Arab Academy for Science, Technology & Maritime Transport

Arab Academy
for Science, Technology & Maritime Transport

AASTMT
SUSTAINABLE
DEVELOPMENT
GOALS

Report 2021/2022

SDG 15

Our Aim in 2021-2022

- AASTMT covers educational initiatives, policy implementation, collaboration, waste management, and conservation efforts within the AASTMT campuses and its immediate environment.
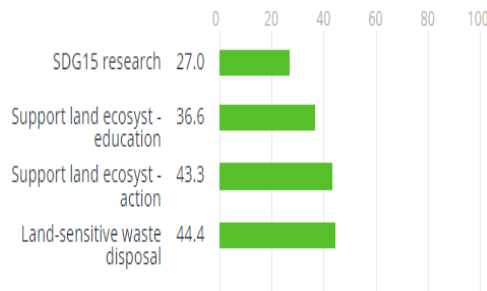
THE Impact Ranking Scores 2020-2021

THE IMPACT RANKINGS

15

LIFE ON LAND

SCORE	RANK	
37.6	**401+**	out of **586** institutions

Details

SDG15 research	27.0
Support land ecosyst - education	36.6
Support land ecosyst - action	43.3
Land-sensitive waste disposal	44.4

0 20 40 60 80 100

SDG 15

LIFE ON LAND

15 LIFE ON LAND

Our Progress through 2021-2022

AASTMT Organize The Climate Protector's Initiative

In the frame work of COP 27 which was hold in November 2022 organized the climate protector's initiative, AASTMT initiative at Abou kir campus
Alexandria, Egypt climate protector's on the AASTMT news page, which raise the awareness of young people to be involved in their local communities.

This event seeks to exemplify green opportunities for work and development climate protector's on social media. This event exemplifies green opportunities for work and development,

Climutopia was live on social media. The Climate Guardians event was judged at the Arab Academy for Science, Technology and Maritime Transport (AASTMT) in Abu Qir on February 27 and 28, which resulted in 12 projects and ideas developed by students to help their local communities adapt and be resilient to the effects of climate change.

World Environment Day

AASTMT organized World Environment Day under the theme ''only one earth'', Abu Kir, campus, Alexandria, World Environment Day 2022 celebration on the AASTMT news page. Within the Arab Academy for Science and Technology and Maritime Transport (AASTMT) role in sustainable development and environmental protection, AASTMT is organizing "World Environment Day 2022" Celebration that will be held under the theme "Only One Earth", on Monday 18- 7- 2022, at 10:00 am, at AASTMT Arab Ministers of transport Hall, Abu Kir, Alexandria.
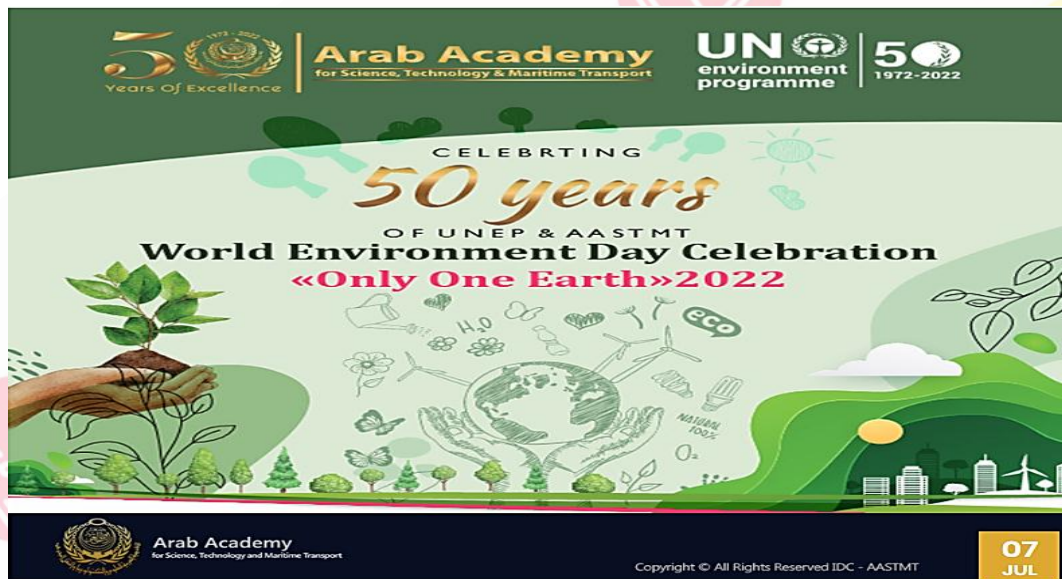
Green and Sustainable Schools Initiative

