocol cooperation with EMPC for Student Internships

https://aast.edu/en/news.php?unit_id=1&language=1&page=2&event=7078&get_event_type=1

AASTMT signs a protocol for cooperation with the Egyptian company for distribution and services

https://aast.edu/en/news.php?unit_id=1&language=1&page=2&event=7078&get_event_type=1



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AASTMT participates in NATIONAL INITIATIVE FOR SMART GREEN projects

https://aast.edu/en/news.php?unit_id=1&language=1&page=5&event=6961&get_event_type=1

Arab women in Maritime Cooperation

https://aast.edu/en/news.php?unit_id=1&language=1&page=27&event=6677&get_event_type=1

GO GREEN workshop in AASTMT campus

https://aast.edu/en/news.php?unit_id=1&language=1&page=52&event=6293&get_event_type=1

AASTMT signs an MOU with Huawei Egypt for students training and internships

https://aast.edu/en/news.php?unit_id=1&language=1&page=114&event=5498&get_event_type=1

The AASTMT participates in Green Skills for Sustainable Development Project

https://aast.edu/en/news.php?unit_id=1&language=1&page=120&event=5406&get_event_type=1

The AASTMT organizes “The National Youth Strategy” workshop

https://aast.edu/en/news.php?unit_id=1&language=1&page=120&event=5406&get_event_type=1

AASTMT organizes Summer training program with CIB

https://aast.edu/en/news.php?unit_id=1&language=1&page=155&event=4644&get_event_type=1

AASTMT organizes a workshop on POST-COVID 19 and Economic Inclusions

https://aast.edu/en/news.php?unit_id=1&language=1&page=161&event=4582&get_event_type=1



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8.3 Establishment of the CAREER DEVELOPMENT CENTER at AASTMT

The AASTMT has developed the Career Development Centre that aims to provide **advice and consultations to students and graduates** regarding the career opportunities.

For more information about our career development center, please visit the career development center at the AASTMT website:

<http://cdc.aast.edu/>

The Career development center has conducted a number of workshops to help the AASTMT's students find a decent job during and after their graduation.



8.4 The ENTREPRENEURSHIP CENTER at AASTMT

The AASTMT through its entrepreneurship center has provided a business incubator for many startups that were developed by AASTMT students and graduates and young Egyptian entrepreneurs.



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

For more information about the activities and competitions that has been conducted by the ENTERPREURSHIP center, please visit our website:

<http://ec.aast.edu/>



8.5 Participation of AASTMT in international co-funded projects

The AASTMT has also participated in an international project co-funded by the CBC-MED which is GREEN SKILLS FOR SUSTAINABLE Development (GREENLAND). This project promotes social inclusion and fight against poverty by providing unskilled and underprivileged young people with marketable skills in the Green and Circular Economy, with the potential to generate thousands of jobs. To reach its objective, the project will create new curricula based on market needs, skills transfer to NEETs and women, media-based training tools, and cultural exchanges among young people.

For more information about the GREENLAND project, please visit the following websites:

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=16



<https://www.enicbmed.eu/projects/greenland>

<https://www.facebook.com/profile.php?id=100063696056884>



8.5 Promotion of the role of WOMEN in MARITIME SECTOR

To promote the role of women in the Maritime sector, the AASTMT has celebrated the women in Maritime international day in its campus:

This comes with the aim of promoting women's employment, retention and sustainable employment in the maritime sector, raising the status of women in the maritime domain, strengthening IMO's commitment to UN Sustainable Development Goal 5 (Gender Equality) and supporting action to address the current gender imbalance in the maritime domain.

This comes in implementation of IMO General Assembly Resolution No. A.1147 (31) entitled "Preserving the legacy of the global maritime logo for 2019 and achieving a barrier-free work environment for women in the maritime sector", which was adopted at the Assembly's 31st session at the end of 2019.



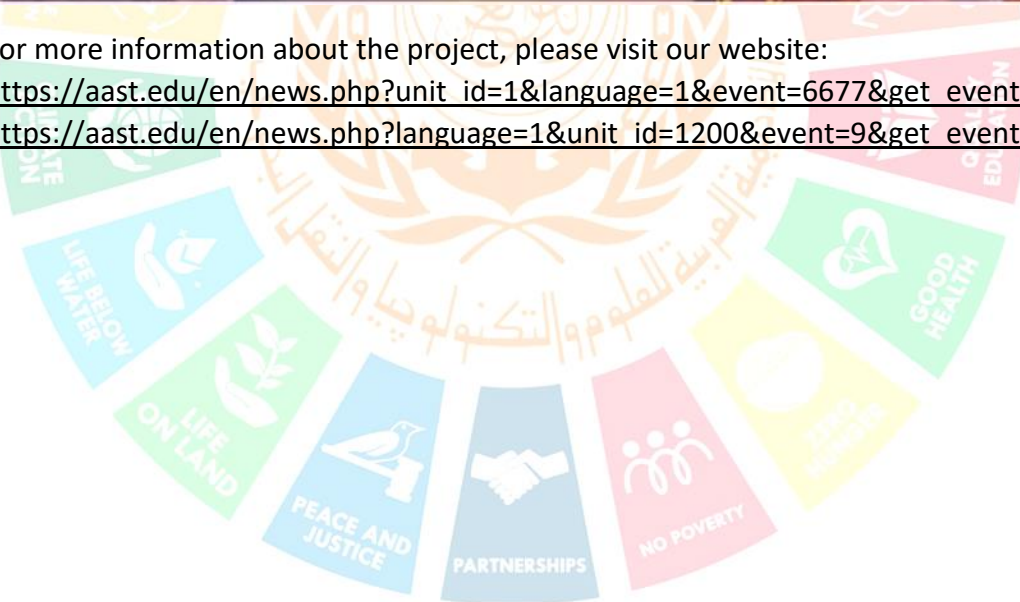
Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



For more information about the project, please visit our website:

https://aast.edu/en/news.php?unit_id=1&language=1&event=6677&get_event_type=1

https://aast.edu/en/news.php?language=1&unit_id=1200&event=9&get_event_type=1





Goal 9 – Industry, Innovation and Infrastructure

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Our Aim

Achieving sustainability of the academic and practical excellence of the Arab Academy, supporting the entrepreneurial education and best use of the academic research and the physical and human resources at AAST to connect with industry needs and challenges, in also the policy aims at spread the entrepreneurship culture, not only for AASTians but also for entrepreneurs and Arab and local community, the aim is enhancing the competitiveness and sustainability, boosting employability, job creation of the Arab and Egyptian Economy.

http://ec.aast.edu/contenttemp.php?page_id=48200309

Last Year Recorded

Worldwide: 412

Egypt: 9





Our Progress through 20/21

Training and Ideation

1. YALLA STARTUP, Advanced Pre-Incubation Program, September, 2020



Advanced Pre-Incubation Program An advanced pre-incubation training program for AAST students & alumni providing them with the necessary knowledge & support to put their ideas into action.

The program starts with a validation exercise, then during this pre-incubation journey, students learn how to assess their business, compare between ideas to choose the best and develop a business model canvas. The program closes with a pitching exercise for a chance to join one of our incubator

http://ec.aast.edu/event-details1.php?unit_id=482&calendar_id=36&calendarType_id=1&language_id=1



2. Pre-Incubation Training Sessions of the Supply Chain Incubator, August 2021

The Training program is implemented by the Academy of scientific research and technology in cooperation with the entrepreneurship center of the Arab Academy for science and technology with funding from the Danish-Arab Partnership Program managed by the African Development Bank.

Some of the legal topics that were discussed during the session:

- The documents you need to establish your startup yourself

- How to legally establish your startup from scratch.
- How to be aware of your company contract
http://ec.aast.edu/event-details1.php?unit_id=482&calendar_id=37&calendarType_id=1&language_id=1



3. Business Ideation Bootcamp, October 2021

The incubation ideation Bootcamp includes the assessment of the commercial and financial needs of each entrepreneur or company, in terms of business guidance and training, business consulting, market access strategies, specialized technical assistance, investment access and marketing.

The main objective of this Training is equipping early stage entrepreneurs with the essential, substantial, and core knowledge & skills. On another side, supporting existing startups through advanced trainings and technical, industry-related mentorship programs, providing specialized training services to entrepreneurs and startup teams to help entrepreneurs at the thinking stage in conceptualizing, achieving the minimum viable products and launching their business.

Participants benefit from the incubator's co-working space, meeting spaces and services that suit the needs of the targeted startups, in addition to taking advantage of networking opportunities: building close interactions between entrepreneurs and mentors or investors they meet in the program.

The incubation team provides training to entrepreneurs regarding business consulting services, Financial Management, Marketing, Public Administration, Banking, and legal ... Etc.



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Ideation Training is considered the first step in supporting entrepreneurs at early stage. The training targets university students and graduates who still have no startup ideas, or those wish to improve their ideas before starting to actually work on its implementation.

It consists of:

- Awareness sessions about the Entrepreneurship culture and its wide ecosystem.
- Ideation sessions to help the students generate startup ideas related to their passion and their area of expertise.
- A complete explanation on how to prepare the Business Model Canvas of the idea.
- The required skills and tips on how to present the startup idea to the judging panel.

http://ec.aast.edu/event-details1.php?unit_id=482&calendar_id=38&calendarType_id=1&language_id=1



4. An Egyptian Team Won the First Place as the best start-up project in a Competition Funded by the European Union - International Cluster ACT Matching Event with the participation of AASTMT, September, 2021

The Arab Academy for Sciences, Technology and Maritime Transport participated as a partner in Cluster ACT project, the AASTMT represented by Entrepreneurship Center by holding

training sessions for startups teams and was managed by specialized lecturers from the Entrepreneurship Center, Cluster ACT (Aggregation and Collaboration Tools) is a project aimed to develop a mechanism for maritime clusters' networking and collaboration with private investors to enhance innovation and business development in the Mediterranean maritime sector, specifically the three targeted sub-sectors of nautical activities, cruising and ports and marinas.

The project is funded by the European Maritime and Fisheries Fund (EMFF) under the management of the Executive Agency for Small and Medium-sized Enterprises (EASME), an agency of the European Commission founded in 2003 to manage on its behalf several EU programs in the fields of business support, innovation, environment, climate action, energy and maritime affairs. Its goal is to promote sustainable development while improving the competitiveness of European industries.

The Winner Startup:



The SEAVO team took the second place at the local level and managed to win the best project award at the final qualifiers in Genoa.

http://ec.aast.edu/news.php?%20unit_id=482&language=1&page=8&event=14&get_event_type=1

5. Create 48 - (The Ideation Training)

It is an introductory entrepreneurial program that covers the basic concepts of entrepreneurship with the aim of:

Study and shed light on the field of entrepreneurship



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Arranging ideas for the arrival of a project idea

Converting the idea from an idea outline to a startup

- Study and education of Business model canvas
 - Study and teach basic marketing and financial plans
 - Study and teach the company's presentation to investors
- After 48 hours a company comes out of the idea and creates Entrepreneur

http://ec.aast.edu/event-details1.php?%20unit_id=482&calendar_id=29&calendarType_id=1&language_id=1

6. DAAD EGYPT @COSIMENA “Digital Winter School on Entrepreneurship” Program, March 2021

DAAD EGYPT @COSIMENA “Digital Winter School on Entrepreneurship” In line with COSIMENA’s goal to tackle today’s global challenges by fostering scientific collaboration, the COSIMENA Winter School – a cooperation with the Arab Academy for Science Technology & Maritime Transport (AASTMT) – aims at training young researchers in the challenges of science and technology transfer and to support and coach them on their exciting journey



from new ideas to innovations and eventually start-ups or university spin-offs. This year’s winter school will therefore tackle topics that are vital for all 7 clusters of COSIMENA by depicting the wide and versatile range of possibilities of entrepreneurship Aim and Scope The 1st COSIMENA Digital Winter School on Entrepreneurship aims to bring together scientists and practitioners from higher education and the economy sector in Germany and the MENA region, building on the research that has already been raised in the past years and adding to the current discussions. The Winter School will serve as a platform to discuss the various forms of current successful concepts on the theme, the challenges as well as the opportunities to cooperate cross-regionally and with Germany. Apply now before March



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13th, 2021 through this link: Applications for COSIMENA's Winter School on Entrepreneurship.

<http://ec.aast.edu/event->

[details1.php?%20unit_id=482&calendar_id=7&calendarType_id=1&language_id=1](http://ec.aast.edu/event-details1.php?%20unit_id=482&calendar_id=7&calendarType_id=1&language_id=1)



Initiatives / Coopération

1. The Incubators Ecosystem -Falak Startups - USAID SSA project, June 2021



Falak Startups, Powered by the Egyptian Ministry of International Cooperation and its venture capital arm, Egypt Ventures. Falak Startups' mission is to find and empower talented and ambitious seed stage tech startup founders and help them thrive in the region's rapidly changing entrepreneurship landscape. Our sector-agnostic offering focuses on improving startups' product- market fit; fine-tuning their business, operating and revenue models; growing their customer base; and raising follow-on investments. Falak Startups' is offering an unrivaled ticket size of up to 2,000,000 EGP and provides the support startups need to gain momentum and accelerate their growth. Falak also supports its portfolio of startups in



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securing follow-on investments from venture capital firms, angel investors, and/or corporates.

Although Falak Startups is industry agnostic and focuses on tech-enabled and scalable startups, we have an additional focused track that specializes in Financial Technology powered by EFGEV. We also foster sub-tracks that are sector-specific with the support of key industry partners.

http://ec.aast.edu/news.php?%20unit_id=482&language=1&page=9&event=44&get_event_type=



2. Co-operation, The Arab Academy for Science, Technology and Maritime Transport and Egyptian Ministry of Youth and Sports "Robotac" program, June 2020

AASTMT - Egyptian Ministry of Youth And Sports "Robotac" program Within the fruitful co-operation between the Arab Academy for Science, Technology and Maritime Transport (AASTMT) and the Egyptian Ministry of Youth And Sports, as for AASTMT efforts in sponsoring sports and athletes to achieve AASTMT leading and outstanding role, the Egyptian Ministry of Youth And Sports launched "Robotac" program for the age from 7 to



17 years to develop the Online design, programming and robotics skills in cooperation with AASTMT, under the patronage of H.E Dr. Ashraf Sobhy - Egyptian Minister of Youth And Sports, and H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President. It's worth to mention that the activities of the program come within the Ministry of Youth and Sports training programs to develop the skills of youth in various fields, as the program provides an interactive training for the pioneers as for their creations, capabilities and innovations that support their ambitions and technological development in line with the precautionary measures to confront the spread of Corona Virus.

https://aast.edu/en/news.php?%20unit_id=1&language=1&page=175&event=4487&get_event_type=1



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

3. Memorandum of Understanding, The Arab Academy for Science, Technology and Maritime Transport and The Egyptian Drug Authority, April 2021

The Arab Academy for Science, Technology and Maritime Transport signed a Memorandum of Understanding with the Egyptian Drug Authority

Within the framework of the Academy's constant keenness to support the state's service organizations and provide cooperation with strategic state bodies, The Arab Academy for



Science, Technology and Maritime Transport, signed a memorandum of cooperation with the Sucking Pharmacy Authority Raya and represented by Dr. Tamer Essam, the head of the Egyptian Board of Medicine.

The agreement included the proposal and discussion of ways of scientific and academic cooperation between the Arab Academy of Sciences and the Egyptian Medicine Board, emphasizing the constant keenness of the Academy as one of the organizations of the University of Arab States to provide all support in the fields of its scientific, educational and field of a for training and scientific research for different active state institutions.

This comes in line with the Pharmacy Authority's policies aimed at supporting the Drug industry, increasing the Egyptian medicine's capacity to sell out to foreign markets, encouraging the export and achieving the sufficiency of the local market of pharmaceuticals, in coordination and cooperation with all stakeholders in the industry The medicine.

https://aast.edu/en/news.php?language=1&unit_id=1&event=5593&get_event_type=1

4. Cooperation Agreement, The Arab Academy for Science, Technology and Maritime Transport and Asyut National Petroleum Industry Company, October 2020

In the framework of the Academy's constant pursuit to open the horizons of constructive cooperation with different state institutions, His Excellency Professor Dr. / Ismail Abdul Ghaffar Ismail Faraj, Head of the Arab Academy, signed a cooperation agreement with Asyut National Petroleum Industry Company, represented by Eng. / Mohamed Badraddin, Chairman of the Board of Directors of the Company.

The signing of the agreement was attended by Eng. Hisham Al-Shatouri, Deputy Chairman of the Board, and Lviv among the gentlemen working in the Asyut National Oil Industry Company, and attended by the Arab Academy of Science and Technology, Dr. / Mohamed Hassan Abdrabhu, Dean of the Productivity and Quality Institute, Where the sides discussed ways of joint academic cooperation where they aim Agreement to promote continuous work between the two sides.





https://aast.edu/en/centers/Entrepreneurship/news.php?%20unit_id=482&language=1&page=12&event=34&get_event_type=1

5. Opening session of "Empowerment of Entrepreneurs" and "Establishing Micro, Small and Medium Enterprises" Program, Jan 2021

H.E Prof. Dr. Ismail Abel hafar Ismail Farag - President of the Arab Academy for Science, Technology and Maritime Transport (AASTMT) participated in the activities of the opening session of the program for preparing and empowering entrepreneurs and establishing micro, small and medium enterprises that was held under the auspices of the League of Arab States.



This session was held in line with the recommendations of Arab Private Sector Forum that was held in Beirut in 2019 to promote micro, small and medium enterprises and create job opportunities for young people in the Arab region through the establishment of entrepreneurship centers and women empowerment programs, and in implementation of the recommendations of the Small and Medium Enterprises Symposium that was held in co-operation between the League of Arab States and the Federation of Arab Chambers, regarding the consequences of the Corona crisis on small and medium enterprises in the Arab world, where the previous recommendations have been activated by the Federation of Arab Chambers and the United Nations Industrial Development Organization (UNIDO) - IPO / AICEI Bahrain to start establishing and operating centers to support entrepreneurs (EDIP) in coordination with AASTMT, the Arab Union for Agricultural Development and the Arab



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Federation for Small and Medium Enterprises. Moreover, the initiative was held under the umbrella of the Presidency of the Egyptian Council of Ministers, the Egyptian Ministry of Industry and Trade, the Egyptian Ministry of Planning, the Central Bank of Egypt, the Egyptian Foundation for Small and Medium Enterprises Development (MSMEDA), and the Federation of Egyptian Chambers of Commerce.

https://aast.edu/en/news.php?%20unit_id=1&language=1&page=135&event=5140&get_event_type=1

6.Cooperational Agreement," The Arab Academy for Science, Technology and Maritime Transport" and "Arab Organization for Industrialization"

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) Co operational Agreements with different World Universities and institutions that promote discussion and exchange of experiences in areas of mutual interest, AASTMT & AOI, signed a Cooperation Agreement between AASTMT Arab Institute for Leadership Development (AILD). "AASTMT" and "AOI" agreement was held to cooperate in the field of technology, scientific research and human element preparation, as well as to offer AILD courses and programs for the purpose of implementing training activities, refining administrative skills and building cadres for preserving capabilities, as in keeping with AASTMT leading role, and in particular AILD, as one of AASTMT academic entities that specializes in preparing cadres with the latest modern scientific methods whether in the governmental institutions or in the private sector.





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https://aast.edu/en/news.php?unit_id=1&language=1&page=161&event=4759&get_event_type=1

7. Fwrun Startup - Supply Chain Program, September 2021

The supply chains and logistics incubator, one of the specialized programs, congratulates the Entrepreneurship Center at the Arab Academy for Science, Technology and Maritime Transport, and in partnership with the Academy of Scientific Research and Technology, Fwrun Program "Intelmaq", on signing a merger and partial acquisition deal with Diggipacks Company at Kingdom of Saudi Arabia.

http://ec.aast.edu/contenttemp.php?page_id=48200131

http://ec.aast.edu/news.php?unit_id=482&language=1&page=9&event=52&get_event_type=1



8. Blending BSO & Incubators Support, May 2021

On the 6th of May with AAST Entrepreneurship Center, in cooperation with the Ministry of International Cooperation, the Ministry of Trade and Industry, the Ministry of Foreign Affairs and the Alexandria Chamber of Commerce hold the online conference on Blending BSO & Incubators Support Introducing ongoing EU funded projects that support innovation, commercialization and startups in Egypt.



