15.3.4 Alien Species Impact Reduction (Policies)

2024-2025

AASTMT Policy for Reducing the Impact of Alien Species on Campus

The policy that commits AASTMT to prevent the introduction and spread of alien species on its campuses, detect them early, remove or contain them, and restore the land with native and drought-adapted plants.



AASTMT Policy for Reducing the Impact of Alien Species on Campus

Download the full policy (PDF)

Brief Description

The Arab Academy for Science, Technology and Maritime Transport (AASTMT) is committed to preventing the introduction and spread of alien species on its campuses and to reducing the impact of any alien species already present on native biodiversity, soils, water and the health of the campus community. This policy covers what we plant, grow, farm, buy and move on our campuses in Egypt, and the ships, laboratories and field training that could carry alien species onto or away from

https://aast.edu/en/sdg/goals.php?unit_item=1215&page_id=121500062

AASTMT Uninvited Guests: Alien and Invasive Species 2024-2025

A report on how AASTMT tracks species that arrive in Egypt from other seas and lands and keeps them from harming native nature on its campuses, ships and farms, in 2024-2025.



AASTMT Uninvited Guests: Alien and Invasive Species 2024–2025

Download the full report (PDF)

Arab Academy for Science, Technology and Maritime Transport

Uninvited Guests

Alien and Invasive Species at AASTMT, 2024–2025

How the Arab Academy tracks species that arrive in Egypt from other seas and lands, and keeps them from harming native

https://aast.edu/en/sdg/goals.php?unit_item=1215&page_id=121500065

AASTMT has a policy to reduce the impact of invasive alien species on its campuses in Egypt and so protect native biodiversity and habitat. It follows the IUCN definition of alien and invasive alien species and commits the Academy to prevent their introduction, detect them early, remove or contain them, and restore the ecosystem through revegetation with native and drought-adapted plants. The policy was put in place in 2025. The cases below show how it was applied in the academic year 2024-2025.

Landscaping with Drought-Tolerant Plants (2024-2025, AASTMT Abu Qir Campus, Alexandria)

AASTMT landscapes its campus green areas with drought-tolerant plants, watered by automated drip irrigation with solenoid valves, bubblers and IoT controllers. The vegetation of the Abu Qir campus includes coastal and Mediterranean species adapted to hot, dry summers, mild winters and the saline conditions near the sea.

UI GreenMetric 4.7: Impact of Water Management programs (Smart Irrigation and Sustainable Landscaping)

Growing Campus Plants in Our Own Nurseries (12 May 2025, AASTMT Abu Qir Campus, Alexandria)

AASTMT propagates the trees, shrubs and ground cover for its campuses in its own planting nurseries at Abu Qir, which supply the plant expansion works across the 62,000 m² of planted vegetation on the campus. Growing our own stock limits the plants, soil and pests brought in from outside suppliers, one of the main pathways for alien species. On 12 May 2025 the AASTMT President inspected the nurseries and the expansion works and met the nursery staff.



AASTMT President tour at AASTMT Campus Planting Nurseries

Closed Hydroponic and Aquaponic Systems at the Aquaculture Research Center (2024-2025, Abu Qir, Alexandria)

The AASTMT Aquaculture and Hydroponics Research Center has grown vegetables and fish in closed hydroponic and aquaponic systems for more than 12 years, using 90% less water than traditional farming and rainwater collected in ten roof tanks. Because the fish and plants are kept in closed, recirculating systems, they cannot escape into the wild, in line with the policy rule that alien organisms used in teaching and research are kept only in closed systems.