The Committee for the implementation of Sustainable Development Goals (SDGs) at the Arab Academy for Science, Technology and Maritime Transport (AASTMT) has launched an initiative in order to educate teachers and school students at different levels of the development of the SDGs set by the United Nations. This is within the framework of the Academy's social responsibility and its positive impact on the surrounding environment.

Green and Sustainable Schools Initiative on the AASTMT web page
SDGs for schools' initiatives by SDGs Workforce AASTMT SDGs For Schools Initiative In Abukir Campus on the AASTMT news page.

"Towards Green and Sustainable Schools" Initiative

The Committee for the implementation of Sustainable Development Goals (SDGs) at the Arab Academy for Science, Technology and Maritime Transport (AASTMT) has launched an initiative in order to educate teachers and school students at different levels of the development of the SDGs set by the United Nations. This is within the framework of the Academy's social responsibility and its positive impact on the surrounding environment. This initiative can be summarized in three main stages:

1. Addressing 7 schools in Alexandria as a first stage this year to join training workshops for teachers and students to raise awareness of the SDGs.

2. Following up with the schools on the implementation of what has been learned in the

Littless

New companies directly created from the research and program at EC-AASTMT
Are defined as register companies set up to exploit intellectual property that has originated from EC-AASTMT. Littless will create high-quality, need-b a s e d -s u s t a i n a b l e t e x t i l e s a n d merchandise that can be recycled or upcycled, reducing textile waste in the environment and providing affordable products to lower-income families, Entrepreneurship Center-Cairo | AASTMT

Littless will create high-quality, need-based, sustainable textiles products to lower-income families.

Farawlatech

Design and implementation of soilless cultivation systems for the production of high-tech strawberries based on the precision cultivation system for strawberry producers, based on precession agriculture methodology https://www.farawlatech.com/en [1].
It uses the specialized fertilizer for strawberry, use innovative local media, schedule irrigation with high technology, increase cycles production in season and finally Improving working conditions and improving income.

Farawlatech on the AASTMT news page

Production and Evaluation Crackers And Instant Noodles Supplement With Spirulina Algae

The study explores the use of spirulina algae in the production of crackers and instant noodles. Spirulina, a blue-green algae rich in protein, vitamins, phytoepigamates, antioxidants, and minerals, was found to increase protein ratio, ash content, and improve physical and cooking properties. The addition of 20% spirulina algae had lower scores for most properties compared to other tested products. This suggests spirulina algae could be used to improve nutritional status in children's food Production and evaluation crackers and instant noodles supplement with spirulina algae.

Production and evaluation crackers and instant noodles supplement with spirulina algae

[1]Abd El-Salam Amira M., O.M. Morsy[2] and E.M. Abd El Mawla[2]

[1]*Food Technology Research Institute, Agricultural Research Center, Giza, Egypt.*
[2]*Arab Academy for Science, Technology & Maritime Transport, Arab League.*