[http://ec.aast.edu/event-
 details1.php?%20unit_id=482&calendar_id=30&calendarType_id=1&language_id=1](http://ec.aast.edu/event-details1.php?%20unit_id=482&calendar_id=30&calendarType_id=1&language_id=1)

9. Environment and entrepreneurship workshop in the presence of his excellency the Minister of the Environment and the head of the Academy, February, 2021

The Arab Academy for Science, Technology and Maritime Transport organized a meeting entitled "Entrepreneurship and Environmental Conservation" for Arab Academy students on Sunday, February 21, 2021 via Zoom. With presence and participation of:

- Her Excellency Dr. Yasmine Fouad, Minister of Environment.
- His Excellency Dr. Ismail Abdel Ghaffar Ismail Faraj, President of the Academy.
- Consultants and experts in different areas of environment.

The meeting's agenda was how to support youth in setting up projects related to the environment, as well as how to provide the necessary training and funding for them. Her Excellency, Minister of Environment, Dr. Yasmine Fouad, expressed her happiness with the participation of Academic students in the "entrepreneurship and environmental conservation" meeting, noting that the AAST is a race to organize and hold important seminars and conferences in addition to its great role in helping and training young people in the localities to deal with the solid waste system, many environmental files and research projects in cooperation with the Ministry. At the beginning of his speech, His Excellency Dr. Ismail Abdel Ghaffar Ismail Faraj, President of the Academy, extended his great welcome to Her Excellency Dr. Yasmine Fouad, Minister of Environment and to the Gentlemen, attending the meeting, noting that the participation of Her Excellency confirms the extent of the



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interest given by the Arab Republic of Egypt in the field of environment and youth support. The academy's president added that the academy is keen to support the Egyptian and Arab youth in all scientific fields, including the environment file. Today's meeting coincides with five years since the establishment of the Entrepreneurship Center in the Academy, which succeeded in delivering many achievements such as " Egyptian Entrepreneurship Rally - Egyptian Pioneers Rally ". His Excellency stated that the Academy is doing every effort to help support youth and that there are many research projects through which the Academy collaborates with the Ministry of Environment.



http://ec.aast.edu/news.php?%20unit_id=482&language=1&page=12&event=7&get_event_type=1

10. Honoring the Entrepreneurship Center at The closing ceremony of the World Entrepreneurship Week, March 2020

We are pleased with the continuous cooperation between the entrepreneurship center of the Arab Academy for Science, Technology and Maritime, and GEN Egypt and are proud to honor the center at the closing ceremony of the World Entrepreneurship Week 2020.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



http://ec.aast.edu/news.php?%20unit_id=482&language=1&page=13&event=45&get_event_type=1#

11. Agribusiness Incubator, Tanmia Wa Tatweer (TWT) Incubator, 2021 - 2022



TANMIA WA TATWEER
AGRI-BUSINESS INCUBATOR
AASTE

TWT Project objective is to enhance and support the entrepreneurship ecosystem in Egypt to Enable empowerment of existing and potential entrepreneurs, particularly youth and women, to establish, manage and operate successful innovation-driven businesses in 3 priority sectors:

1. Agribusiness
2. Clean and Green



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3.Creative Industries, with a focus on handicrafts and performing arts.

This will be achieved by supporting the implementation of incubation programs, giving focus to disenfranchised areas such as Upper Egypt and New Valley, as well as to women and youth.

In Numbers:

Graduated Startups: 60

Training Sessions: 50

<http://ec.aast.edu/twt.php> https://aast.edu/en/centers/Entrepreneurship/event-details1.php?unit_id=482&calendar_id=16&calendarType_id=1&language_id=1
http://ec.aast.edu/news.php?unit_id=482&language=1&page=1&event=29&get_event_type=1
http://ec.aast.edu/contenttemp.php?page_id=48200310

12. Honoring The Arab Academy for Science, Technology and Maritime Transport for being the educational partner in Biznexpo 2021, December 2020

Participation of the Entrepreneurship Center at the Academy in BiznExpo event, the largest gathering of businesses and SMEs, held at the Nile Ritz Carlton on November 17th and 18th, and we were pleased for honoring the AAST for being the educational partner in Biznexpo 2021, and also for honoring our Supply Chain incubator, TwT Agribusiness incubator, and MashreQ Tourism incubator startups for participating in annual entrepreneurship competition.

Day 1: startups from our Mashreq incubator, TwT incubator were given the opportunity to present their startups and the challenges they face.
- Dr. Wael El-Desouki, Director of AASTT Entrepreneurship Center, gave a session regarding investment opportunities and the entrepreneurship ecosystem in Egypt.

Day 2: featured a supply chain incubator panel, where startups from the incubator exhibited their products and spoke about their experiences. Along with a speech by Dr. Hany Ayad, the head of operations at the center talking about the Mechanisms for selecting startups supported by the AAST Entrepreneurship Center.



http://ec.aast.edu/news.php?%20unit_id=482&language=1&page=5&event=23&get_event_type=1



13. Rally Competitions for Entrepreneurship and Innovation

RALLY STARTUP COMPETITION **AAST EC**

Rally startup competitions is a full program that focuses on youth who are eager to create and develop startups and become entrepreneurs. The program helps engage and promote entrepreneurship amongst youth by exposing them to the entrepreneurial culture and ecosystem from an early age.

The program includes capacity building, pre-incubation training, one to one mentorship for startups, access to online entrepreneurship content via our Startup School, online and offline content success stories and exciting entrepreneurship networking events attended by many members from the entrepreneurship ecosystem. In addition to financial award to winners.

The competition was created in 2016 by the AAST Entrepreneurship Center as one of its different entrepreneurship programs that gather, inspire, train, and mentor university students and innovative startups.

The Entrepreneurship Rally Competition is a full pre-incubation program that can take the participants from the ideation to the prototype generation phase within 6 months. It also provides a major development opportunity to running startups through an intensive 2 months' acceleration one to one program focusing on developing specific parts of their businesses.

Participants get the chance to pitch their projects in front of different business leaders, investors, and members from the Entrepreneurship Eco-System.

http://ec.aast.edu/contenttemp.php?page_id=48200268

http://ec.aast.edu/news.php?unit_id=482&language=1&page=2&event=28&get_event_type=1

[http://ec.aast.edu/event-
details1.php?unit_id=482&calendar_id=15&calendarType_id=1&language_id=1](http://ec.aast.edu/event-details1.php?unit_id=482&calendar_id=15&calendarType_id=1&language_id=1)



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Competitions:

- Arab Rally
- Egypt Rally
- Rally Accelerate
- AAST Rally



ARAB RALLY 2021-2022



**ARAB RALLY
FOR ENTREPRENEURSHIP
AND INNOVATION
AAST EC**

The Rally Competition was established in 2016 by the Arab Academy's Entrepreneurship Center (The Arab League educational organization) for the purpose of impacting youth, entrepreneurs, and startups, not only in Egypt the Arab League headquarters but also to the Arab youth and the entire world.

In 2019 UAC and UNIDO ITPO AICEI Bahrain took the initiative to enhance the ecosystem towards promoting domestic investment boosting Entrepreneurship and Innovation with the goal of leveraging foreign direct investment through various stakeholders namely national Chambers in the Arab Region.



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In this context, a partnership was developed between UAC, UNIDO ITPO ACIEI Bahrain and the Arab Academy (The Arab League educational organization) to organize the Arab Entrepreneurship and Innovation Rally. This is where a great impact started, thousands of applicants applied for the Arab Rally competition, several match making and business development opportunities, and hundreds of thousands of dollars were granted to many young entrepreneurs from several countries from the Arab region, and what's most importantly great exposure and showcasing to their startups in the Rally Finale in Bahrain (November 2019 during the World Entrepreneurs investment Forum and 18 th Arab Businessmen and Investors Conference).

The aim of the competition is to provide guidance, mentorship and investment opportunities to individuals and teams who are eager to follow their dreams and kick-off their business.

Final Ceremony for Arab Rally 2021-2022 during : The second edition of the "Arab Entrepreneurship Rally" competition within the framework of the 4th World Entrepreneurs Investment Forum (WEIF), as part of the "Expo Dubai 2020" exhibition.





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RALLY Egypt 2020-2021



Final Ceremony during : Startups Festival, celebrating the 5th Egypt Rally for Entrepreneurship and Entrepreneurship center Demo Day for Supply Chain and Youth Incubator programs, in Sharm El-Shih under the auspices of the Arab League.





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http://ec.aast.edu/news.php?unit_id=482&language=1&page=11&event=43&get_event_type=1

http://ec.aast.edu/news.php?unit_id=482&language=1&page=12&event=10&get_event_type=1



Research

Research Projects

1. Disinfection Gates, AASTMT Industry Service Forum

In 2020, as COVID-19 pandemic swept the world, in an attempt to limit its spread among people who frequented their jobs or various bodies and institutions. The R&D department at Industry Service complex with the direct support of His Excellency the President of the Arab Academy designed and manufactured disinfection gates to carry out a partial disinfection process for people when they passed through it.

73 were manufactured for the Arab Academy, which distributed it to many Egyptian state institutions and branches of the Arab Academy in Egypt.



https://aast.edu/en/complexes/is-complex/contenttemp.php?page_id=40700108

2. Project, GREEN LAND GREEN SKILLS FOR A SUSTAINABLE DEVELOPMENT

The Mediterranean area suffers from extremely high rates of youth and female unemployment. To face this challenge, GREENLAND promotes social inclusion and fight against poverty by providing unskilled and underprivileged young people with marketable skills in the Green and Circular Economy, with the potential to generate thousands of jobs. To reach its objective, the project will create new curricula based on market needs, skills transfer to NEETs and women, media-based training tools, and cultural exchanges among young people.

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=16

3. Project, River Transport Authority AASTMT Industry Service Forum

Building training kits for the Egyptian Transport Authority (RTA) for training laboratories. The project divided into 3 phases for most mechanical equipment used in river vessels. The training kits were made using real equipment after making necessary modification like cross sections for training purposes.



<https://aast.edu/en/complexes/is-complex/>

Research Papers

1. Time Compression in Engineer-to-Order Industry a Case Study of a Norwegian Shipbuilding Industry

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=126750&research_id=6&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

2. AN EXPLORATORY STUDY OF THE STRATEGIC USE OF THIRD PARTY LOGISTICS FOR COST REDUCTION and CUSTOMER SATISFACTION IN THE OIL and GAS INDUSTRY

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=42775&research_id=21&language_id=1



https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

3. Dynamic scheduling Model for the Construction Industry”, Built Environment, Project and Asset Management

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=62550&research_id=5&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

4. Selective Laser melting for improving quality characteristics of a prism shaped topology injection mould tool for the automotive industry

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=36575&research_id=57&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

5. The Impact of Applying Advanced Manufacturing Technology on Supply Chain Performance in Dental Industry “Empirical Study

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=126250&research_id=1&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

6. Resource Constrained Multi-Project Scheduling Using Priority Rules: Application in the Deep-Water Construction Industry

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=92000&research_id=12&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

7. Key elements of green supply chain management drivers and barriers empirical study of solar energy companies in South Egypt

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=44100&research_id=14&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

8. Interactive Internet of Things Based on Dark Light System for Smart Room, Optical and Quantum Electronics



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https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=134700&research_id=300&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

9. The Role of Road Transport Infrastructure Investments on Logistics Performance: A Research Agenda

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=44175&research_id=42&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

10. Construction facilities location Selection for urban linear infrastructure maintenance projects using uniform cost search method

https://aast.edu/pheed/staffadminview/view_eng_abstract.php?addcon=1&ser=80875&research_id=22&language_id=1

https://aast.edu/pheed/academic-research/search_home.php?search=55&aa=1

Public Engagement

- The Academy of Scientific Research and Technology (ASRT) - Egypt
- Pharco Pharmaceuticals - Egypt
- Arab Organization for Industrialization - Egypt
- UCLan University - UK
- Ministry of Energy & Infrastructure - UAE
- Marine Industries & Services Organization - Egypt
- Egyptian Chemical Industries (Kima)
- General Authority for Roads, Bridges and Land - Egypt
- HUAWEI Technology Company - Egypt
- Ministry of Local Development - Egypt
- National Bank of Egypt
- Egyptian Micro, Small and Medium Enterprises Development Agency (MSMEDA)
- Ministry of Planning and Economic Development - Egypt
- Rowad 2030 Project- Egypt



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- Ministry of Tourism and Antiquities - Egypt
- Arab Tourism Organization
- African Development Bank
- U.S. Agency for International Development, USAID
- Unido network Investment and Technology Promotion Offices - Bahrain
- The Confederation of Egyptian European Business Associations, Ceba- Egypt



AASTMT Grants

- Entrepreneurship Center and Industrial Modernisation Center IMC - 100.000 €.
http://ec.aast.edu/news.php?unit_id=482&language=1&page=7&event=53&get_event_type=1
- Project 2068 Campus Smart Recycling System (CSRS) AASTMT Industry Service Forum.
https://aast.edu/en/complexes/is-complex/contenttemp.php?page_id=40700107
- Project 2069 Campus Smart Recycling System (CSRS) AASTMT Industry Service Forum.



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https://aast.edu/en/complexes/is-complex/contenttemp.php?page_id=40700107

- 2020 Grant Call for Collaboration Research and Innovation Project.

https://aast.edu/en/scientific-research/contenttemp.php?page_id=47300112

- Grant College of Maritime Transport & Technology.

https://aast.edu/en/colleges/comt/contenttemp.php?page_id=500049

- Grant for 50.000EGP university students and potential entrepreneurs -Entrepreneurship Center.

http://ec.aast.edu/news.php?page=7&unit_id=482&language=1&event=47&get_event_type=1

- Grants Entrepreneurs hip Center and Google - Training Entrepreneur Program- 100.000€.

http://ec.aast.edu/news.php?page=7&unit_id=482&language=1&event=47&get_event_type=1

- Grants Entrepreneurship Center and Industrial and the Federation of Egyptian European business associations CEEBA- 40.000€.

http://ec.aast.edu/news.php?unit_id=482&language=1&page=6&event=51&get_event_type=1

- Grants Entrepreneurship Center and The National Bank of Egypt - Egypt Entrepreneurship Rally competition - 5 Million Egypt Pound.

http://ec.aast.edu/news.php?unit_id=482&language=1&page=6&event=51&get_event_type=1

- Grants Entrepreneurs hip Center and The Bahrain Chamber of Commerce and Industry, and the United Nations Industrial Development Organization (UNIDO)- 300.000\$.

http://ec.aast.edu/news.php?unit_id=482&language=1&page=14&event=57&get_event_type=1

- Grants Entrepreneurship Center and The African Development Bank - Tanimia w Tatwer Incubator - 170.000€.

http://ec.aast.edu/news.php?unit_id=482&language=1&page=14&event=54&get_event_type=1



Case Study



ReNile is a leading environmental solution and agritech company providing end-to-end solutions for smart farming using the internet of things (IoT) and water, air and soil quality management. Our monitoring systems provide cutting-edge real-time online analytics that helps enhance the production efficiency and reduce consumption of our customer farms. ReNile provides a full solution from monitoring farms, alerting in emergencies, controlling, and providing analytics of the best practice model for farming through the online platform.

Deal: 500,000 USD, Seed funding convertible notes or Equity

Investment Memo/Executive Summary

Overview

Mission: Enhance the Environmental parameters and management for farms in the MENA region.

Vision: The Brain for all growers to manage their farm effectively.

Company History/Story

The population of the world in 2021 is a 7.7Billion population, and we will be a 9.6Billion population in 2050 to cover the food need of all of mankind we must increase the world's food production by 50% and save freshwater by 30% or all children now don't have food in their youth. According to the FAO and UNIDO, the most efficient way to save protein and food in an economic way is by cultivating fish on land and enhancing the value chain of producing food.

The main pain point of the farmers is the lack of resources to manage their farms in a proper way which leaves room for shrinkages in the farms in addition to the high consumption of feed with high price and absence of scientific method. Now farmers can't solve this problem according to a field survey. Our product is a unique solution that upgrades the monitoring systems for farms from instant measure to online monitoring with online consultation.



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ReNile provides an end-to-end solution for farmers to manage their farms online in addition to having the ability to predict the actual needs of the farm and control all machines depending on data-driven analysis

Main Product:

Our main product is a unique solution that upgrades the monitoring systems for farms from instant measure to online monitoring with online consultation.

ReNile provides an end-to-end solution for farmers to manage their farms online in addition to having the ability to predict the actual needs of the farm and control all machines depending on the measured parameters.

- The solution contains many sensors that measure some parameters for the farm, such as pH, dissolved oxygen, water conductivity, humidity, and temperature.
- All measured parameters are sent in real-time messages and notifications for the farmer to report any problem regarding the farm and instructions to solve the problem.

Founders:

- The general manager is Hazem, a post-graduate student from Arizona state university in Engineering Management program and graduated from Energy and bioprocess Engineering from Zewailcity, in addition, he has experience in digital transformation consultation in addition to industry consultation.
- Ibrahim, a communication engineering bachelor holder who has experience in IoT solutions and Embedded systems.
- Amir Sabry has his consulting firm called NEXEL Partners which works in the digital transformation field in the Gulf area. Amir was a consultant in Booz & Alien company in addition to SAP.

Early Hires:

- Mohamed Ziyada: Postgraduate student, Master of fish production, a graduate of the Department of Fish Production, Faculty of Agricultural Sciences, Al-Azhar University, Cairo branch.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- Kareem, MSc in Mechatronics and Intelligent Machines from the University of Central Lancashire, worked in different positions in Engineering.

- Islam is a MERN stack developer with a strong background in software engineering concepts. Won first place in the 2017 Landmine Free international mine-sweeping competition, designing code for an autonomous mine detecting robot. Well-versed in anything from writing code for large-scale cross-platform applications to designing small-scale IoT solutions.

- Leaf is an Environmental engineer who worked on several research topics and industrial roles in research and development in the water and air quality field

- Ahmed is a business graduate from UoP and a communications engineer background who worked in trading and sales management in different industries.

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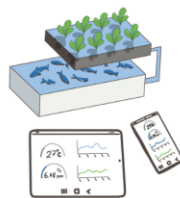
<http://ec.aast.edu/rally-accelerate.php>

<https://www.renile.net/>

RENile, Services:



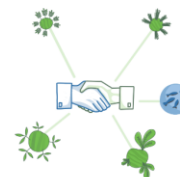
Fish farming
smart devices



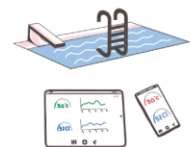
Hydroponics
and aquaponics
monitoring
systems



Managing fish
farms



Consultation



Swimming pools
safety and
monitoring
systems

RENile, Products:





Goal 10 – Reduced Inequalities

10 REDUCED INEQUALITIES



Our Aim

The Academy aims to strengthen all required mechanisms to enforce its declared policies in reducing inequalities through a set of pillars represented in:

- Promoting equality and providing an environment where all members of its community are treated with respect and dignity.
- AAST seeking to employ a workforce and educate a student body that reflects the diverse community we serve with a student body of 37 different nationalities from Europe, Asia, North America, and the Gulf region.
- AAST aims to enhance the enforcement of the obligations contained in the Universal Declaration of Human Rights, policies and practices adhering to Egyptian law and international mandates and charters that provides a legal framework to protect people from discrimination, harassment, and victimization in the workplace and wider society.
- AASTMT's admission policy provides a learning, working and social environment which is free from discrimination, prejudice, intimidation, stigmatization and all forms of harassment and bullying. No student, staff member or visitor will be discriminated against based on an unfair distinction including:
 - Age
 - Disability
 - Gender Identity
 - Marriage or civil partnership
 - Pregnancy or maternity
 - Race



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- Religion or belief
- Sex
- Sexual orientation
- Socio-economic background
- Trade union membership

providing equality of opportunity and will work to ensure that all of our staff, students, and visitors.