Hydrauponic system for agriculture

UI GreenMetric: Water conservation and sustainable agriculture at AASTMT

AquaVET: Aquatic Animal Health and Ecosystem Health (1 December 2024 and kick-off 13–15 July 2025, El Alamein campus)

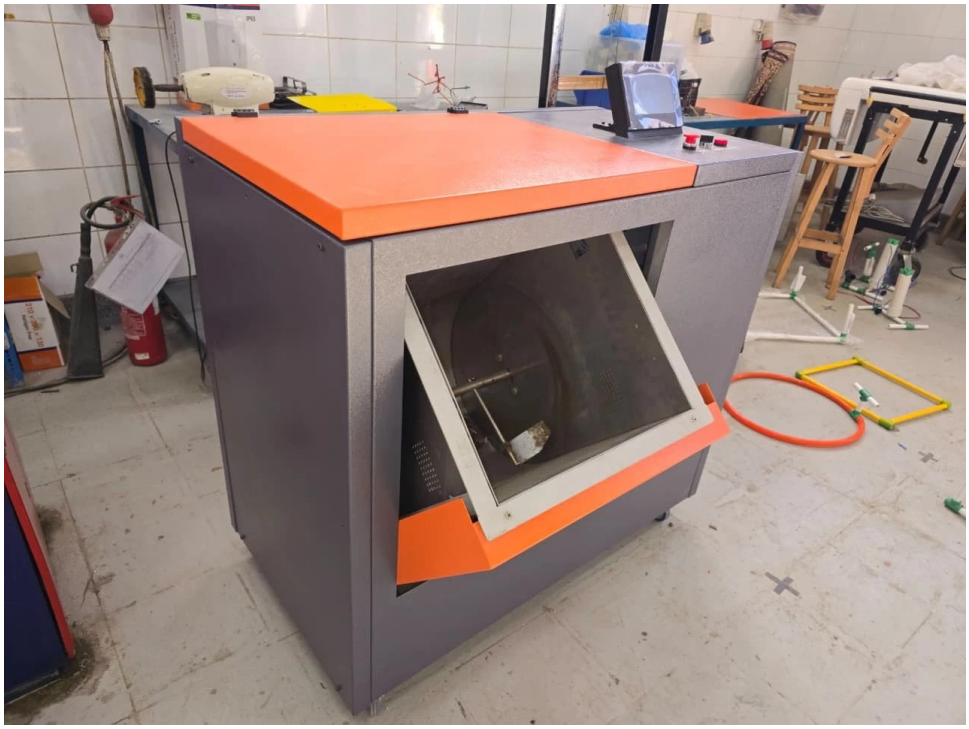
AASTMT is a partner in AquaVET, an Erasmus+ project with Alexandria University and partners in Nigeria, Italy and Croatia that is creating the first interdisciplinary MSc in Aquatic Animals Medicine and Ecosystem Health. The project responds to disease outbreaks in fish farms and hatcheries caused by pollution and the spread of pathogens. Its kick-off meeting was held at the AASTMT El Alamein campus from 13 to 15 July 2025. Training in fish health and biosecurity helps stop pathogens and alien organisms from spreading from farms to wild ecosystems.



AquaVET Project Kickoff Meeting

Composting Campus Green Waste (2024-2025, AASTMT Abu Qir Campus, Alexandria)

Garden and food waste from the campus is composted on site, in an on-campus composter and by vermicomposting with red wiggler earthworms, instead of being dumped off campus.



UI GreenMetric 3.8: Organic waste treatment

Turning an Invasive Plant into an Eco-Friendly Antifouling Coating: Water Hyacinth (21 April 2024, before the 2024–2025 reporting window, Abu Qir Bay)

A graduation project of the College of Fisheries and Aquaculture Technology assessed the environmental and biological effects of the antifouling paints used on fishing vessels in Abu Qir Bay, next to our main campus, and developed an eco-friendly antifouling solution based on extract of water hyacinth, one of the world's worst invasive aquatic plants. It was shown at the Bibliotheca Alexandrina on the International Day of Innovation and Creativity. Hull fouling is a pathway for marine alien species, and using an invasive plant as a raw material helps reduce it.



Graduation project: antifouling paints in Abu Qir Bay and a water hyacinth solution