ABSTRACT

In this study, spirulina algae which is one of the blue-green algae rich in protein 61.50%, and high content of amino acids isoleucine and treptophan (6.77 and 1.93% of protine). Also, agood source of vitamins especially vitamin B complex such as vitamin B12 (193 µg / 100 g) and folic acid (9.66 mg/100 g), many phytoepigamates such as chlorophyll, phycocyanins, total carotene (1.470, 14.17 and 0.550%) and those considered as potent antioxidants. As well as minerals such as potassium, calcium, phosphorus and iron (2180.79, 1042.925, 1899.71 and 336.965 mg / 100 g, respectively). In addition to a high of natural fibers. Spirulina was used in the production of crackers and instant noodles by at 5, 10, 15 and 20%. Data of sensory evaluation results showed that the adding spirulina algae by ratio 20% had lower score for most properties compared to other tested. The chemical analysis, sensory evaluation, physical and cooking properties, rheological properties were done. The obtained data showed that the adding spirulina algae play a large role in increasing protein ratio and ash content and improved the physical properties of the crackers and cooking properties of instant noodles. Therefore it could be produced for industrial level to improve the nutritional status of these products for consumed among children.

Key words: Spirulina, crackers, instant noodles, chemical composition, cooking properties and rheological properties.

Introduction

Al Amal

An agricultural consulting office, diagnosing the diseased condition of the plant, giving the appropriate pesticide or fertilizer, and following up the crop from the beginning of planting until harvest to increase productivity and make maximum use of the largest amount of the crop and sell seeds governorate

[Entrepreneurship Center-Cairo | AASTMT](#) . on the AASTMT news page
[Entrepreneurship Center-Cairo | AASTMT](#) on the AASTMT news page

ERGOBOTS

The tree intelligence platform! This innovative idea focuses on providing farm owners with an affordable service for farm diagnostics using robotics and artificial intelligence, innovating traditional agriculture systems, and lowering farmers' resource consumption costs [ERGOBOTS](#) on the AASTMT news page.

Uni-Green Project

Promoting the role of youth as active change-makers in addressing climate change in Egypt through education" Uni-Green is a 36-month project with a budget of approx. 13 million EGP and is funded by the European Union. Uni-Green seeks to reinforce the

role of youth as key actors in raising awareness, advocating, and directly addressing local climate change challenges in Egypt.

Uni-Green Project on the AASTMT news page .

KNZ Global

Their main goal of optimizing resource use and maintaining green spaces serves as a road map for developing resilient green infrastructure. Their project uses IoT solutions to provide intelligent waste management for everyone

Entrepreneurship Center-Cairo | AASTMT on the AASTMT news page.

Vlaby Platform

Vlaby is first virtual labs platform for school students in MENA, that allows students and teachers to conduct practical science experiments in a virtual online lab that simulates the traditional science laboratory and has all lab equipment, chemicals, devices, glass tools and other laboratory tools,
Thus, the student can conduct experiments anytime, anywhere and from any device

Vlaby Platform on the AASTMT news page

Be positive

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

Be positive project on the AASTMT news page
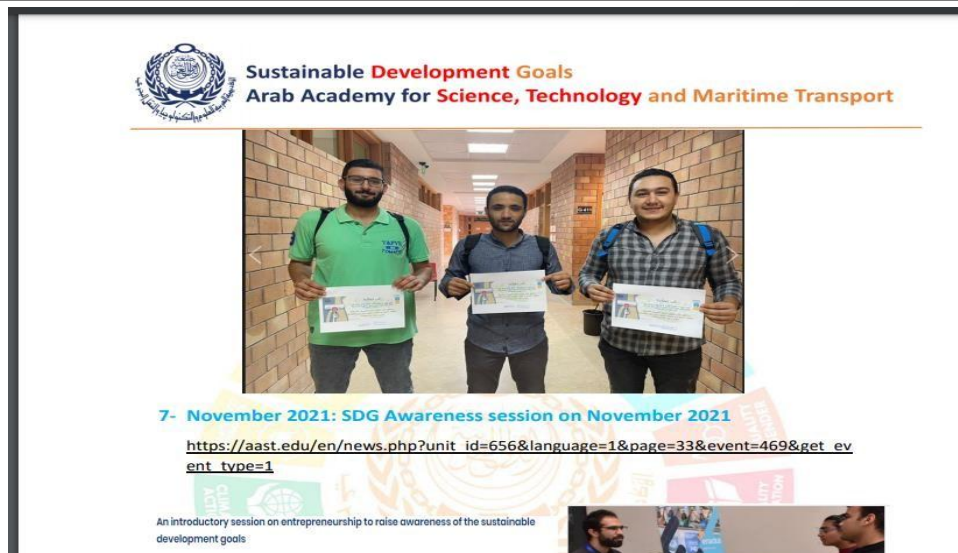
Collaborate of the AASTMT with the NGOs to tackle the SDGs