- Promote equality between male and female students
- Providing all forms of financial and psychological support for people with special needs
- Strengthening the strategy of diversity, cultural communication and acceptance of others
- Supporting students from developing countries

Our Progress through 20/21

me (Index.Php) / Latest News / AASTMT President Meeting With Special Needs Students



Arab Academy
for Science, Technology and Maritime Transport

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07

AASTMT President Meeting with Special Needs Students

Within the leading role of the Arab Academy for Science, Technology and Maritime Transport (AASTMT) in serving the Egyptian society and in qualifying students in various fields, AASTMT Deanery of Student Affairs organized a meeting for H.E Prof. Dr. Ismail Abdel Ghafar Ismail Farag (<https://www.facebook.com/ismailghafar/>) – AASTMT President and AASTMT Special Needs Students, on Sunday 6- 12- 2020, at AASTMT AbuKir Campus, in the presence of H.E AASTMT Officials, and AASTMT students from various AASTMT Colleges and Institutes, in addition to the participation of a group of

https://aast.edu/en/news.php?unit_id=1&language=1&event=6186&get_event_type=1



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Co-funded by the Erasmus+ Programme of the European Union

Progression of Accessibility Centres in higher Education for Students with disabilities in North Africa (PACES)

2nd INTERNATIONAL CONFERENCE FOR PERSONS WITH DISABILITIES

THE ROLE OF ENTREPRENEURSHIP, ACCESSIBILITY CENTERS AND ASSISTIVE TECHNOLOGIES TOWARDS FULL INCLUSION

(IC-PACES) - HYBRID EDITION CONFERENCE

UNDER THE PATRONAGE OF THE SECRETARY GENERAL OF THE LEAGUE OF ARAB STATES, EGYPTIAN MINISTRY OF SOCIAL SOLIDARITY, EGYPTIAN MINISTRY OF YOUTH AND SPORTS

Arab Academy for Science, Technology and Maritime Transport

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25 FEB



2nd International Conference for Persons with Disabilities "Hybrid Edition Conference"

The 2nd International Conference for Persons with disabilities (PwD): The role of entrepreneurship, accessibility centres and assistive technologies towards full inclusion (IC-PACES) – Hybrid Edition Conference is organized by the Arab Academy for Science, Technology and Maritime Transport (AASTMT), under the patronage of H.E Secretary General of the League of Arab States, H.E Egyptian Minister of Social Solidarity, and H.E Egyptian Minister of Youth and Sports, within the framework of PACES Project: Progression of Accessibility Centers in higher Education for Students with disabilities in North Africa, which is co-funded by the European Commission under the Erasmus+ Programme for Capacity Building in Higher Education (CBHE), where the conference will be held on 6 – 7 March 2021, at AASTMT Campus & Online, as this Hybrid Edition of the conference will focus on:

1. Knowledge building and launching awareness campaigns for all the stakeholders concerned with the inclusion of students with disabilities (SwD) and the rights of persons with disabilities (PwD).
2. Raising awareness about the Accessibility Centers (AC) in Higher Education Institutions (HEIs), Assistive Technologies (AT) and the Employers' Network.
3. The necessity of training for employment and entrepreneurship for SwD.

It's worth to mention that during the conference, there will be many sessions – presented by Keynote speakers from Europe, Egypt and Morocco – related to disability issues and good practices. Likewise, there will be many workshops, success stories from PwD, an Assistive Technology Exhibition & round table discussion for exchanging ideas for collaboration, education, role of civil society, corporate social responsibility towards PwD, and employment opportunities, as well as disseminating the PACES project results.

https://aast.edu/en/news.php?language=1&unit_id=1&event=5380&get_event_type=1



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Home / Latest News / AASTMT President Participates In The Inauguration Of The Interactive Conference For Technology And Persons With



AASTMT President Participates in the inauguration of the interactive conference for Technology and Persons with Disabilities
[t.edu/en/news.php?unit_id=1&language=1&event=6186&get_event_type=1#](https://aast.edu/en/news.php?unit_id=1&language=1&event=6186&get_event_type=1#)



Arab Academy
for Science, Technology and Maritime Transport

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05
DEC

AASTMT President Participates in the inauguration of the interactive conference for Technology and Persons with Disabilities

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) interest to preserve the gains it has achieved and its status at all levels, local, Arab and international, to keep up with the modern changes and to achieve excellence and the ability to meet the requirements of development, H.E Prof. Dr. Ismail Abdel Ghafar Ismail Farag - AASTMT President participated in the interactive conference for Technology and Persons with Disabilities and the Exhibition of the Inventions and Technological Innovations for Persons with Disabilities in the Arab Region that was held under the slogan "Towards supporting full inclusion and enhancing empowerment", on Friday 3- 12- 2021, at Expo 2020 Dubai in the United Arab Emirates (UAE).

The conference was Co-curated with the UAE Ministry of Community Development and in partnership with the United Nations Department of Economic and Social Affairs (UN DESA), and in cooperation with the Arab Labor Organization, the Social Affairs Sector of the General Secretariat of the League of Arab States, the United Nations Population Fund and AASTMT, on the occasion of the International Day of Persons with Disabilities (IDPD), as well as for supporting the efforts of Arab countries to empower persons with disabilities and to create an Arab platform to promote innovations in the field of assistive technology for persons with disabilities.

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Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



Discussion session and workshop for the Entrepreneur Incubator for people with disabilities

The Entrepreneurship Center of the Academy organized a workshop for the entrepreneurship incubator specialized in supporting young entrepreneurs with disabilities in partnership with Project 2030 and the Ministry of planning and economic development on Thursday, 3/3/2022.

The opportunities and challenges faced by Creative Youth with disabilities were discussed.

PUBLISHED ON: THURSDAY, 03 MAR 2022

TAGS: WITH, ENTREPRENEURSHIP, DISABILITIES

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Appreciation of Egyptian Minister of Social Solidarity



As for the 2nd International Conference for Persons with disabilities (PWD): The role of entrepreneurship, accessibility centers and assistive technologies towards full inclusion (IC-PACES) – Hybrid Edition Conference, that was held on 6 – 7 March 2021, at the Arab Academy for Science, Technology and Maritime Transport (AASTMT), under the patronage of H.E Secretary General of the League of Arab States, H.E Egyptian Minister of Social Solidarity, and H.E Egyptian Minister of Youth and Sports, within the framework of PACES Project: Progression of Accessibility Centers in higher Education for Students with disabilities in North Africa, which is co-funded by the European Commission under the Erasmus+ Programs for Capacity Building in Higher Education (CBHE), H.E. Minister of Social Solidarity, Nivine El-Kabbag praised and appreciated AASTMT role in serving community and supporting people with disabilities, as well as the role of H.E Prof. Dr. Ismail Abdel Ghaffar Ismail Farag - AASTMT President and AASTMT Family on cooperation, effort and providing all means of support.

https://aast.edu/en/sites/smart_village/news_en.php?&page=32&disp_unit=1&last_id=5432&get_event_type=1&language_id=1&view=1



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

AASTMT Delegation at Shefaa Al Orman Hospital in Luxor



Within the role of the Arab Academy for Science and Technology and Maritime Transport (AASTMT) in serving the Egyptian society, as being keen on playing a vital role in the area of Social Responsibility, H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President and his accompanying delegation visited Shefaa Al Orman Hospital, on Sunday 05- 12- 2021, in Luxor. AASTMT delegation toured the hospital departments and listened to a detailed explanation from Shefaa Al Orman Hospital officials about the idea of establishing the hospital, the steps for receiving patients, treatment protocols and the recovery rates, as AASTMT President praised the importance of this medical institution that shortened the trip for treatment in Cairo by providing all the capabilities and services necessary throughout the treatment in Luxor.

https://aast.edu/en/colleges/ccit_cairo/newstemp.php?&page=18&disp_unit=1&last_id=6191&get_event_type=1&language_id=1&view=1



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



Corporate Social Responsibility





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

AASTMT has been keen on playing a vital role in the area of Social Responsibility through a variety of academic and non-academic activities with the aim of affecting positive development in the social, economic and environmental areas not only in the region and the Arab World but that also bears fruit on the whole world.

These web pages provide information on our CSR initiatives and activities on both the local and international levels.

Activities



AASTMT's vision is to create responsible young men and women who not only invest in themselves through a distinguished education but also share in making the world a better place to live in for the less privileged fellow citizens. That is why AASTMT creates varied opportunities for both its students and staff to play an active role in carrying out their social responsibility towards their community.

Conferences





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

AASTMT has held and continues to hold conferences that enhance awareness, discuss and pose professional and innovative approaches to addressing the different challenges that face the world, last of which is the upcoming conference entitled “An innovative approach to green growth”.

The Arab Youth Forum

Campaigns & Events



AASTMT has launched numerous campaigns that aim at counteracting different negative social phenomena, like addiction, smoking, etc... or promoting and encouraging positive responsible behavior, like going green, charity, cleanliness, healthy eating, etc...



Achievements

AASTMT Memorandum of Understanding with the Children's Cancer Hospital 57357

Within AASTMT active Social Responsibility role, H.E Prof. Dr. Ismail Abdel Ghafar Ismail Farag – AASTMT President paid a visit to the Children's Cancer Hospital 57357 in Cairo, where he met Prof. Dr. Sharif Abul-Naga – the hospital's General Manager for Learning and Development and signed a memorandum of understanding between AASTMT and the hospital.

<https://aast.edu/en/csr/>

Egypt & Africa



"Africa is considered a major element in the strategic plan of AASTMT since its establishment in 1972. In specific, AASTMT targets to excel the education, research and capacity building in the African continent."



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One of the major aims of AASTMT as its international students of today are the nations and leaders of tomorrow.

- Prof. Ismail AbdelGhafar Ismail Farag
AASTMT president

Students Parade



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



“The AAFS sector is devoting all manpower, resources and facilities to the success of our vision that our African and Asian students are tomorrow's leaders and pioneers.

- Dr.Al-Snosy Balbaa Word
Vice president of AASTMT for African & Asian Affairs

”

Graduation Ceremony



African and Asian Affair Sector (AAFS) is one of the specialized entities of the AASTMT."

Students field trip in Cairo
Students Parade



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

African and Asian Affairs in Brief



Africa is considered a major element in the strategic plan of AASTMT since its establishment in 1972. In specific, AASTMT targets to excel the education, research and capacity building in the African continent. The African and Asian Affairs Sector was established as an executive sector targeting the vision of having outstanding educational and research in Africa.

PROF. DR. ISMAIL ABD EL GHAFFAR



AASTMT president word

Arab Academy for Science, Technology and Maritime Transport is a leading in the Middle East and North Africa region with forty years of excellence in education, training, research and consultations.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

DR. AL-SNOSY BALBAA WORD

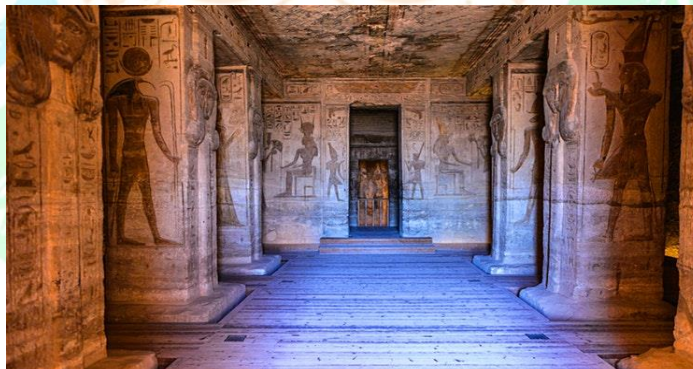


Vice president of AASTMT for African & Asian Affairs

Guided by the AASTMT president directions and its strategic plan, the AAFS sector is devoting all manpower, resources and facilities to the success of our vision that our African and Asian students are tomorrow's leaders and pioneers.

Sector of African and Asian Affairs

COMING TO EGYPT



Egypt, Climate, Politics, Religion

Egypt is officially, The Arab Republic of Egypt, is in north-eastern Africa with its capital located in its largest city, Cairo. Egypt also extends into Asia by virtue of holding the Sinai Peninsula.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



Education and living in AASTMT

Education & living of Africans & Asians in AASTMT who are enrolled in African/Asian programs of Computing, IT, Engineering, Maritime Transport & Logistics, Management, Language & Mass communications.



About us

Vision to deliver creative education, innovative research and productive consultations with the right resources to assist in the building of leaders who can shape a better future for African and Asian nations.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



Agreements & Protocols

Referring to the AAFS strategy, cooperation in assigning agreements and protocols is one of its main priorities. Based on this principle, AAFS has the honor of participating in many agreements and protocols.

Word about AAFS



African and Asian Affair Sector (AAFS) is one of the specialized entities of the AASTMT. AAFS is responsible for the coordination between AASTMT and the African and Asian organizations, structures, and students.

Success Stories

Meet the youngest northern Nigerian marine engineer

Ahmad Khalil Yahaya was among the youngest students from Nigeria who graduated from the Arab Academy for Science, Technology and Maritime Transport University in Alexandria, Egypt. Yahaya, who hails from Katsina State, disclosed why he returned to Nigeria as a marine engineer and how teenagers can succeed in the profession.

By Hossaini Garba Mohammed

Why did you choose to be a marine engineer?
Marine Engineering was not my childhood dream, but I am grateful to God and my father who encouraged me to read the course.

Which places did you travel to by ship?
I have journeyed to almost all the states around Egypt that border the Mediterranean and Red seas. I have also been to Cyprus, Saudi Arabia and Greece.

Where was the most fascinating place you visited?
The places were Cyprus and Greece. When I joined the Arab Academy for Science, Technology and Maritime Transport University in Alexandria, Egypt, I was very excited to see men and women from different countries around the world

preferring themselves as navy and sailors, and everyone was very kind to relate with each other despite our various differences - social, cultural and religious - we were friends.

As a youth corps member, how do you see yourself at the moment?
I am very happy and engaged. I successfully completed my studies and now serving my fatherland at the National Inland Waterways Authority (NIWA) in Lokoja, Kogi State. It is quite an experience working in an organisation related to my course of study.

What advice will you give to students who desire to have a career like yours?
They have to know and understand that to be a naval officer or sailor, the field is very nice and interesting. I wish my future son would choose this as his career.



■ Ahmad Khalil Yahaya

Our Academic journey in AASTMT which started in 2013 have witness both high and low point, smooth and rough situations, happy and sad moment, failure and success etc., which is the normal life processes that shape or define our future.

[View all Stories](#)



Latest news

African Development Senior Managers Forum

31 OCT 2021

In continuation of the cooperation concluded between the Arab Academy for Science, Technology and Ma ...



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

The African and Asian Affairs Sector (AAFS) welcomed the second group

15 SEP 2021

According to continuous directions of H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President to ...

The African and Asian Affairs Sector (AAFS) welcomed the second group

27 JUN 2021

According to continuous directions of H.E Prof. Dr. Ismail Abdel Ghafar Ismail - AASTMT President to ...

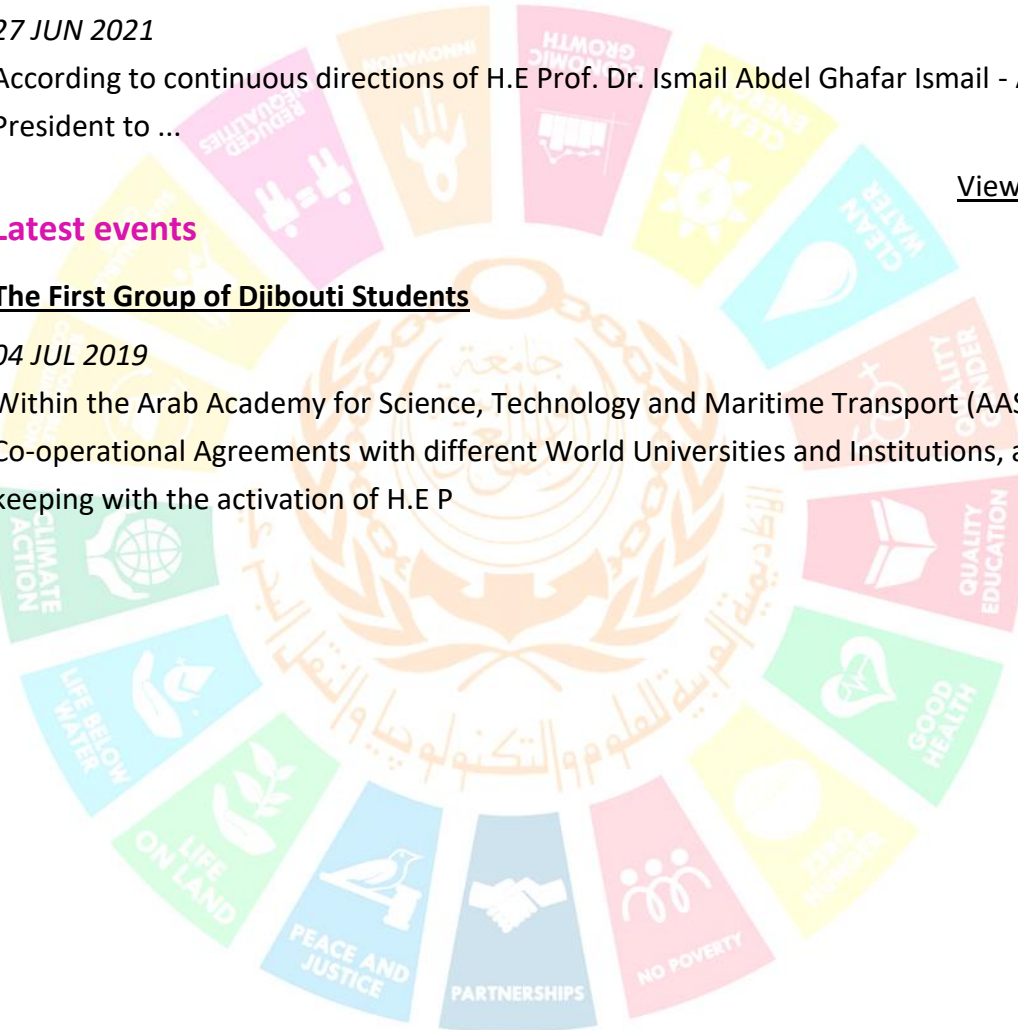
[View all news](#)

Latest events

The First Group of Djibouti Students

04 JUL 2019

Within the Arab Academy for Science, Technology and Maritime Transport (AASTMT) Co-operational Agreements with different World Universities and Institutions, as in keeping with the activation of H.E P





Success Stories

AASTMT's women From Graduate Nigeria College of Maritime Transport and Technology

My name is Engr. Oluwadamilola Adebamipe, bonafide alumni of AASTMT, graduated with first-class in 2015, and was also certified as 3rd Engineer in 2015. I was sponsored by NIMASA (Nigeria Maritime Administration and Safety Agency and Lagos state government) to study in AASTMT. Going to Egypt was my least dream, because of the language barrier, but I was wrong. They never treated us like we were not Arabians, the number one thing that got my attention and gave me focus was their hospitality.



AASTMT offers the best education as far as I'm concerned, their curriculum suits me and gave me more than I thought, I learned at ease and came out with excellent as the overall best student in 2015. Having my sea term onboard an Egyptian vessel is a story I can't finish writing, there was no record of harassment and there was full discipline.