AASTMT organizes and hold vocational courses to achieve one of the sustainable development goals (poverty eradication) in order to provide a profession for the youth with the collaboration of NGOs

Collaborate of the AASTMT with the NGOs to tackle the SDGs .
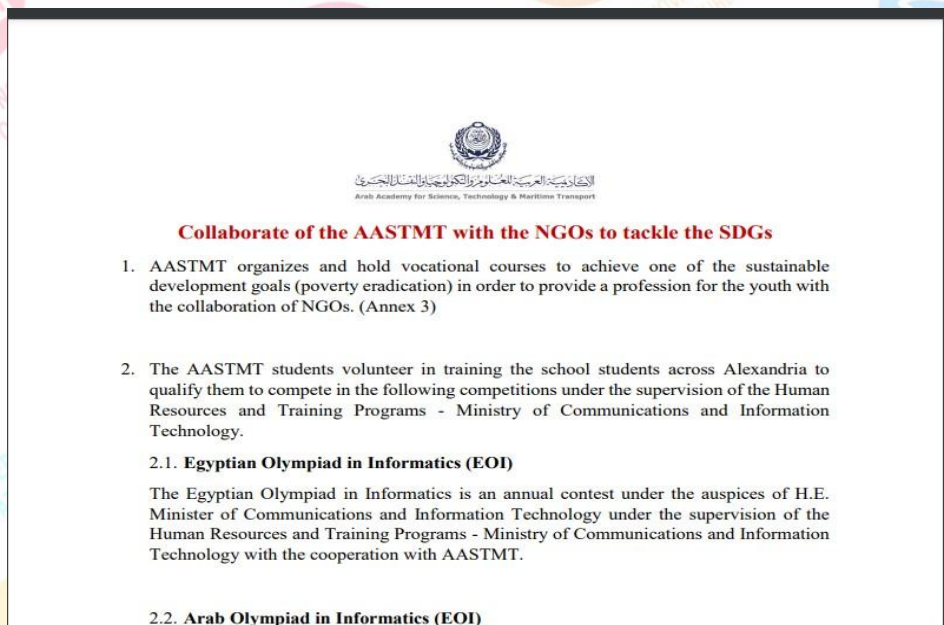
International Tou Mali conference 2022 at AASTMT Abu Kir, Alexandria

AASTMT announces the beginning of the international Tou Mali conference 2022 that entitled ''contribution sound waste management systems to sustainable tourism and the protection of marine ecosystem''

International Tou Mali conference 2022 at AASTMT Abu Kir, Alexandria on the AASTMT news page

World Environmental Day 2022 Celebration

Within the Arab Academy for science, technology and maritime transportation role in sustainable development and environment protection, AASTMT is organizing world environmental day celebration that held under the theme ''only one earth' 'on Monday 18/7/2022 at 10 am, at AASTMT Arab ministries of transport hall- Abu kir campus, Alexandria

World Environmental Day 2022 Celebration on the AASTMT news page
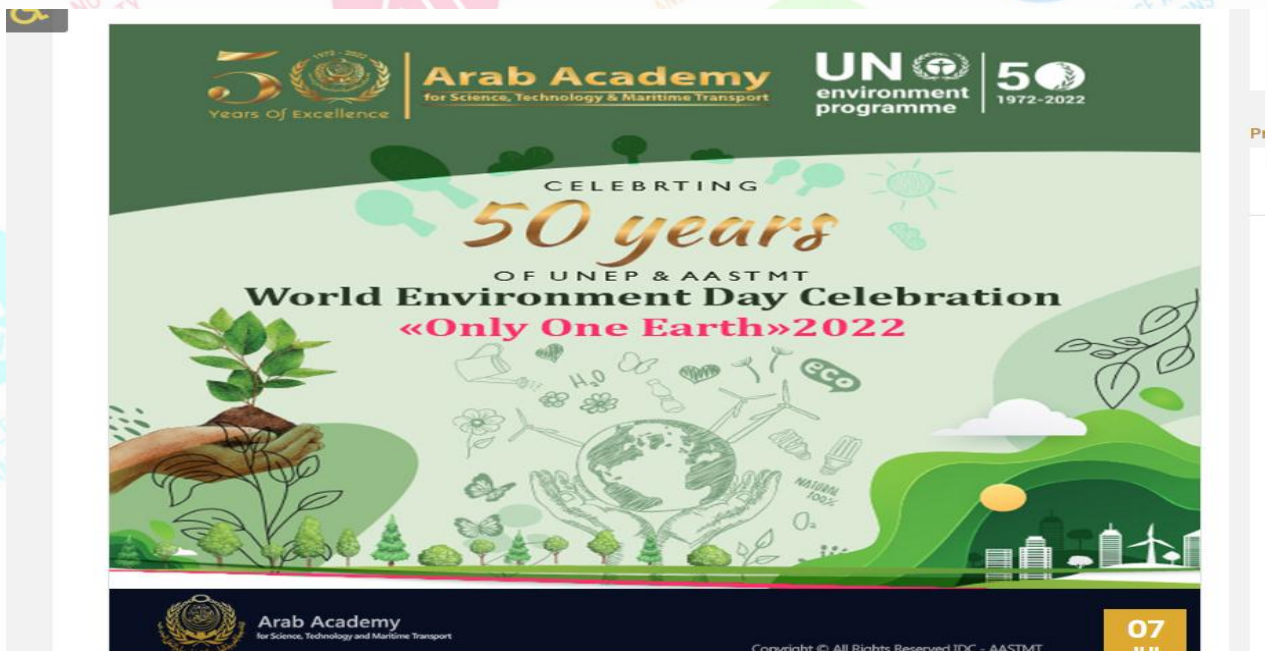
Educational Programs

AASTMT provides educational programs to enhance society knowledge and teach students that sustainable ecosystems and land conservation are essential for human health and safety.

AASTMT Environmental Policy on the AASTMT news page

aast.edu/en/sdg/goals.php?unit_item=1215&page_id=121500008

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Committee). The SDGs workforce committee will cooperate with all campuses and deaneries to ensure the satisfactory implementation of SDG13,14, and 15 awareness and recommend initiatives for all stakeholders and funds for their research teams to serve SDGs 13,14 and 15. In addition, the policy will be reviewed frequently, besides reevaluating the action plans and student involvement percentages as required to ensure the most educational and social returns.

5   POLICY STATEMENT

AASTMT is committed to achieving the UN 2030 Agenda and taking urgent actions to combat climate change and its impacts and preserve the life below water. AASTMT provides educational programs and initiatives to enhance society's knowledge about climate change and its consequent effects on human health, biodiversity, water resources, and agriculture. We raise a flag warning among our community that climate change symptoms are increasing rapidly, accelerating the intensity of extreme weather events such as heatwaves, droughts, floods, and tropical cyclones. This is causing aggravating water management problems, reducing agricultural production and food security, increasing health risks, damaging critical infrastructure, and interrupting the provision of essential services such as water and sanitation, education, energy, and transport.

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aast.edu/en/sdg/goals.php?unit_item=1215&page_id=121500008

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acidification; regulate harvesting, and end overfishing, illegal, unreported, and unregulated fishing, and destructive fishing practices.