On getting to my country Nigeria, I faced a lot of challenges while searching for a job because of gender inequality, I was granted a job opportunity in a company due to my grade and my Institution 'AASTMT', but on seeing me personally, I was not called back because of my gender. My sincere gratitude goes to LTT coastal and marine services who took interest in my certificate and also my gender, they trained me as a chief Engineer for their Tug boat. This was my first experience.





AASTMT Nigerian Graduates

Johnson speech

- Our Academic journey in AASTMT which started in 2013 have witness both high and low point, smooth and rough situations, happy and sad moment, failure and success etc, which is the normal life processes that shape or define our future.
- AASTMT which we the grandaunts will be referring to as our ALMAMATA has offered us all the opportunity to become World class leaders in our different field of studies with qualitative studies through qualified lecturers, high tech teaching aid and world class facilities, the institution is very dear to our heart as we did not just passed through the school, but the school also passed through us. Being a high standard institution, we are very proud to have our names mentioned as students that were trained by this great and prestigious institution and we believe our relationship with Egyptian and Egypt as a country will continuously blossom through this wonderful foundation laid through knowledge acquisition from this great city of ALEXANDRIA which was home to a lighthouse ranking among the Seven Wonders of the Ancient World.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



Success Stories

AASTMT's women Graduates From Kenya College of Maritime Transport and Technology



Elizabeth Marami, 28, has made history by becoming Kenya's first female marine pilot. Born and bred in the coastal city Mombasa, Marami initially studied law at the University of Nairobi, but later changed course and went on to pursue navigation in **Arab Academy For Science Technology and Maritime Transport AASTMT, Alexandria, Egypt for 5 years**. "I always grew up knowing that I wanted to do something different, Something out of the ordinary. Being awarded a scholarship to pursue this career was God's answered prayer....," she says.

Her job as a marine pilot entails assisting vessels with coming into territorial waters because according to law, vessels entering a country's territorial waters may not progress to the harbor without officials.

AASTMT/Africa and
Asian Affairs Sector

AASTMT Nigerian Graduates

Mubarak Haruna

*Working as a Third mate
In a pipe laying vessel

*Company name is Saipem Interoil
limited.

He was one of the BATCH 3 Students
and graduated as second officer with
GPA **3.84**



AASTMT Nigerian Graduates

Ibrahim Hussaini

***Working as a Third mate**

***Company name is Oceanic Shipping services PVC.**

He was one of the BATCH 3 Students and graduated as second officer with GPA 3.01



AASTMT Nigerian Students

Message from a Student

With a grateful heart to God Almighty for giving me the opportunity to study in the cradle of civilization- Egypt and the prestigious Arab Academy for Science and Technology and Maritime Transport. Since when I began studying in fall of 2015, my academic journey has been smooth as the curriculum is properly defined, the dedication of the Doctors (Phd) and tutors to see their students excel at academics has been truly commendable. The several installed simulators and well equipped workshops allow me have an almost real life experience of the ship environment while in the academy. On top of that, the collaboration of the academy with the Egyptian Authority for Maritime Safety ensures that all students in the Maritime College have their sea training in an IMO approved cadet training ship (AIDA IV).



Furthermore, life within and outside the academy has so far been adventurous as there is always some historical or fun place to go to in Egypt from the citadel of Qaitbay in Alexandria to Philae Temple in Aswan, I have visited. There's no gain saying that Egypt is a beautiful country with people of all races and the longest history known to humankind.

I'm rest assured that with hard work on my part I will have a successful graduation. This is because the office of African and Asian Affairs is doing its best possible to enable me focus on my primary goal-studies, while it handles the other issues that may get in the way. Meanwhile, I hope to have great stay in Egypt enjoying all it has to offer!

Emmanuel Brills Dasohot.



Sustainable Development Goals
Arab Academy for Science, Technology and Maritime Transport

Deanery of Student Affairs AAST - Smart Village



27 سبتمبر •

The Deanship of Student Affairs organized a special ceremony to welcome new students to the Academy in the Smart Village branch.

Welcome to the Arab Academy for Science, Technology and Maritime Transport.

and a special thanks to [Cold Stone Creamery Egypt](#).

عرض الترجمة





Sustainable Development Goals
Arab Academy for Science, Technology and Maritime Transport





Sustainable **Development Goals** Arab Academy for **Science, Technology** and **Maritime Transport**





Sustainable Development Goals
Arab Academy for Science, Technology and Maritime Transport





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PACES

Progression of Accessibility Centers in higher Education for Students with disabilities in North Africa: (PACES)

Project Number: 585901-EPP-1-2017-1-UK-EPPKA2-CBHE-JP

FUNDER EU Erasmus Plus VALUE €998,034

COLLABORATORS

Coventry University (Main Applicant), Universidad De Alicante, University of Macedonia, University of Maribor, Arab Academy for Science, Technology and Maritime Transport, Ain Shams University, Fayoum University, University of Mansoura, University of Abdelmalek Essaadi, Ibn Tofail University, The Mohammed V University of Rabat.

PROJECT OBJECTIVES

- PACES will set up Accessibility Centers for Students with Disabilities, providing equipment and support.
- Needs will be analyzed, international good practice shared and practical assistance supplied.
- Cooperation across regions and the establishment of the Employers Network will increase the relevance for the labour market.
- Transfer good practice for equal access across EU and North Africa.
- Build Accessibility Centers in a further 5 Universities.
- To amplify the reach of the centers, establish virtual and mobile/pop-up Accessibility Centers to assist students/teachers, spread policy and information throughout the regions.
- Establish a network for HE institutions and employers in the Par Countries.
- Develop new "Student Support Schemes" for students to work with SwD peer-to-peer.



RESEARCH IMPACT

Ultimately the aim is to develop socioeconomic growth by modernizing Higher Education and making it more accessible to students with special needs, thereby enabling Students with Disabilities to enter the workforce and to become independent and economically less disadvantaged.

This project will target groups of: teaching staff, trainees either administrative staff or technical staff, high level management students and graduate students with and without disabilities, employers. Students will be involved in all aspects of planning and delivery to give the project impact on the ground.

The “student clubs” started in the SWING Project are crucial to the success of the project and will be involved in supporting SwD practically, socially and politically. The training programs will be compulsory for progression of the administrative and technical staff in the partner universities and other universities will be visited by the mobile/pop-up ACs to encourage take up of the training and resources. Printed information, a training manual and disability awareness will be distributed to all targeted groups.

EU teachers will have an important role in these activities by contributing to the employability and AT workshops and the international conferences. The programs managers will spread the word in all the world networks and associations related to those fields. A launch of two regional employability and AT workshops will be arranged in Egypt and Morocco. This project targets other regional universities for future cooperation between the partner universities and other EG/MA universities along with the governmental organizations.

The Accessibility Centers (AC) and the Employer Accessibility Mentors (EAM) will be recognized as exemplars for other universities in Egypt and Morocco. At the end of the project two international conferences will be held in Morocco, with 200 attendees including SwD, Government and Policy makers expected at each.

<http://pacesproject.eu/en/home>



Goal 11 – Sustainable Cities and Communities

11 SUSTAINABLE CITIES AND COMMUNITIES



Our Aim

AASTMT supports the supply of knowledge and the dissemination of practices to different users and communities of practice focusing on the implementation of urban policies that help to achieve SDG 11. The university, as well, is committed to contribute to the improvement of society through high quality education and cutting-edge research in line with stringent international guidelines. It offers undergraduate and graduate programs on issues such as sustainable urbanism, community development, housing, architecture design with respond to the physical and social context and other courses, which deal with sustainability. AASTMT aims to:

- Identify and address basic physical, social and psychological human needs in relation to human settlements such as cities and towns.
- Apply basic principles of sustainable planning and building and identify opportunities to make their community more sustainable and inclusive.
- Reflect on the role of local decision-makers and participatory governance and how to represent a sustainable voice in planning and policy for their community.
- Engage with community groups and local planning systems for sustainable future visions for their community.
- Plan, implement, and evaluate inclusive community-based sustainable projects.

Directly related to Goal 11, there are 10 research areas in Architecture and Urbanism. AASTMT organizes seminars and workshops on sustainable cities and communities. In addition, the University actively promotes SDG11 by a set of initiatives to discover the cities' heritage and engaged with local communities. Also, AASTMT begun to signs MOU with local authorities to engage within the country strategic plan 2030.



Last Year Recorded

Worldwide: 407

Egypt: 12

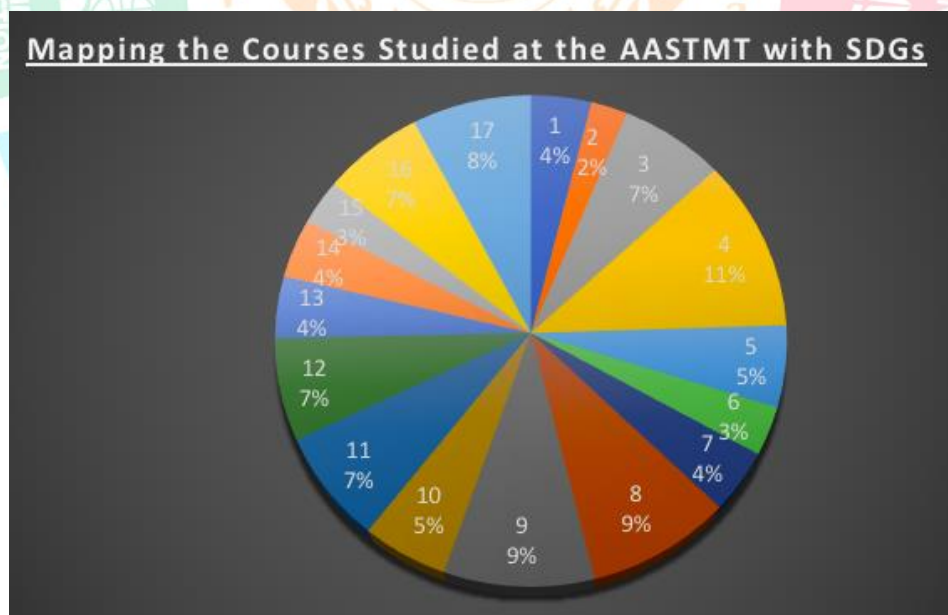
Our Progress through 20/21

Teaching

Mapping AASTMT courses with the UN SDGs

In pursuit of genuine commitment to the UN-SDGs, AASTMT has launched an initiative in 2020 that incorporates the 17 goals into all courses of all programs across all campuses. The outcome of mapping curricula to the 17 SDGs is a report that showcases the number of courses across all campuses that comply with each SDG, as shown in the chart below.

This study confirms that the 17 SDGs are fully covered in many different courses across all disciplines. This is just the first step, though! AASTMT has many others plans to come in this regard for implementation in 2021. The details of the courses that comply with SDG no (11) can be found below:



Research



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

From SciVal, the Arab Academy developed an activity spreadsheet for SDG (11) as shown below, which contains three data sets: Research performance, Collaboration summary and Top 15 key-phrases of this SDG.

SciVal is a research performance assessment tool that allows analysis of the data from Scopus.

The Scopus database covers over 30 million publications from 1996 to the present. SciVal updates weekly from Scopus. SciVal gives access to the performance of research institution, and individual researchers worldwide. SciVal helps to visualise research performance, benchmark against peers using a number of metrics, review co-author networks, and identify potential collaborative partnerships.

Activity of the Arab Academy for Science, Technology and Maritime Transport

Within: SDG 11: Sustainable Cities and Communities (2022) | Year range used for metrics: 2017 to >2022

Summary

Performance

136

Scholarly Output



[View list of publications](#)

0.55

Field-Weighted Citation Impact



39

International Collaboration



2,675

Views Count

362

Citation Count

Collaboration

International Collaboration

Publications co-authored with Institutions in other countries/regions



Academic-Corporate Collaboration

Publications with both academic and corporate affiliations



Top 15 keyphrases

Top 15 keyphrases by relevance, based on 136 publications





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Initiatives

- A Lasting Temporariness- RFC.pdf
- Urban Contrast Back to walkability.pdf
- Rethinking bicycle city.pdf
- Towards an Integrated Egyptian Maritime Transport Sector
- The Impact of Using Firefighting Virtual Reality Simulation For Enhancing
- Composting the organic wastes into an organic fertilizers using the earthwo
- Campus Smart Recycling System to turn Food Organic Wastes and Recyclables
- Carbon Footprint Estimation and Reduction in the AASTMT Campus Towards
- New Geoheritage Sites: Outdoor Geological Museums as a tool
- Proposed aesthetic architectural patterns to support damaged buildings
- Frozen Music
- Rebox Hub
- Revitalized Carpentry School
- Recycled Fashion
- Documentary Film making School

Public Engagement

Case Study

Mention brief Details about one of the research or initiatives and then mention the output

(note: try to add statistics for any of the above points)

In the autumn semester of 2019, the Department of Architectural Engineering & Environmental Design in AASTMT's Faculty of Engineering & Technology organized two courses on integrated urban rehabilitation. Both courses drew extensively upon the experience and methodology of the Aga Khan Historic Cities Programs.

The metropolis of Cairo is often characterized by its capability to juxtapose tradition, historicism and modernity, to concoct a blend unique that is this sprawling city; home to over 20 million inhabitants. Nevertheless, questions pertaining to urban design are inherent, and Cairo remains a consistent hot-bed for opportunities toward urban growth and development of the built environment, toward the advancement and sustainability of communities that inhabit this city.

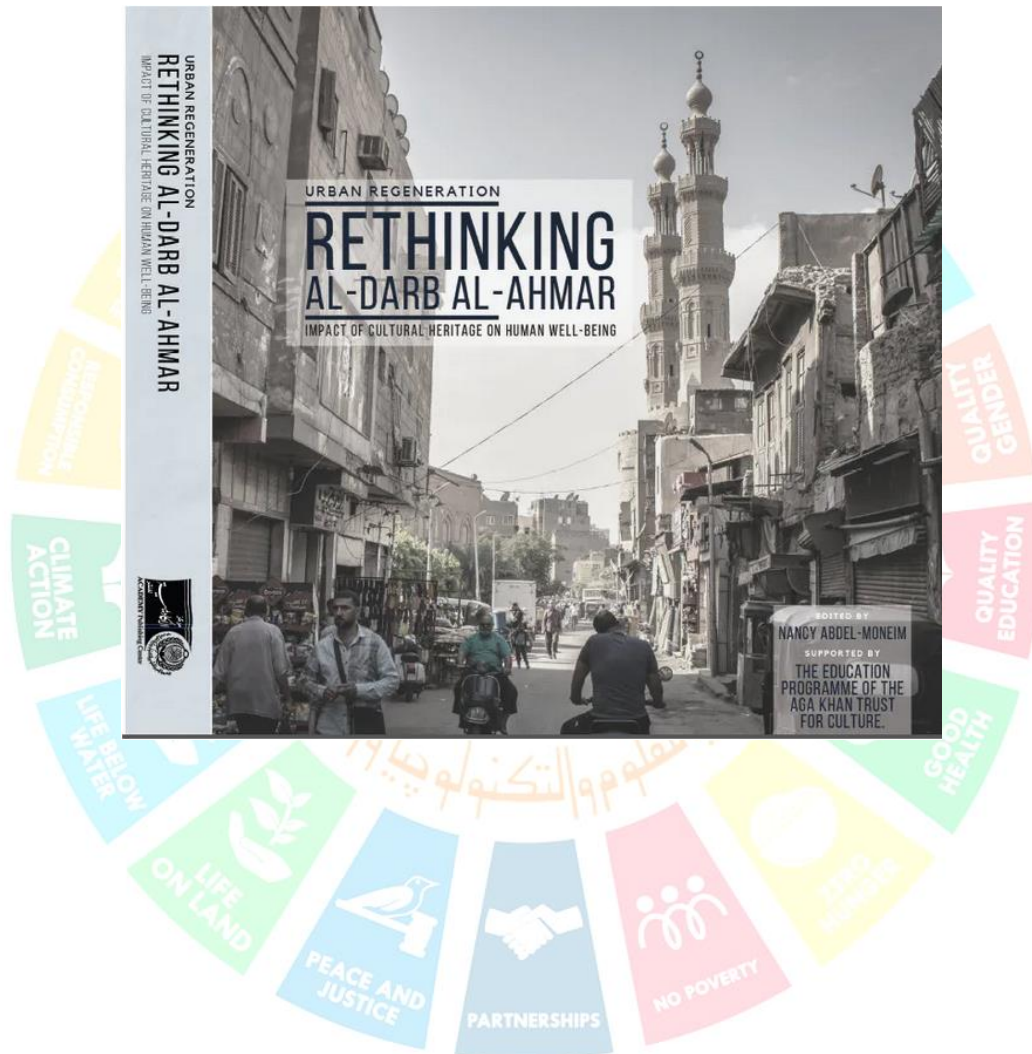
The course aimed to understand the different theories, principles, processes, and urban design procedures and enhance students' practical urban revitalization skills. The course examined the



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

ways that existing cities have spread and been redeveloped. The course included a rich collection of ideas and projects that urban designers were generating internationally, notably the Aga Khan Historic Cities Programs.

<https://www.archnet.org/publications/14325>





Goal 12 – Responsible consumption and Production

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Our Aim

Commitment to environmental protection and sustainable practices implemented through responsible management and minimization of wastes. It also addresses some concerns like waste-conscious events, single-use packaging, low-carbon food options, and infrastructure for recycling. Students and staff members will learn about waste prevention and recycling, sustainable management of natural resources, and what a sustainable lifestyle looks like in practice. By participating in the planning of these activities, students get a taste of the leadership, organization, and advocacy skills needed to help achieve SDG 12.

Last Year Recorded

Worldwide: 205

Egypt: 4

Our Progress through 20/21

Teaching

1. Master in Health Logistics Management

Hospitals logistics management master degree is a program that is tailored for healthcare managers at all levels to be qualified to improve effectively and efficiently all aspects of healthcare organizations and to maintain a smooth flow of patients, data and medical supplies all over the hospital to achieve your remarkable goals in the most professional and efficient ways.



Sustainable Development Goals

Arab Academy for Science, Technology and Maritime Transport

We aim at crafting and developing a transferable learning experience through highly qualified instructors and innovative curricula that create a unique learning environment that pushes candidates to creativity excellency and professional integrity.

https://aast.edu/en/institutes/itli/programtemp.php?program_id=216&unit_id=237

Code	Title	Prerequisites
LHM 410	Medical Nutrition	na
LHM 420	Hospital Infection & Waste Management	na
LHM 430	Hospital Medical Crises Management	na
LHM 440	Clinical Engineering	na
LHM_400	Project	na

2- Undergraduate Environmental & Sanitary Engineering Course

The course objective is introducing the student to the main sources of pollution, understanding the water quality management and wastewater treatment and disposal systems.

https://aast.edu/pheed/show_course11.php?get_code=CB532

3- Master in Marine Environment Conservation and Energy Efficiency Management

The purpose of this Master's program is to support the global societies with highly qualified and trained personnel at middle and high management levels by providing a unified high level postgraduate studies in the field of marine energy management and environment conservation that satisfies the needs of shipping and offshore industries, whether at sea or land based. The expected graduates will be able to be experienced enough to take proper decision, analyze and act in an environmentally pro-active way when considering policies, future prospective, production and resource utilization. However, program is seeking to broaden the scope of knowledge and skills of participants, contributing to capacity building in the field of sustainable development and energy efficiency management.

https://aast.edu/en/institutes/mpi/contenttemp.php?page_id=48100031



Initiatives

1- Major General Mahmoud Shaarawy, Minister of Local Development and Prof. Dr. Ismail Abdel Ghaffar, President of the Arab Academy for Science and Technology and Maritime Transport, signed a cooperation protocol for planning and implementing green academy

Major General Mahmoud Shaarawy, Minister of Local Development and Prof. Dr. Ismail Abdel Ghaffar, President of the Arab Academy for Science and Technology and Maritime Transport, signed a cooperation protocol for planning and implementing green academy campaign "always, not day" _with the attendance of the leaders of the Ministry of Local Development and the Arab Academy for Science, Technology and Maritime Transport.