AASTMT is ambitious to involve our students and the community in protecting, restoring, and promoting all land-based ecosystems and biodiversity. We teach our students that sustainable ecosystems are essential for human health through safe water supplies, sustainable food systems, crops, pollinators, soil, medicines, and climate change mitigation. We hold events to emphasize the importance of terrestrial ecosystems to provide a series of goods, raw materials for construction and energy, food, the capture of carbon, maintenance of soil quality, provision of habitat for biodiversity, maintenance of water quality, as well as regulation of water flow and erosion control.

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Smart Autonomous IoT Agricultural Monitoring System - 2020

This project involves implementing the latest sensing and IoT technologies and machine to machine communications in agriculture practices. Currently, seamless integration of wireless sensors and the IoT in smart agriculture can raise agriculture to levels which were previously unimaginable. CISCO, provides a cloud-based software platform for the IoT in Agri-business, which is rapidly embracing IoT services to capitalize on automation, real-time visibility and remote diagnostics to achieve smart agriculture. Products like Topcon, Motech, Observant and Semios are the best examples that bring the power of communications, sensor technology and cloud computing to the agriculture industry to enhance productivity and efficiency.

[SMART AUTONOMOUS IOT AGRICULTURAL MONITORING SYSTEM](#) on the AASTMT news page

Home / All Projects / Project Details

PROJECT: SMART AUTONOMOUS IOT AGRICULTURAL MONITORING SYSTEM

⌂ Overview	☰ Objectives	Partners	👤 Contact Us
	📷 Funding Program		

Abstract

This project involves implementing the latest sensing and IoT technologies and machine to machine communications in agriculture practices. Currently, seamless integration of wireless sensors and the IoT in smart agriculture can raise agriculture to levels which were previously unimaginable. CISCO, provides a cloud-based software platform for the IoT in Agri-business, which is rapidly embracing IoT services to capitalize on automation, real-time visibility and remote diagnostics to achieve smart agriculture. Products like Topcon, Motech, Observant and Semios are the best examples that bring the power of communications, sensor technology and cloud computing to the agriculture industry to enhance productivity and efficiency. MICROSOFT has begun investing in smart agriculture. The company launched a 5-year, $50-million initiative in 2018 called "Artificial intelligence

Project Name
Smart Autonomous IoT Agricultural Monitoring System

Ref No/ Funded Entity
GP2020.R15.3

Priority
IOT

Project Duration
12 Months

Andak Gas

Establishment of biogas units running on food leftovers that produce methane gas used for cooking and an organic fertilizer sold to farmers.

Entrepreneurship Center-Cairo | AASTMT on the AASTMT news page
Andak Gas Biogas Company on the AASTMT news page

Agreements or Mous With Local Community Groups or Organizations Related To Land Ecosystem Maintenance

The Arab Academy for Science, Technology and Maritime Transport (AASTMT) received DP WORLD SOKHNA Delegation on Wednesday 17- 3- 2021, at AASTMT.

Dp world sokhna agreement "MOU" on the AASTMT news page

Arab Academy For Science, Technology And Maritime Transport (AASTMT) Participates In A Research Project Against Marine Litter Led By The University Of Rostock And Leibniz Institute For Baltic Sea Research Warnemünde.

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 marine ecosystems in 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 Programme against Marine Litter". "Zukunft – Umwelt – Gesellschaft (ZUG) gGmbH" supports the Federal Ministry in implementing its funding policy aims.

[Arab Academy for Science, Technology and Maritime Transport (AASTMT) participates in a research project against marine litter led by the University of Rostock and Leibniz Institute for Baltic Sea Research Warnemünde](#)on the AASTMT news page
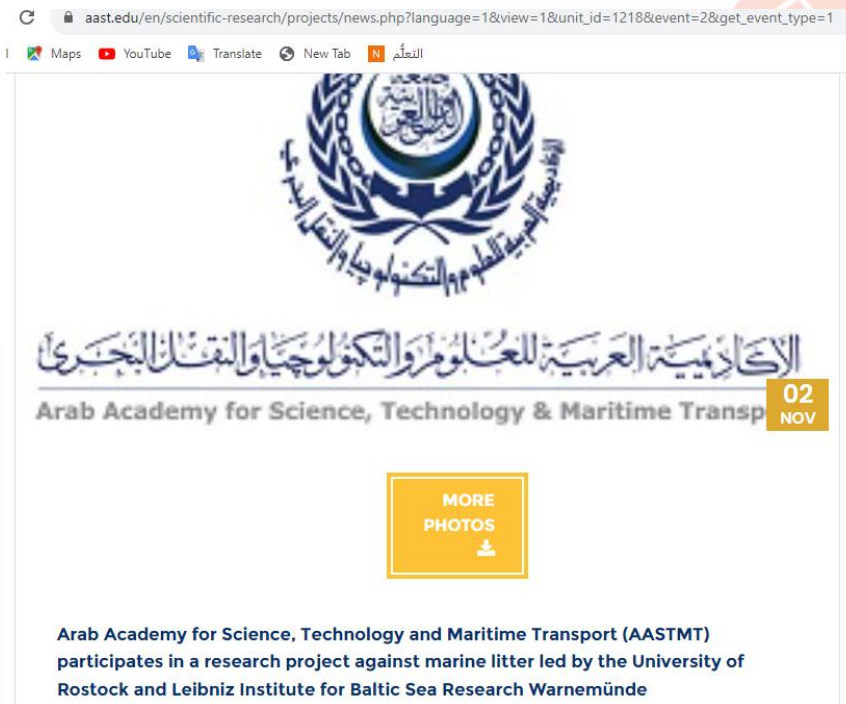
Water Conservation Policy at AASTMT

AASTMT upgrading to high efficiency front loading washers, and becoming even more energy efficient by using technology that allows them to monitor the status of the machines.

[Water Conservation Policy at AASTMT](#) on the AASTMT news page

Water Conservation Policy at AASTMT

Background

Egypt has been suffering from severe water scarcity in recent years. Uneven water distribution, misuse of water resources and inefficient irrigation techniques are some of the major factors playing havoc with water security in the country. Egypt has only 20 cubic meters per person of internal renewable freshwater resources, and as a result, the country relies heavily on the Nile River for its main source of water. The River Nile is the backbone of Egypt's industrial and agricultural sector and is the primary source of drinking water for the population. Rising populations and rapid economic development in the countries of the Nile Basin, pollution and environmental degradation are decreasing water availability in the country. Egypt is facing an annual water deficit of around 7 billion cubic meters. In fact, United Nations is already warning that Egypt could run out of water by the year 2025.

AASTMT is taking steps to reduce our consumption of potable water. Through solutions like those below we are using this precious resource more efficiently to protect water for future generations.

AASTMT's Recycling Policy

Explicitly, this policy requires that by 2022 AASTMT has halted the utilization of 'single use' plastics nearby utilizing a blend of elective materials and the suspension of deals of plastic filtered water nearby. AASTMT is additionally introducing seriously drinking fountains to assist with this particular point.

AASTMT's Recycling Policy on the AASTMT news page

1 / 3 — 100% +

Arab Academy for Science, Technology & Maritime Transport

AASTMT's Recycling Policy

1. **Introduction**:

This Waste and recycling policy shapes part of the AAST's manageability structure and helps uphold the University's Environmental Change and Social Duty Policy:

The policy's point is to lessen negative natural effects emerging from our age of waste raisings, looking to forestall, reuse, repurpose and decrease squander from our activity. The Policy likewise plans to guarantee that AASTMT oversees squander issues as per the counteraction of contamination and consistence with natural enactment consistently.

AASTMT has a vigorous and complete reusing foundation and all staff and understudies are urged to utilize these offices to help reuse as much waste with no guarantees conceivable.

2. **Policy:**

AASTMT committed Policy likewise incorporates the need to think about finish of life removal costs and natural effect when settling on acquirement choices including the development of