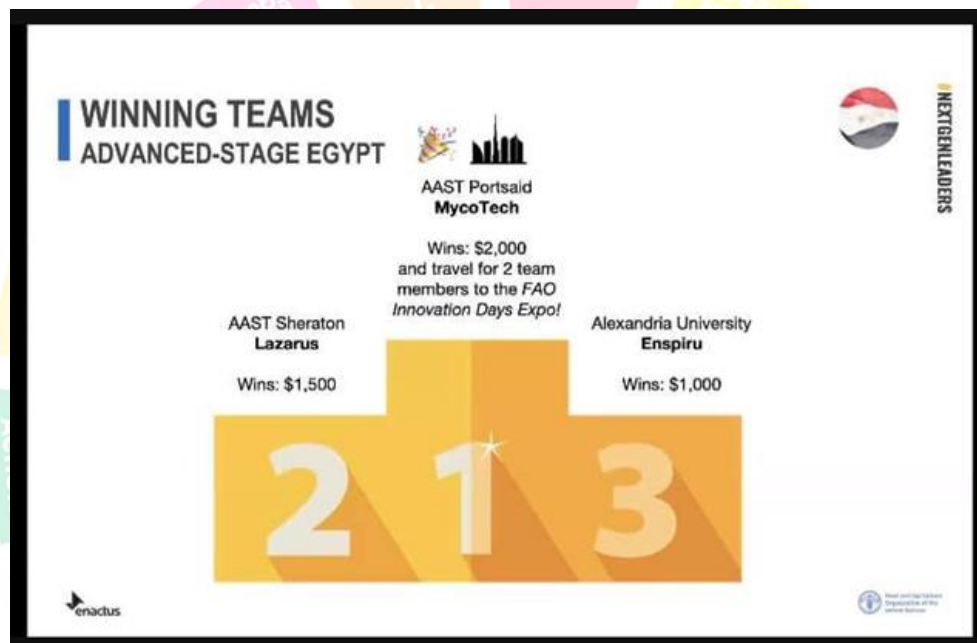
Mai. Gen. Shaarawy confirmed that the first program of the system is currently being implemented with a cost of 8.5 billion pounds until 2023, indicating that so far accumulations have been raised in 38 sites in 7 governorates, namely Al Beheira, Al Sharqia, Fayoum, Beni Suef, Luxor, Aswan and Gharbia also 9 waste recycling lines have been created in 3 governorates at a cost of 371 million pounds " the signing of the protocol comes Within the framework of implementing the directives of the state of necessity for civil society organizations, educational institutions and youth initiatives to participate in raising awareness in the new hygiene system that costs 12 billion pounds and is implemented by the Ministry of Local Development in a strategic partnership with the ministries of environment, Military Production, planning. finance, the Arab Organization for Industrialization and community organizations Civil, private and informal sectors. "The Minister pointed out as well that the protocol aims to Launch an awareness campaign at all branches of the Academy on the importance of environmental support and the preservation of the environment in all possible ways. Dr. Ismail Abdel Ghaffar, President of the Arab Academy for Technological Sciences and Maritime Transport confirmed the presence of a number of volunteer students from the araba academy at the campaign, and organization a series of awareness seminars for participant students with the participation of a number of the Community development associations and the Smart Village Development Management Company.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

2- 1st Place in Enactus AAST Portsaid & Food and Agriculture Organization of the United Nations (FAO)

Enactus AAST Port Said team won first place in the Enactus FAO Food and Agriculture Organization of the United Nations (FAO) competition conducted by the United Nations. The Enactus team competed against the Enactus teams of Tunisia, Egypt and Morocco. The presentation was about their MycoTech project which includes mycobrick and mycopottian, and will be presented in the UAE on February 24-25 at Dubai Expo 2020



3- AASTMT Seminar About Reducing the Use of Single Use Plastic

The Arab Academy for Science, Technology and Maritime Transport (AASTMT) organized a seminar as keeping with AASTMT initiative on "Reducing The Use of Single Use Plastic in its campuses". AASTMT seminar was held on Sunday 19- 12- 2021, under the patronage and with the participation of H.E Dr. Yasmine Fouad - Minister of Environment of Egypt, and H.E Prof. Dr. Ismail Abdel Ghafar Ismail Farag - AASTMT President, in the presence of group of AASTMT deans and Officials from various campuses.

AASTMT initiative comes within AASTMT framework in achieving sustainable development goals, and support of the "Go Green" initiative launched by the Egyptian Ministry of Environment, which aims to change behaviors, spread environmental awareness and urge



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

citizens -young people in particular - to protect the environment, natural resources and protectorates to maintain sustainability and preserve future generations rights

https://aast.edu/en/////news.php?page=69&event=6239&unit_id=1&language=1&get_event_type=1

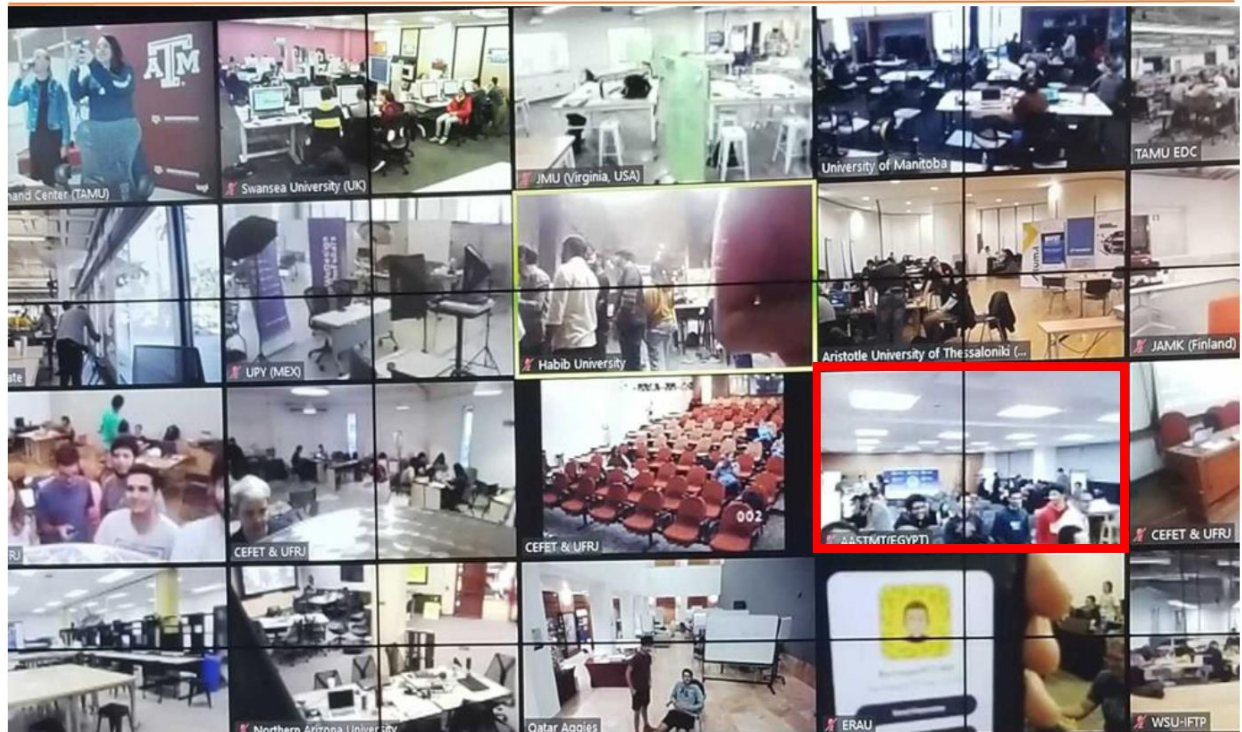


4. February 2020: Invent for the Planet

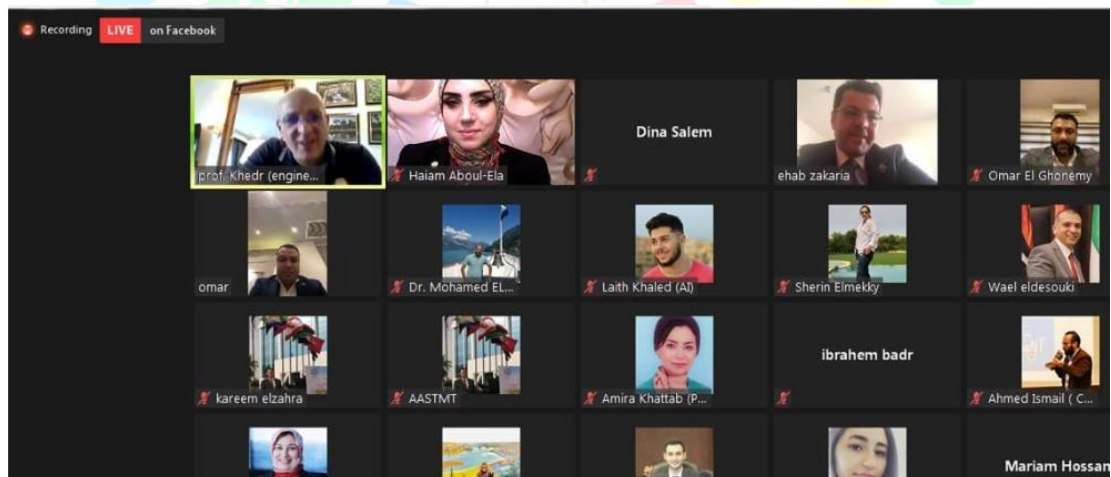
Invent for the Planet global challenge has been held in AASTMT Smart Village Campus February 2020 for the second time after 2018. Invent for the Planet is hosted by Texas A&M University and it is a 48-hour intensive design competition, which took place at more than 30 universities around the world. Students developed solutions for major issues facing society that have arisen as our world continues to modernize and become more populated. Over the course of two days, students at each campus formed teams, developed a plan and prototype, created a business plan and pitched it to a panel of judges. These students' activities and challenges cultivate the ability of the students to communicate and work effectively in teams and also to teach students how to analyze and implement interdisciplinary engineering projects.



https://aast.edu/en/colleges/coe/smartvillage/dept/contenttemp.php?page_id=52900026



5- Participation of the faculty of Fisheries and Aquacultural Technology in the Virtual open Day





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

https://aast.edu/en/news.php?language=1&view=1&unit_id=491&event=43&get_event_type=1

6- SDG Awareness Session

An introductory session on entrepreneurship to raise awareness of the sustainable development goals (aast.edu)

https://aast.edu/en/news.php?unit_id=656&language=1&page=33&event=469&get_event_type=1

An introductory session on entrepreneurship to raise awareness of the sustainable development goals

An introductory session on the field of entrepreneurship to encourage and educate students about the goals of sustainable development through active participation in the Enactus competition, which is interested in encouraging and educating university youth to find new ideas that help in sustainable development

 **PUBLISHED ON:** MONDAY,01 NOV 2021

 **TAGS:** SUSTAINABLE, EDUCATING, ENCOURAGING



7. A seminar for students of the Faculty of Management under the Department of Environmental Conservation and the benefits of reducing energy consumption on the environment

An Orientation session for students of College of Management and Technology Alamein Hull on Sunday 12th December 2021 about “The Importance of Going Green and the benefits of reducing plastic consumption for the environment” presented by Dr. Mahmoud El Bishbishy - Former President of Rotary Alexandria West.

https://aast.edu/en/news.php?unit_id=656&language=1&event=511&get_event_type=1



Research

1- Aquaculture Research Center

The center aims to create models of new development projects in the field of aquaculture by studying scientific problems in aquaculture projects and developing appropriate solutions.

The center works with 3 integrated tasks (water- energy and food).

1- Production of Bio-diesel from waste using cooking oil:



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- 2- Food production using Hydroponic system:
- 3- Rain water harvesting for plant production in the Hydroponic system:
- 4- Compositing of organic waste:

https://www.aast.edu/en/sdg/goals.php?menutab=7&unit_item=1206&page_id=120600018

1- Biodiesel production:

A mixer reactor of 1000-liter capacity was developed by the Aquaculture Research Center for biodiesel production using the transesterification process. Bio-diesel production started using the waste used cooking oil produced from kitchen wastes in the main campus in Abu Qir and from the surrounding restaurants and hotels from Alexandria city. They produced biodiesel used in the production of electricity using a diesel generator. The produced energy was used in the general activities of the Aquaculture Research Center.



2- Food production using Hydroponic system:

Hydroponics is the cultivation of plants without using soil. Hydroponic flowers, herbs, and vegetables are planted in inert growing media and supplied with nutrient-rich solutions, oxygen, and water.

This system fosters rapid growth, stronger yields, and superior quality. When a plant is grown in soil, its roots are perpetually searching for the necessary nutrition to support the plant. If a plant's root system is exposed directly to water and nutrition, the plant does not have to exert any energy in sustaining itself. The energy the roots would have expended acquiring food and water can be redirected into the plant's maturation.

Hydroponic innovations have proven direct exposure to nutrient-filled water can be a more effective and versatile method of growth than traditional irrigation. The hydroponic system dramatically reduced the amount of fresh water needed by plants to 95% and increased the plant production by 3 folds than the traditional land cultivation system.





3- Rain water harvesting for plant production in the Hydroponic system:

Alexandria city is subjected to heavy rainy seasons extended from November to April. In the Aquaculture Research Center rainwater is collected from the roofs of the green house and collected in 10 water tanks each one of 500 Liter capacity. The collected water is used in the hydroponic system and fertilizer production units throughout the year.



4- Composting of organic waste:

Organic wastes produced from the landscape areas in the main campus in Abu Qir and from the kitchen scraps are of great importance. These wastes are converted into soluble organic fertilizers and used in the Earthworm production unit which mainly produce vermi-compost used as organic fertilizers for the plant production in the hydroponic system and worm's production used in the experiments of animal feed production.

3-Publications

The faculty member of the AAST are keen to conduct research related to waste and food production and publish international articles in this regard

<http://apc.aast.edu/ojs/index.php/RES/article/view/03.2.189>



2-Agriculture Waste Recruiting

The agricultural waste produced from the landscape activities in the main campus as well as the main kitchen of the students in the Arab Academy are considered as a great source of wastes. The Aquaculture Research Center (ARC) in the main campus is responsible for recycling these wastes. The recycling system, consists of 2 paths. In the first one these wastes are collected and introduced to the earthworm composting pens. The produced vermicomposte is then used back as an organic fertilizer used in the landscape actives. On the other hand, the sexual production of the worms leads to an increase in their number (3 folds). Part of the produced worms is then used in the fish culture activities in the ARC. In the second path the wastes are used to produce bio-gas and soluble fertilizers. The produced bio-gas is used in the different ARC actives as an alternative source of energy.



3- Funded Research Projects

1- CAMPUS SMART RECYCLING SYSTEM TO TURN FOOD ORGANIC WASTES AND RECYCLABLES INTO ECONOMIC VALUE PRODUCTS

The proposed project is about build and implement sustainable self-sufficient recycling system to turn AASTMT campus food organic wastes and recyclables into valuable products that have economical values, which can be used to reduce the campus running expanses. The proposed system is targeting only 3 types of campus wastes (Organic food remains -Plastic tableware - aluminum cans). The main objectives of the project are:

- Adding an economic value to the organic food wastes instead of dumping it.
- Reducing the campus running cost by: Producing percentage of the campus disposable plastic tableware using AASTMT owned plastic injection machines reside at ISC. Reducing the campus budget for purchasing:
- Fertilizers used in campus cultivated areas.
- Aluminum raw materials for student's graduation projects.

These objectives will be achieved by manufacturing:

- Portable compost unit that produce organic fertilizer from garbage.
- 2 molds for the AASTMT plastic injection machine.
- Plastic washing, drying and disinfection unit to recycle the plastic tableware.
- Aluminum can crusher machine to reduce the storing size of the cans until melting it.
- Electrical furnace to melt aluminum cans into raw bars.

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=29

Funded by the AASTMT

2- PROJECT: COMPOSTING THE ORGANIC WASTES INTO AN ORGANIC FERTILIZERS USING THE EARTHWORM EISENIA FETIDA (RED WIGGLER)



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Recycling the organic waste is considered as a great problem all over the world and especially in the Arab countries which have an increase rate of population and development. Most of these organic wastes are dumped in landfills and a very few are buried in specially designed underground places. The decomposing of such organic wastes leads to the production of greenhouse gases as CO₂ and methane. Also, it causes many problems to the underground water. The current project aims to the building a sustainable composting unit for the disposal of the organic wastes using the earthworm which will feed on them. After digesting the worms for these organic wastes, it produced a cast called vermicomposting which is very rich in organic nutrients as well as growth hormones which will be very useful for plant growth. Moreover, the production rate of these worms is very high and also its protein content reach 70%. So, the dried worm meal can be used as a supplementary feed for fish and poultry. This in turn will decrease the fish and poultry production coast and hence decrease the overall prices of such important human food. So the current project is trying to solve the problem of organic wastes in cities and also converting them to a valuable and important product. Moreover, such techniques will decrease the overall emission of greenhouse gases.

Funded by AASTMT

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=27

Public Engagement

1- VeryNile lecture





Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

VeryNile was created in 2018 as an initiative that breaks boundaries through its wide range of ideas, strong commitment to action, and ability to bring together multi-sectoral volunteers and partners. The Nile is a symbol of Egyptian heritage and a source of life for Egypt. However, according to the World Economic Forum, it is also one of 10 rivers that contribute 90% of the garbage in the world's oceans. By cleaning the Nile, raising awareness about the importance of reducing plastic consumption, and empowering local communities, VeryNile ensures that its impact is not just clear on a local and regional level, but on a global one as well.

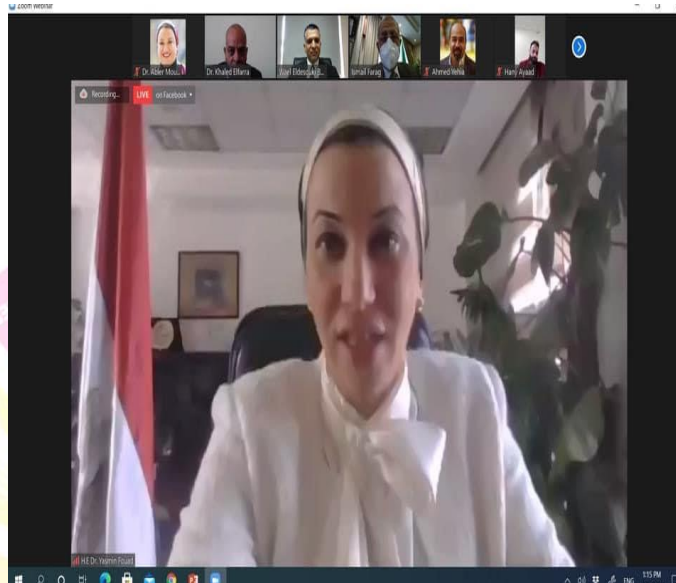
Architect Mostafa Habib presented the lecture on the initiative's process starting from fishing out the waste to clean up the Nile, to recycling and up-cycling the waste to various products and materials.

2- The participation of the Rotaract team of El Alamein in supporting the United Nations goals for sustainable development



Some students from the Rotaract team of El Alamein participated in supporting the United Nations sustainable development goals by helping to clean one of the beaches on the northern coast and separating waste from paper and plastic to preserve the environment as part of the activities of the third El Alamein Students

3- Environment and entrepreneurship workshop in the presence of his excellency the Minister of the Environment and the head of the Academy



4-

The Arab Academy for Science, Technology and Maritime Transport organized a meeting entitled "

Entrepreneurship and Environmental Conservation " for Arab Academy students on Sunday, February 21, 2021 via Zoom.

with presence and participation of:

- Her Excellency Dr. Yasmine Fouad, Minister of Environment.
- His Excellency Dr. Ismail Abdel Ghaffar Ismail Faraj, President of the Academy.
- Consultants and experts in different areas of environment

The meeting's agenda was how to support youth in setting up projects related to the environment, as well as how to provide the necessary training and funding for them. Her Excellency, Minister of Environment, Dr. Yasmine Fouad, expressed her happiness with the participation of Academic students in the " entrepreneurship and environmental conservation " meeting, noting that the AST is a race to organize and hold important seminars and conferences in addition to its great role in helping and training young people in the localities to deal with the solid waste system, many environmental files and research projects in cooperation with the Ministry. At the beginning of his speech, His Excellency Dr. Ismail Abdel Ghaffar Ismail Faraj, President of the Academy, extended his great welcome to Her



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Excellency Dr. Yasmine Fouad, Minister of Environment and to the Gentlemen, attending the meeting, noting that the participation of Her Excellency confirms the extent of the interest given by the Arab Republic of Egypt in the field of environment and youth support. The academy's president added that the academy is keen to support the Egyptian and Arab youth in all scientific fields, including the environment file. Today's meeting coincides with five years since the establishment of the Entrepreneurship Center in the Academy, which succeeded in delivering many achievements such as " Egyptian Entrepreneurship Rally - Egyptian Pioneers Rally ". His Excellency stated that the Academy is doing every effort to help support youth and that there are many research projects through which the Academy collaborates with the Ministry of Environment.

3- Consultancy Services

To qualify companies, organizations and entities seeking to establish and implement quality, environmental, health and safety, energy, and information security management systems as well as organizational excellence.

The Institute undertakes productivity improvement projects, and manages downsizing and privatizing initiatives with all underlying issues. The Productivity and Quality Institute pre-qualification in this domain contains a long list of companies both in Egypt and in the Arab world working in various sectors of manufacturing, Oil and Gas and service industries. We assist our clients to achieve and maintain certification of their management systems to international standards such as Environmental Management Systems ISO 14001.

https://aast.edu/en/institutes/pgi/contenttemp_item.php?unit_item=342&page_id=3420001



Case Study

Organic wastes produced from the landscape areas in the main campus in Abu Qir and from the kitchen scraps are of great importance. These wastes are converted into soluble organic fertilizers and used in the Earthworm production unit which mainly produce vermi-compost used as an organic fertilizer for the plant production in the hyonic system and worm's production used in the experiments of animal feed production





Goal 13 – Climate Action

13 CLIMATE ACTION



Our Aim

To protect the environment and address climate change to ensure that all students are fully aware of UN SDG 13 and the UN motivation for such a goal. Besides, familiarize students with the related international conventions about climate change. Moreover, provide frequent initiatives for community serving workshops within AASTMT's campuses cities. That will grantee AASTMT's graduate's readiness to be involved in any environmental preserving system during their future careers. AASTMT pledge at the head-of-organization level to reach (net) zero Greenhouse Gases (GHGs) as soon as possible, and by mid-century at the latest, in line with global efforts to limit warming to 1.5°C. Set an interim target to achieve in the next decade, which reflects maximum effort toward or beyond a fair share of the 50% global reduction in CO2 by 2030 identified in the IPCC Special Report on Global Warming of 1.5°C.

Objectives:

- Carbon Emissions Reduction:
- Being Net Zero Carbon by 2050.
- A 50% reduction in emissions by 2040.

Last Year Recorded

Worldwide: 414

Egypt: 13



Our Progress through 20/21

Teaching

Postgraduate Studies: Master of Science Degree in Smart Environmental Management of Climate Change (SECCM), Maritime Postgraduate Studies Institute.

College of Maritime Transport and Technology, Maritime Meteorology (BS281)

College of Fisheries and Aquaculture Technology, Meteorology (FN121)

Meteorology (UM114)

Initiatives

1. Meteorology & Oceanography Training Courses
2. Environmental Monitoring and Climate Change Laboratory
3. GLOBAL CLIMATE CHANGE, BIODIVERSITY AND SUSTAINABILITY: CHALLENGES AND OPPORTUNITIES, in cooperation with University of Prince Edward Island (PEI) - Canada and Smithsonian Conservation Biology Institute - Virginia - USA, during April 15 - 18, 2013
4. Meteorology and Hydrographic Survey Program
5. Environmental Monitoring and Climate Change Laboratory:
6. Permanent Arab Committee on Meteorology & its Sub-committees in the League of Arab States (LAS)/
7. World Meteorology Organization (WMO)
8. Permanent Arab Committee on Meteorology & its Sub-committees in the League of Arab States (LAS).
9. Weather and Climate Risk Information Management Committee (League of Arab States (LAS)).



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

Race to Zero AASTMT Initiative

Arab Academy for Science, Technology and Maritime Transport participate in Race to Zero Campaign: Race to Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero-carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth. Race to Zero Campaign mobilizes a coalition of leading net zero initiatives by 2050 at the latest, representing cities, regions, businesses, the biggest investors, and universities and colleges.

Steps to implement the Campaign:

1. Pledge: Pledge at the head-of-organization level to reach (net)-zero in the 2040s or sooner, or by midcentury at the latest, in line with global efforts to limit warming to 1.5C.
2. Plan: Within 12 months of joining, explain what actions will be taken toward achieving both interim and longer-term pledges, especially in the short- to medium-term. Set an interim target to achieve in the next decade, which reflects a fair share of the 50% global reduction in CO2 by 2030 identified in the IPCC Special Report on Global Warming of 1.5C
3. Proceed: Take immediate action toward achieving net-zero, consistent with delivering interim targets specified.
4. Publish: Commit to report progress at least annually, including via, to the extent possible, platforms that feed into the UNFCCC Global Climate Action Portal



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



GIS to Serve the Sustainable Development Goals – Egypt Vision 2030

The Bibliotheca Alexandrina, in cooperation with ESRI Northeast Africa, organizes the Geographical Information Systems (GIS) Conference for the seventh consecutive year, under the title “GIS to Serve the Sustainable Development Goals – Egypt Vision 2030” on Tuesday, 14 December 2021, at 10:30 am, in the BACC Great Hall.

The Conference tackles the technologies, tools, and multiple domains of the geographical information systems, through a panel discussion and presentations that feature a number of experts and specialists in this field in Egypt. The Conference is preceded by online GIS workshops, which aim at training students on the latest technologies this particular field has reached.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Additionally, the Conference will be accompanied by an exhibition showcasing the maps that applied the geographical information systems and will include a prize-giving ceremony to honor the winners of the “Digital Maps” drawing competition, which targeted students and those with an interest in geographical information systems.

Climate Protector Initiatives

https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1213&page_id=12130000





- An initiative by the Ministers of Immigration and Planning for the participation of Egyptians abroad in a "dignified life"
- The Arab Academy of Sciences cooperates with the Ministry of Immigration to support Egyptians abroad

Research

AASTMT Research Performance and Collaboration of the SDGs from Scoops

From SciVal, the Arab Academy developed an activity spreadsheet for SDG (13) as shown below, which contains three data sets: Research performance, Collaboration summary and Top 15 key-phrases of this SDG.

SciVal is a research performance assessment tool that allows analysis of the data from Scopus. The Scopus database covers over 30 million publications from 1996 to the present. SciVal updates weekly from Scopus.

SciVal gives access to the performance of research institution, and individual researchers worldwide. SciVal helps to visualise research performance, benchmark against peers using a number of metrics, review co-author networks, and identify potential collaborative partnerships



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

Research Projects

- **Innovative Photovoltaics Envelopes for adaptive energy**
- **improved for Recast Of Climatic changes and its Socioeconomic implication**
- **Carbon Footprint Estimation and Reduction in the AASTMT Campus Towards**
- **High Level Renewable and Energy Efficiency Master Courses**
- **Wind Engineering Skills in Egypt and Tunisia**
- **Climate Change Management Through Mitigation And Adaptation (AdapTM)**
- **Knowledge exchange in sustainable Fisheries management and Aquaculture in the Mediterranean region**

https://aast.edu/en/sdg/goals.php?menutab=10&unit_item=1213&page_id=121300007

Public Engagement

- An initiative by the Ministers of Immigration and Planning for the participation of Egyptians abroad in a "dignified life"
- The Arab Academy of Sciences cooperates with the Ministry of Immigration to support Egyptians abroad
- GLOBAL CLIMATE CHANGE, BIODIVERSITY AND SUSTAINABILITY: CHALLENGES AND OPPORTUNITIES, in cooperation with University of Prince Edward Island (PEI) - Canada and Smithsonian Conservation Biology Institute - Virginia - USA, during April 15 - 18, 2013

Training Courses: Meteorology and Hydrographic Survey Program

Environmental Monitoring and Climate Change Laboratory



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

- Organizations:

Permanent Arab Committee on Meteorology & its Sub-committees in the League of Arab States (LAS).

World Meteorology Organization (WMO)

Permanent Arab Committee on Meteorology & its Sub-committees in the League of Arab States (LAS).

Case Study

Mention brief Details about one of the research or initiatives and then mention the output
(note: try to add statistics for any of the above points)

Climate Protector Initiatives

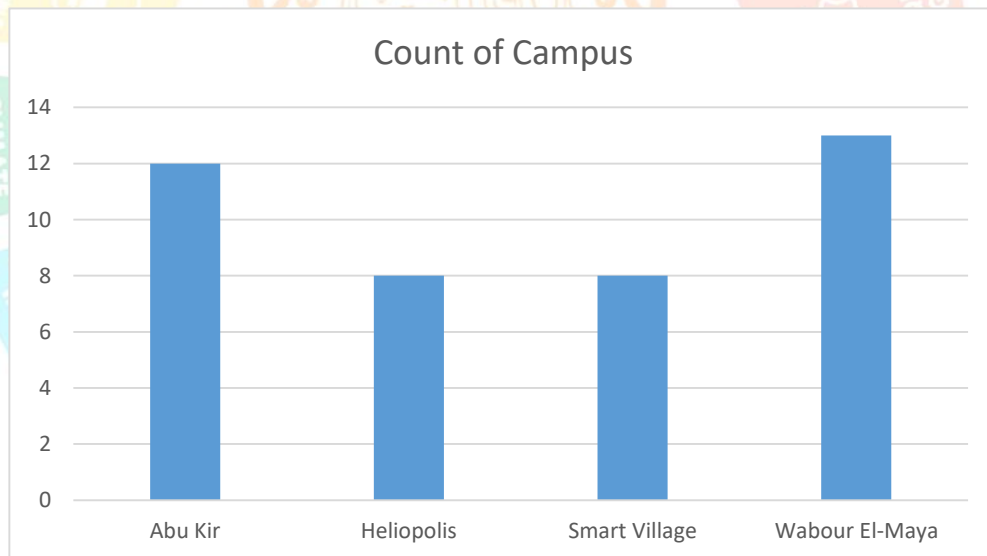
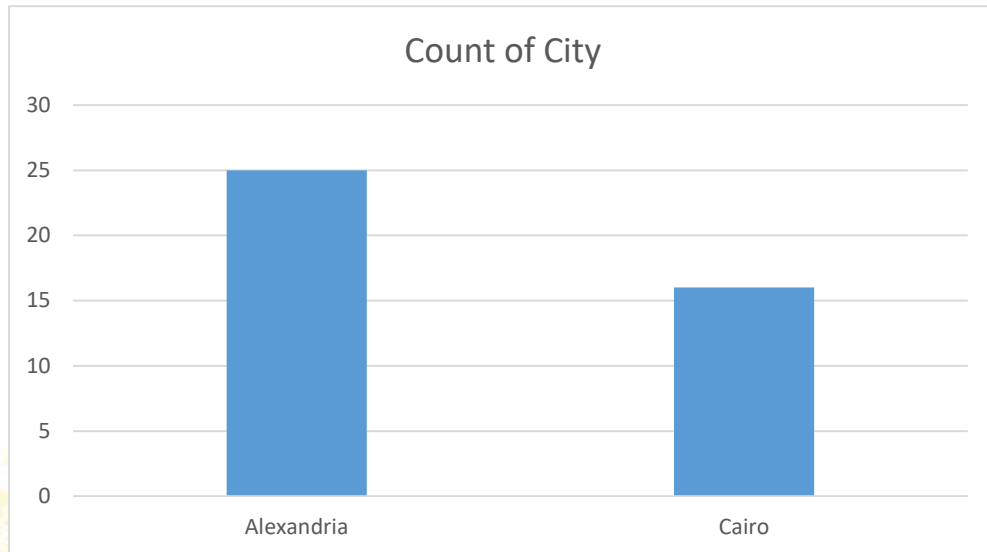
https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1213&page_id=12130000

the output of this initiative is awareness of how protect our climate



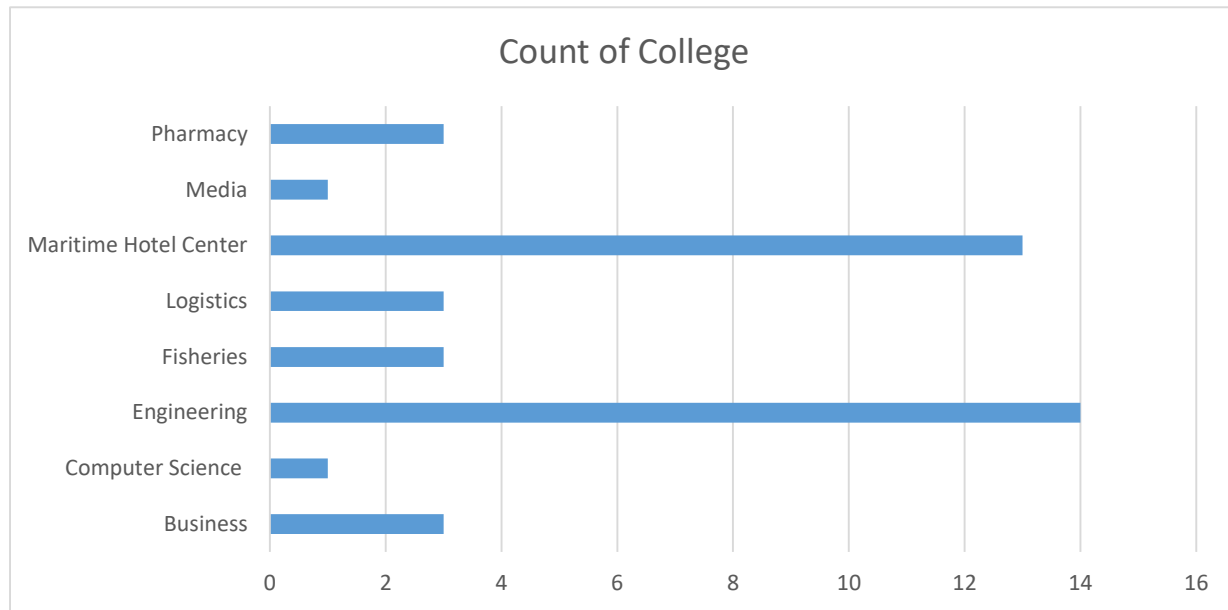


The statistics





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport





Goal 14 – Life Below Water



Our Aim

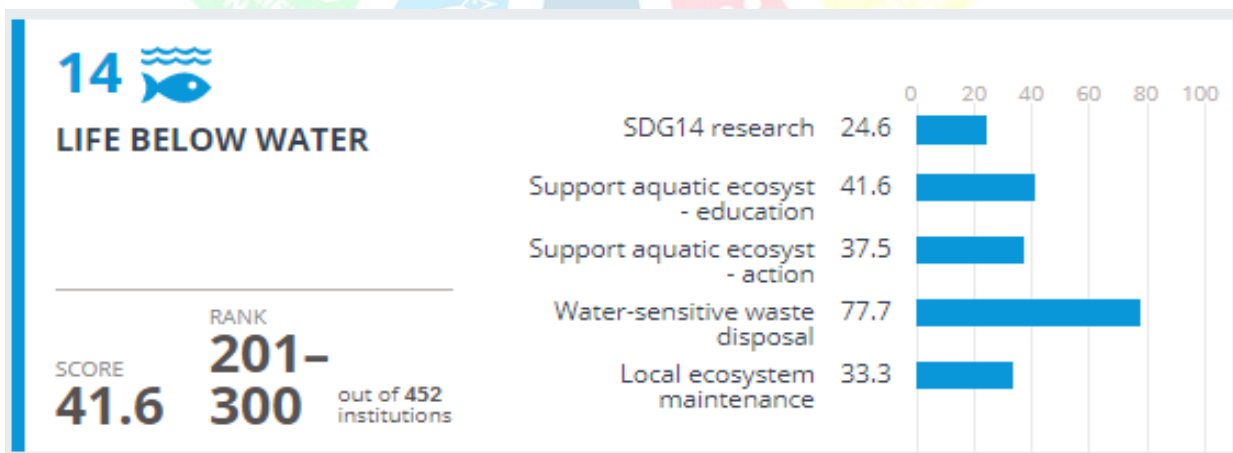
To demonstrate the commitment of AASTMT towards the UN 2030 Agenda, especially preserving the life below water goal (SDG14) through:

- Updating the educational programs to cope with the contemporary ocean-related concerns
- Encouraging research in the field of ocean sustainability and governance
- Community-based initiatives to enhance society's knowledge about pressures and challenges affecting life below water
- Encouraging participation in regional and international ocean-related events, gatherings, and consortiums

Last Year Recorded

Worldwide: 207

Egypt: 4





Our Progress through 20/21

14.1 AASTMT students' international achievements in serving SDG14

14.1.1 Participation in the UN Food for All summit in Dubai EXPO-2022:

The inaugural Food for Future Summit & Expo and Global Agtech Expo saw 60+ world leaders, 150+ influential speakers, the world's top startups, innovators, and food revolutionaries unite to collectively inspire new Agtech and food tech solutions through innovative thinking, multi-disciplinary expertise, and collaborative action. The AASTMT team led by our student Moamen Sobh have presented Egypt at the UN – FAO – Enactus unique competition held on the 24th of February 2022. They provided two products that made an impact under the umbrella of Mycotech. Mycobrick, which is an organic building material. Mycobrick is classified as class A fireproof; it has no reliance on fossil fuel and is 60 times lighter than conventional brick. MycoPottain, a biodegradable pot that can be used in decoration, help plant nurseries and farmers in the transportation of the tiny seed from the pot to the soil; in addition, it can be used as a fertilizer for the soil after removing the paint and grinding it and friendly for the aquatic life if runoffs went to the sea.





14.1.2 Our students are representing Egypt in the UN Ocean Conference Youth and Innovation Forum:

Between June 24-26, 2022, the governments of Portugal and Kenya and the UN Global Compact organized the UN Ocean Conference Youth and Innovation Forum. Two of the AASTMT students were presenting Egypt in the forum. The Forum was an opportunity for youth to contribute to SDG 14 in alignment with the 2022 UN Ocean Conference theme: Scaling up ocean action based on science and innovation for implementing Goal 14: stocktaking, partnerships, and solutions. The Forum was a platform for ocean action and implementing youth-led solutions at scale to address SDG 14 target. The Forum sought to advance and inspire interdisciplinary thinking to address ocean challenges.



https://aast.edu/en/sdg/goals.php?menutab=16&unit_item=1214&page_id=121400005

14.2 Teaching

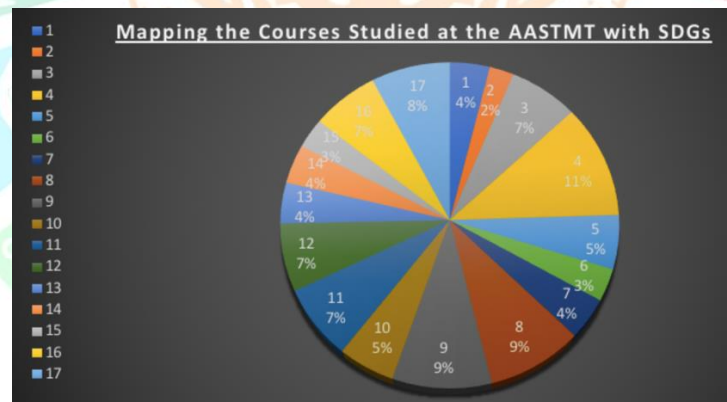
14.2.1 Directing the graduation project topics in the relevant specializations to serve SDG14:

On Sunday, 22 May 2022, during the AASTMT Industrial Advisory Committee (IAC) meetings, a group of students in the Department of Marine Engineering Technology of the College of Maritime Transport and Technology (CMTT) at the AASTMT headquarters in Abu Qir presented their graduation project. Its theme was a land-based ballast water management

system in the presence of their supervising lecturers, namely engineer Mustafa Abdul Ghaffar and engineer Mohammed Shawky. The presenters were Khaled Hazaa, Mustafa Hisham Qisheh and Youssef Sami, Youssef Hamed, Mohammed Khalil, Walid Mohammed, and Bilal Amer. The students did an exciting presentation reflecting their efforts on the global environmental issues related to marine life preservation in line with UN SDG 14 direction. The audience praised the marine environmental research figures for the students' practical experience, and the project results were shared with the attendees.



14.2.2 About 4% of the AASTMT courses are dedicated to covering SDG 14 aspects



https://aast.edu/en/sdg/goals.php?menutab=3&unit_item=1214&page_id=121400007

14.3 Initiatives

14.3.1 AASTMT recycling program

AASTMT perceives the unfavorable effect of plastic waste, from creation through to removal. Plastic contamination can destructively affect Aquatic life, and the College is looking to diminish plastic use and wastage nearby. The accompanying activities have been received to advance this point with staff and understudies:

Single-use plastics in catering (food bundling, dispensable coffee cups, cutlery) have been supplanted with compostable catering supplies in all College food outlets to lessen plastic waste nearby.

Reusable cups are given to AASTMT staff during staff acceptances to decrease single-utilize dispensable cup wastage. These can likewise be bought from grounds retail outlets, and limits are offered to clients when reusable cups are used. Single-use cups cause an extra charge to urge a transition to reusable cups.

Conferencing and Occasions use reusable crystals to serve water, killing waste from recently used plastic-filtered water. The group also produces cleaned water nearby, further diminishing waste by evading the need to purchase indispensable water bundling. Water stations have been introduced all through the grounds for use by understudies and staff to support bottle reuse.

AASTMT intends to keep diminishing waste by investigating new items and administrations to help decrease plastics utilization and waste. To achieve this, AASTMT adopted a garbage segregation strategy and has distributed categorized trash bins on all its campuses; the following pictures are from Abu-Qir Campus.

http://www.aast.edu/en/research/contenttemp.php?page_id=47300116





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

14.3.2 AASTMT Hosts International events that support ocean conservation

14.3.2.1 IAMU AGA21 26th -28th October 2021

The 21st AGA and IAMUC 21 were hosted by the Arab Academy for Science, Technology, and Maritime Transport (AASTMT), in the beautiful city of Alexandria, Egypt. The theme of the AGA21 IAMUC is “Innovation and Sustainability of Maritime Industry in the Scope of [Blue Economy](#) and [Green Concept](#)”.

The 21st Annual General Assembly (AGA 21) is the International Association of Maritime Universities (IAMU) annual meeting. The IAMU Conference (IAMUC), held annually as part of the AGA, brings together experts and official representatives of IAMU member universities from all over the world to discuss, exchange, and share recent progress and future trends in maritime education, training, research and other matters within the scope of IAMU.

<https://aga21.aast.edu/en/home>





Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

14.3.2.2 MARLOG 11 20th -22nd March 2022

The conference theme was “**Towards a sustainable blue economy**”. Blue economy seeks to promote economic growth while at the same time ensuring the environmental sustainability of the oceans and coastal areas. Blue economy has diverse components, including established traditional ocean industries such as maritime transport, fisheries, and new fields, such as offshore renewable energy, seabed extractive activities, aquaculture, and marine biotechnology.

The conference topics were:

- **Blue Economy** Management Technology
- Innovative investments in the blue economy
- **Blue economy**: Maritime transport and Ports services
- Smart innovations for the blue economy
- Challenges and opportunities of Blue Economy
- **Blue Economy**: Environmental Prospective

<https://marlog.aast.edu/archive/2022/en/home.html>

<https://marlog.aast.edu/archive/2022/en/introduction.html>

14.4 Research

14.4.1 TouMaLi research project

The overall project goal is to reduce the proportion of waste from coastal tourism in North-African states (Algeria, Egypt, Morocco and Tunisia) and to recycle and reuse the unavoidable waste to reduce overall marine and beach littering sustainably. Primary activities are the



development and implementation of a coastal monitoring program; the definition of a pollution baseline as well as marine litter pollution assessments; the evaluation of solid waste management and current mitigation measures; the analysis, implementation and monitoring of legal, organizational, financial and technical solutions and measures with local, regional and national actors; and the provision of capacity building and awareness raising in the regions.



14.4.2 AASTMT funds research projects serving SDG14, like the “Blue Carbon project” (May 2021 - in progress)

Coastal ecosystems are critical to maintaining human well-being and global biodiversity. In particular, mangrove forests provide numerous benefits and services that are essential for climate adaptation and resilience, where it helps mitigate climate change by sequestering and storing significant amounts of carbon (blue carbon) from the atmosphere and oceans. To explicitly address the role of blue carbon ecosystems in climate change mitigation and human wellbeing through policy, regulatory, finance, or other mechanisms, the carbon stock in these ecosystems and the current or potential carbon emissions from changes to those ecosystems must be quantified. In light of the limited studies in the literature that connects the recent reliable estimates of carbon emissions and their relation to the mangroves on the Egyptian Red Sea coast, the overall objective of this project is to facilitate development in the area, restore mangrove ecosystems, enhance ecosystem services (including carbon sequestration), promote sustainable mangrove related income, and act as a model for future projects. This



Sustainable Development Goals **Arab Academy for Science, Technology and Maritime Transport**

project aims to create a carbon inventory for mangrove beds at selected locations along the Red Sea coast of Egypt.

https://aast.edu/en/scientific-research/projects/project.php?uid=16&proj_id=21

14.4.3 Knowledge exchange in sustainable Fisheries management and Aquaculture in the Mediterranean region

FishAqu (Knowledge Exchange in sustainable Fisheries management and Aquaculture in the Mediterranean region) is a project, co-financed by the European Commission through the Erasmus+ program, in the area of Capacity Building in the field of Higher Education.

The aim of the project is to develop capacities of practitioners and academics working on fisheries management and aquaculture in Egypt, in line with the directives of the Bologna process and the strategies of European Policy Cooperation (Education and Training 2020 framework) in order to launch a master degree program on fisheries and aquaculture in Egypt.

Objectives are:

- initiate a master's degree study program competence-based curriculum in response to Egyptian Vision 2030 giving higher priority and importance to the sector of fisheries and its relation to Egyptian food security
- implement a new Collaboration Platform to support the learning and academic environments
- involve researchers and practitioners into communication and dissemination and establish their joint participation in the educational process and research
- upgrade facilities and services of Egyptian universities through modern equipment, international relations and student counselling/guidance
- improve the internationalization and modernization of Egyptian universities in terms of research, scientific, technological and service (student counselling/guidance)
- integrate decision makers, academic staff, NGOs, labour marketing together.

https://aast.edu/en/research/contenttemp.php?page_id=47300106



Case Study: TouMaLi research project

In August 2021, the University of Rostock and the Leibniz Institute for Baltic Sea Research Warnemünde (IOW), together with the Arab Academy for Science, Technology and Maritime Transport (AASTMT) and other partners including think tanks as well as universities and ministries from the project region, started a research project on Marine Litter caused by the tourism industry in Egypt, Morocco, Tunisia and Algeria called TouMaLi. Arab Academy for Science, Technology and Maritime Transport (AASTMT) participate in this research as the local project partner in Egypt. Complimentary the Egyptian Ministries for Environment, Local development and Tourism are involved. The project aims to develop and establish sustainable waste management solutions in the tourism sector to protect the marine ecosystems of the Middle East and North African (MENA) region. The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is funding the project with about 4.2 million euros from the "Funding Program against Marine Litter". "Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH" supports the Federal Ministry in implementing its funding policy aims.

The Mediterranean Sea is one of the most polluted marine environments in the world. According to the European Parliament, about 730 tons of litter are discharged daily, most of which consists of plastics. So far, monitoring of inputs and research on the exact impacts and long-term effects are limited. However, negative impacts on marine wildlife have already been proven.

The countries belonging to the MENA region, Egypt, Algeria, Morocco and Tunisia, have a very high plastic waste generation. This is partly caused by tourism, which significantly contributes to local waste generation. A consortium of ten institutions from science think tanks and private companies will address this challenge in the TouMaLi research project. The German partner consortium includes next to the University of Rostock and the Institute for Baltic Sea Research, also three companies with an excellent reputation, named Adelphi gGmbH, BlackForest Solutions and the Landbell Group. The project's objective is to minimise the share of tourism waste in the target regions. This will be achieved by implementing the framework conditions needed to avoid and recycle waste as much as possible, thereby sustainably reducing the total amount of marine litter.

Therefore, the project's subject is developing an assessment system for marine litter pollution



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based on monitoring beach litter and evaluating current waste disposal. Adding to that is the analysis, implementation and monitoring of legal, organizational, financial and technical solutions and measures with local, regional and national actors. Awareness-raising is another crucial activity to achieve long-term, self-sustaining monitoring by local actors.

The project implementation focuses on designated pilot regions in the project countries, which are to become exemplary for more comprehensive national implementation after the end of the project.

AASTMT, as the academic and scientific arm of the Arab League with seven sites in Egypt and the headquarter located in Alexandria, the most populated touristic city on the Mediterranean, is looking forward to effectively cooperating with the University of Rostock and all partners to achieve the different objectives and outcomes of the project. We target to involve all national stakeholders in the tourism and waste management sector for the project's great success. Additionally, all national and international stakeholders engaged in the area that aims to target the issue of marine litter are invited to participate in the project activities.



In March and April 2022, the Arab Academy and the IOW teams, supported by several local students and volunteers, surveyed several beaches around Alexandria and Marsa Matruh. The beaches sampled were a mix of private and public beaches. Furthermore, marinas were also



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examined to gain more knowledge about the overall pollution status and to assess litter emissions. Regarding beach pollution, more than 25.000 litter pieces were collected and analyzed. A preliminary assessment of the sources of pollution indicates that many of the plastic bags, candy wrappers, straws and food packaging originate from tourism and beach users.



<https://toumali.org/en/partners>

https://toumali.org/sites/toumali.org/files/documents/toumali_factsheet_eng.pdf

https://aast.edu/en/scientific-research/projects/news.php?page=2&unit_id=1218&language=1&event=2&get_event_type=1

<https://toumali.org/en/node/126>



Goal 15 – Life on Land



Our Aim

In order to achieve the SDG 15 which aims to protect, restore, and foster sustainable use of terrestrial ecosystems, managing forests sustainably, battling desertification, halting and reversing land degradation, and promoting biodiversity conservation. AASTMT is a leading institution at the local, Arab and international levels, and has made an effort to achieve the following goals:

- 1- Educational and training programs with international standards for students to be aware of how to protect ecosystem and how to contribute sustainable use of land.
- 2- Waste management and plastic recycling policy.
- 3- Arranging initiatives like climutopia, stop food loss and waste and energy management.

Last Year Recorded

Worldwide: 306

Egypt: 7

Our Progress through 20/21

Teaching

Environmental Studies 1

https://aast.edu/pheed/show_course11.php?get_code=AR362

Engineering Geology

https://aast.edu/pheed/show_course11.php?get_code=CB361

Environmental & Sanitary Engineering



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

https://aast.edu/pheed/show_course11.php?get_code=CB532

Environmental Control and Energy in Buildings

https://aast.edu/pheed/show_course11.php?get_code=CB533

Special Topics in Environmental Engineering

https://aast.edu/pheed/show_course11.php?get_code=CB534

Virtual Environments

https://aast.edu/pheed/show_course11.php?get_code=CS453

Initiatives

1- World earth day

<https://aastmtic2.aast.edu/sri/sdg15/15.3.5.pdf>





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2- Engineers for the future Egypt

<https://rayetmisr.com/30466-2/>



3- climotupia

https://aast.edu/en/sdg/goals.php?menutab=22&unit_item=1213&page_id=12130000





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4- prepare for green

https://aast.edu/en/news.php?unit_id=419&language=1&event=40&get_event_type=1



5- Go green

http://www.aast.edu/en/news.php?page=12&event=22&unit_id=531&language=1&get_event_type=1

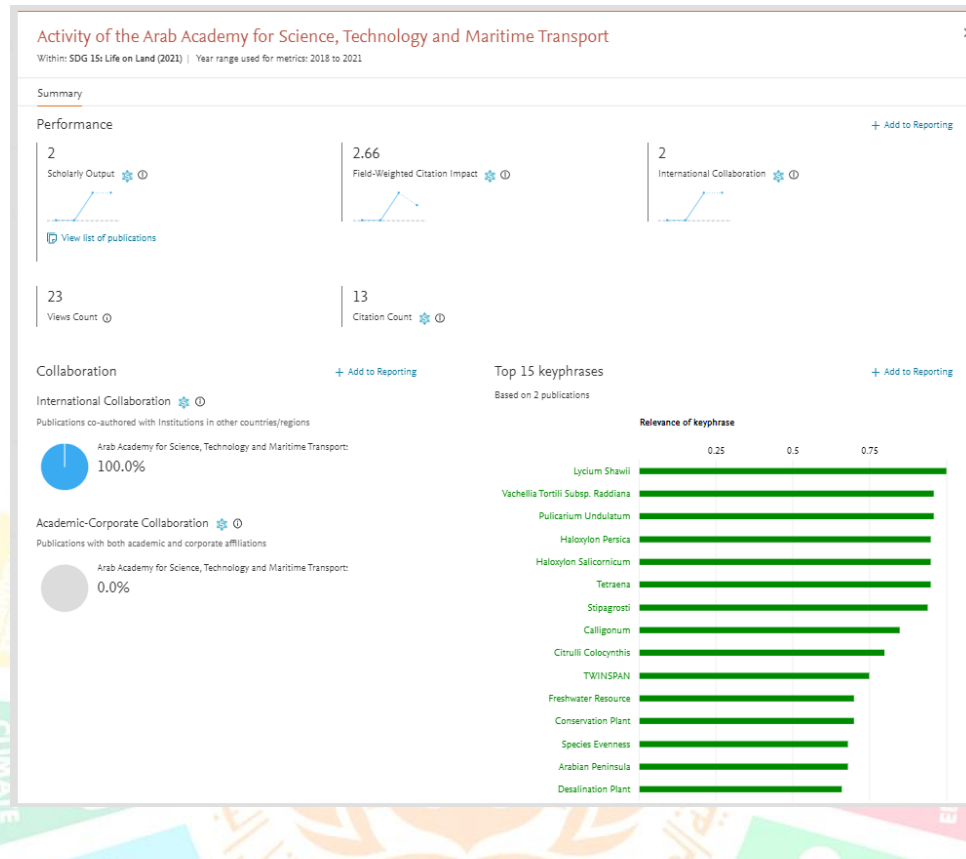


Research

https://aast.edu/en/sdg/goals.php?menutab=7&unit_item=1215&page_id=121500003



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



- High Level Renewable and Energy Efficiency Master Courses
- Knowledge exchange in sustainable Fisheries management and Aquaculture in the Mediterranean region

https://aast.edu/en/sdg/goals.php?menutab=10&unit_item=1213&page_id=121300007

Public Engagement

- 1- Symposium on the role of the media in raising environmental awareness and the “Be prepared for the green” initiative



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<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.elmogaz.com%2F698920&psig=AOvVaw3Fn9R0hxf2OcmGZJAp77pg&ust=1667849102771000&source=images&cd=vfe&ved=0CA0QjRxqFwoTCLjcqJ2kmvsCFQAAAAAdAAAAABAE>



- 2- Ministry of Environment Honors the Academy

<https://aast.edu/en/csr/news.php?unit=1&event=3779&language=2>

- 3- No plastic bags

<https://www.bing.com/search?q=google+translate&form=ANNT11&refig=299ffe94c282407c87f59d1b69d4215c&sp=6&q=AS&pq=google&sk=AS5&sc=10-6&cvid=299ffe94c282407c87f59d1b69d4215c>

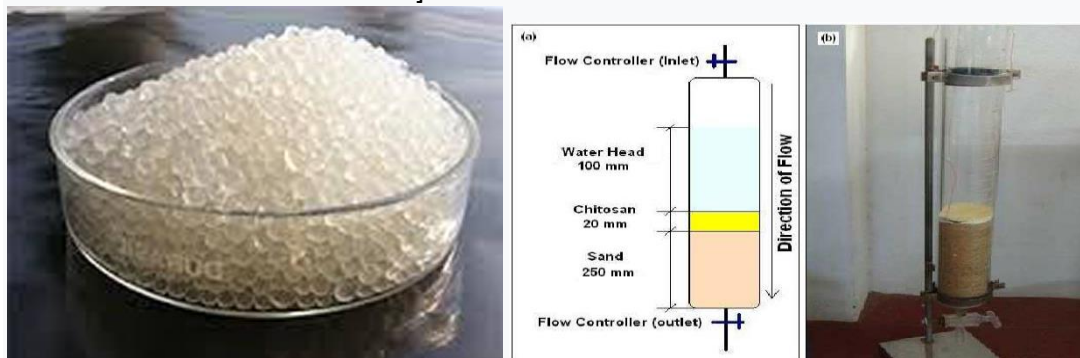
Case Study

Mention brief Details about one of the research or initiatives and then mention the output
(Note: try to add statistics for any of the above points)

Synthesis and Characterization of Metal-Organic Frameworks in Petroleum Oil-Contaminated Wastewater

One of the research that utilizing in various environmental applications such as the treatment of industrial contaminated wastewater with carcinogenic heavy metals and microorganisms to

achieve sustainable use of water and land and use of this water for agricultural irrigation .The aim of the research includes the preparation and characterization of metal-organic framework/composites. The hydrogel composite consists of [chitosan & 1- MOF (Metal Organic Framework 'Zirconium Chloride)] and act as adsorbent.



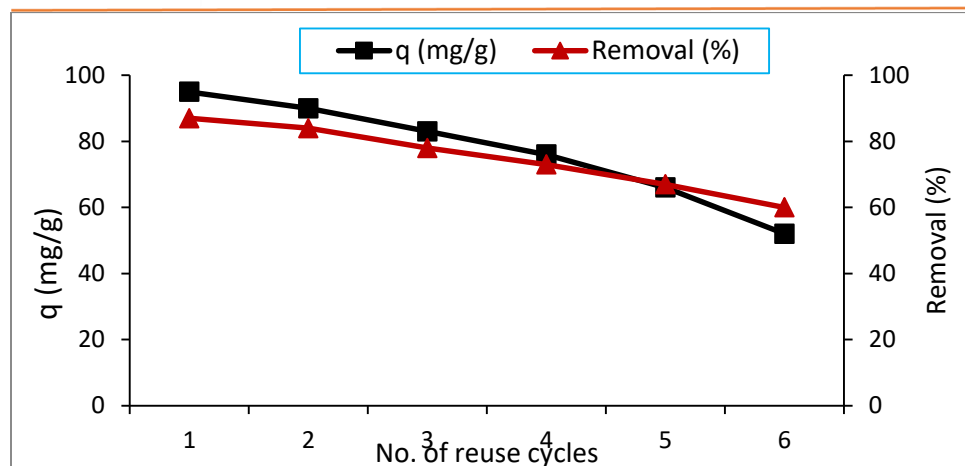
Results

Reusability

The reusability of the adsorbent is a very important factor from an economic point of view since it affects directly on the production cost of adsorbents. In this study, the ability of the prepared CS-MOF (UIO-66-NH₂) adsorbent to be reuse in the adsorption of heavy metal was studied via conducting the adsorption-desorption experiments as investigated. The results indicated that adsorbent still has good adsorption properties after conducting six repeated adsorptions - desorption cycles. Where, the removal (%) of heavy metal still exceeded 60 % after six-cycles with maximum adsorption capacity reached 52 mg/g. This reveals that the developed adsorbent beads could be used efficiently as a reusable and ecofriendly adsorbent for removing of ions from their aqueous solution.



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This research won the second place in IEEE from special track and made it to the finals in India



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport



بالأكاديمية العربية بآبي قير | عقدت لأول مرة في مصر فعاليات المرحلة (IEEE-YESIST12) فعاليات المرحلة التمهيدية للمسابقة الدولية
...والتي IEEE-HKN Mu Beta Chapter من تنظيم فرع الجمعية الشرفية للمنظمة الدولية IEEE-YESIST12 التمهيدية للمسابقة الدولية
By College of Engineering and Technology Main Campus Alexandria-AASTMT | Facebook



Goal 16 – Peace, Justice and Strong Institutions

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



Our Aim

AAST encourages spreading justice within the academy between employees and also between the students. Improving the teaching process and all the services in AAST is considered to be a responsibility for each person in the Academy. Each year AAST holds transparent and fair student union elections in all colleges which is highly important to discuss both students and educational issues with the Governance of the Academy and also, in supporting students when it is needed. AAST takes strong steps to fight corruption and to combat bribery and corruption within the Academy and in the surrounding communities.

Last Year Recorded

Worldwide: 309

Egypt: 6

Our Progress through 20/21

Teaching

AAST encourages teaching freedom for the Academic staff in selecting different and creative teaching methodologies to improve the teaching process. AAST supports not only teaching new and advanced modules, but also focusing on raising the students' experiences and allow them to cope with the changing labor market by presenting Practical Training with different external stakeholders for both normal students and students with disabilities.

Initiatives

During the COVID-19 Pandemic, College of Pharmacy launched by Basmet Kheir family (Students' Union) an awareness campaign in Al-Alamin to educate the young students at El Alamein School about this pandemic. Additionally, AAST had different initiatives in many fields: Community service, Social responsibility and volunteering. On the other hand, AAST combat corruption and bribery within the academy, through signing agreements with National Anti-Corruption Academy and participation of the students in the world anti-corruption day.



Sustainable Development Goals Arab Academy for Science, Technology and Maritime Transport

Research

AAST gives freedom for both academic staff and students in selecting their areas of research and the topics. Also, Several Labs have been established by various AAST Colleges, researchers can use these labs to conduct their research work.

Public Engagement

AAST cares for publishing information, so that people have access to this information. One of the most important sources of information is the Arab Network for Science and Technology for Sustainable Development Network. Annual reports of AAST achievements and college achievements are published on the website.

Case Study

The Technical and Vocational Institute (TVI), which is a part of the Industry Service complex (ISC), offers a BTEC Higher National Diploma awarded by Pearson International.

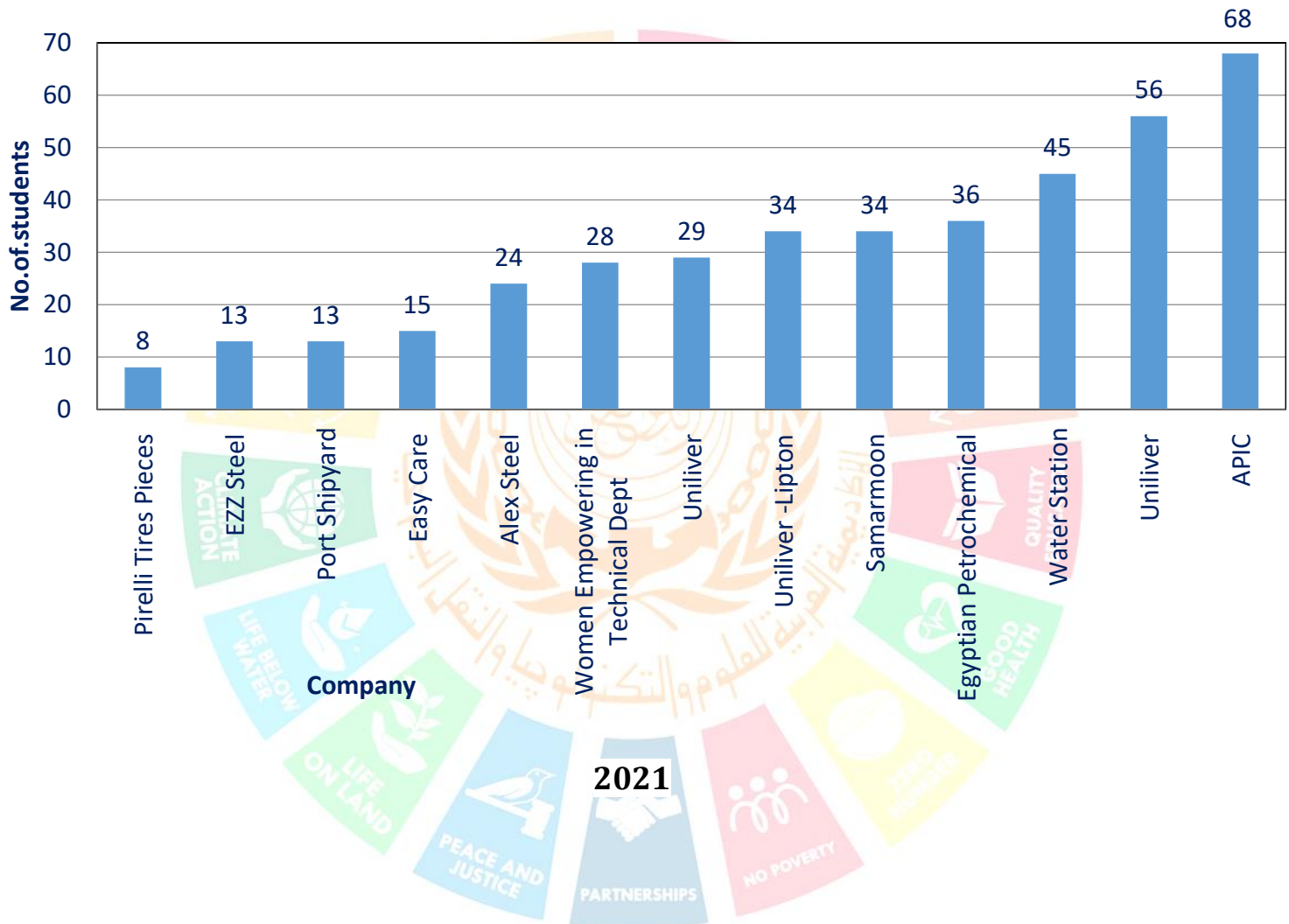
Aly Mohamed El Garhy graduated from Technical and Vocational institute (TVI) - BTEC Higher National Diploma (HND) in Electrical and Electronic Engineering. TVI with the agreement signed with two large stakeholder presented t2o training programs in them, which enabled him to work on the new industrial systems and gave him a wider range to work through this specialization in modern technical industrial maintenance process. This gave him the opportunity to open his own business (El-Eman Factory) in “Turning Computerized Numerical Control Manufacturing”.



Some products from El-Eman Factory



TVI Male and Female Students Training in Factories & Companies 2020-





TVI Male and Female Students Practical Training in Factories & Companies 2020-2021





Goal 17 – Partnerships for the Goals

17 PARTNERSHIPS FOR THE GOALS



Our Aim

The objectives of the strategic plan of the Arab Academy for Science, Technology and Maritime Transport (AASTMT) 2021/2026 focus on internationalization and community service, which are in line with the Times Higher Education sustainable development goals (SDGs).

The AASTMT strategic objectives serve the requirements of goal 17 of the Times Higher Education, starting with the research that serves all seventeen goals followed by signing many cooperation agreements at the national and international levels with governmental and non-governmental organizations.

On the other hand, it publishes reports on all the goals that will be announced to everyone, and finally it is concerned with spreading the principles of the SDGs through educational programs, seminars and various public lectures.

Our Collaboration for Goals

N	Partner Institution	Specialization	Content
SDG 4	Agreements and Partnerships with Companies and Bodies related to education and academic degrees.		
1	ESC Rennes University Country: France	Field: College of Management and Technology	The two parties agreed to cooperate in order to offer a dual degree Certificate for students of College of Management and Technology.
2	Bibliotheca Alexandrina Country: Egypt	Field: College of Artificial Intelligence	The two parties agreed to cooperate in the field of artificial intelligence.



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3	Northampton University Country: UK	Field: College of Management and Technology	Cooperation between the two parties to add a dual degree program in the BIS major for students of College of Management and Technology.
4	Autonoma Barcelona University Country: Spain	Field: College of Law and College of AI	The two parties agreed to offer a Joint Certificate to students of College of Language and Media and students of College of Artificial Intelligence at the Academy.
5	Egyptian Space Agency Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in all fields of space technology, in addition to cooperation through the exchange of scientific and technical expertise, education, postgraduate studies and scientific research.
6	Faculty of Arts - Alexandria University Country: Egypt	Field: College of Language and Communication	The two parties agreed to cooperate in the field of postgraduate studies and research to offer diplomas, master's and doctoral degrees in the field of language and media.
7	Egyptian Yacht Club Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the Maritime field and the field of postgraduate studies.
8	Military Intelligence and Reconnaissance Country: Egypt	Field: General Agreement	The two parties agreed to cooperate through education, training and cooperation in postgraduate programs.
9	Military Medical Academy & Northampton University	Field: Graduate School of Business	The parties agreed that the University of Northampton should equalize the Medical Management Board Certificate



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Arab Academy for Science, Technology and Maritime Transport

	Country: UK		
10	Armed Forces Logistics Authority Country: Egypt	Field: College Logistics and International Transport	The two parties agreed to cooperate through the academy's provision of international transport and logistics programs for the officers of the authority to raise the efficiency and scientific skills of the officers.
11	University of Plymouth Country: UK	Field: College of Maritime Transport and Technology	The two parties agreed to cooperate in order to provide a dual degree program for the students of the College of Maritime Transport and Technology .
12	International experts for research enrichment and knowledge exchange (IEREK) Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in many scientific fields to increase the knowledge of AASTMT students, in addition to training programs in areas of common interest.
13	Ministry of Energy & Infrastructure Country: United Arab Emirates	Field: College of Maritime (Sharjah branch)	Cooperation between the Ministry of Energy and Infrastructure in the UAE and the Academy (Sharjah branch), in the field of Maritime education and training.
14	Galala University Country: Egypt	Field: General Agreement	The two parties agreed to cooperate through education, training, consultations and student activities in many educational fields.
15	American University in Cairo Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the field of study programs and academic activities, and to enhance cooperation in the fields of teaching, scientific research, student exchange programs, and joint programs in



Sustainable Development Goals

Arab Academy for Science, Technology and Maritime Transport

			research and development at various educational and developmental levels.
16	Egyptian Drug Authority (EDA) Country: Egypt	Field: College of Pharmacy	The two parties agreed to cooperate through education, training, consultations, and student activities.
N	Partner Institution	Specialization	Content
Agreements and Partnerships with companies for Training Programs			
1	Egyptian Ministry of Emigration Country: Egypt	Field: General Agreement	The two parties agreed to cooperate to offer training opportunities for Egyptian youth through.
2	Marine Industries and Services Egyptian Ministry of Defense Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the fields of education, training and technical consultations, and exchange experiences and knowledge between them.
3	KIMA - Egyptian Chemical Industries Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the fields of education, training, consultations and joint research, and exchange experiences and knowledge between them.
4	Arab Tourism Organization Country: Saudi Arabia	Field: General Agreement	The two parties agreed to cooperate in the fields of research, training, consulting, and leadership preparation programs, as well as integrating entrepreneurship.
5	EDGE-PRO for Information Systems	Field: College of Computing	The two parties agreed to cooperate through education, training and



Sustainable Development Goals

Arab Academy for Science, Technology and Maritime Transport

	Country: Egypt	and Information Technology	consultations in the field of computers and information technology.
6	ESRI Northeast Africa Country: Egypt	Field: College of Computing and Information Technology	The two parties agreed to cooperate through education, training and consultations in the field of computers and information technology.
7	Franklin Covey Company Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the field of training, as the company implements programs, training courses, workshops and field visits for AASTMT students.
8	MisrTech Company SAE Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the field of training, as the company implements programs, training courses, workshops and field visits for AASTMT students.
9	Sea-Surf Company for Marine Services Country: Egypt	Field: College of Maritime Transport and Technology	The two parties agreed to cooperate in the field of training, as the company implements programs, training courses, workshops and field visits for AASTMT students.
10	Geocombe Geological and Petroleum Consulting Company Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the field of training, as the company implements programs, training courses, workshops and field visits for AASTMT students.
11	Public Administration for Road and Bridges Country: Egypt	Field: General Agreement	The two parties agreed to cooperate through training program for AASTMT



Sustainable Development Goals

Arab Academy for Science, Technology and Maritime Transport

			students to raise their practical efficiency.
12	Arab Administrative Development Organization & Arab Labor Organization Country: Egypt	Field: General Agreement	The parties agreed to cooperate in many areas of common interest, including training, postgraduate programs, entrepreneurship, and cooperation in the economic, social and statistical fields.
13	Huawei Company Country: Egypt	Field: College of Engineering and Technology	The two parties agreed to cooperate through the fields of education, training and consultations, in addition to the establishment by Huawei of the Information Technology and Networks Training Center at AASTMT.
14	Maritime Transport Regulatory Authority Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in various fields to enhance joint cooperation between the two sides.
N	Partner Institution	Specialization	Content
Industry agreements and partnerships and innovation support.			
1	The Academy of Scientific Research & Technology Country: Egypt	Field: The Academy Company for Information & Communication Technology	The two parties agreed to cooperate in providing the necessary support for students' graduation projects in the field of information technology, communications and electronics.
2	Pharco Pharmaceuticals Country: Egypt	Field: College of Pharmacy	The two parties agreed that the Pharmaceutical group of companies would donate the necessary equipment to establish a central



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			laboratory within the Faculty of Pharmacy in the Academy's branch in the new city of El Alamein.
3	The Cairo Regional Centre for International Commercial Arbitration & Cairo Chamber of Commerce Country: Egypt	Field: College of International Transport and Logistics	The parties agreed to cooperate to re-establish a branch of the Cairo Regional Center for International Commercial Arbitration in Alexandria.
4	Arab Organization for Industrialization & University of Central Lancashire Country: Egypt	Field: General Agreement	The parties agreed to cooperate in training the engineers and technicians of the Arab Industrialization factories and for them to obtain advanced technological courses in the United Kingdom.
N	Partner Institution	Specialization	Content
	Agreements and Partnerships with bodies related to community service, and sustainable development.		
1	Sawiris Foundation for Social Development Country: Egypt	Field: General Agreement	Renewing the protocol with Sawiris Foundation to enroll a number of students to study at AASTMT,, as Sawiris Foundation provides and finances full scholarships for students with disabilities to study at AASTMT in various fields.
2	Agricultural Bank of Egypt & Matrouh Governorate Country: Egypt	Field: General Agreement	The parties agreed to cooperate in providing scholarships for outstanding students to study at AASTMT in various fields.



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3	Misr El Kheir Foundation Country: Egypt	Field: General Agreement	Renewal of the protocol with the Misr El-Kheir Foundation to enroll a number of students to study AASTMT.
4	Arab Women Organization Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in scientific fields with the aim of qualifying and empowering Arab women and enhancing their role in society at all levels.
5	El-Muthalath ElSharky Company Country: United Arab Emirates	Field: General Agreement	Renewal of the protocol with the e Company to enroll a number of students from the State of Yemen to study at AASTMT, as the company provides and finances full scholarships for students from the State of Yemen to study at AASTMT in various fields.
6	National organization for military production Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in the field of training, the study of environmental impact, environmental protection, sustainable development and community service.
7	The Egyptian Exchange Country: Egypt	Field: General Agreement	The two parties agreed to cooperate in order to spread the financial culture, investment and cumulative savings in the stock exchange in order to maximize the contribution to the comprehensive development in Egypt.



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**Our opportunity to thank those who have helped and supported in
preparing this AASTMT SDGs Report 2020/2021**

**UNDER THE PATRONAGE OF HIS EXCELLENCY AASTMT
PRESIDENT PROF. ISMAIL FARAG ISMAIL ABD ELGHAFAR**



**Arab Academy For Science, Technology &
Maritime Transport**
PRESIDENT



AASTMT SDGs Management Team



Yasser Gaber



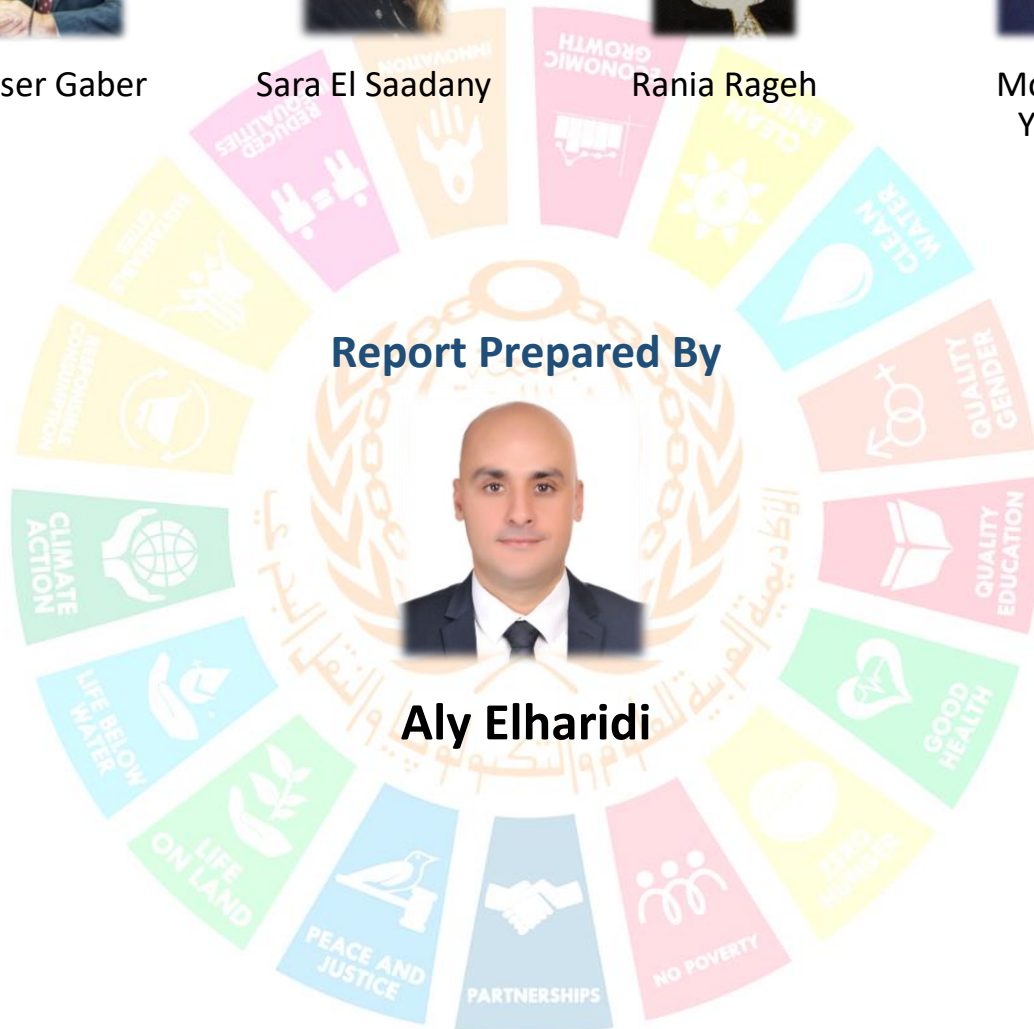
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