AASTMT Policy for Reducing the Impact of Alien Species on Campus

Egypt · approved in academic year 2024-2025 · reviewed October 2026

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 them.

1. Purpose

Invasive alien species are one of the main causes of biodiversity loss worldwide. Campuses can spread them through ornamental planting, imported soil and plants, ponds and aquaculture, and ships. This policy sets out how AASTMT prevents alien species from arriving, finds them early, removes or contains them, and restores the land with native and drought-adapted plants, in line with the IUCN guidelines on invasive alien species and Egypt's National Biodiversity Strategy and Action Plan.

2. Scope

- **Campuses.** All 8 AASTMT campuses in 6 Egyptian governorates: Alexandria (Abu Qir, Miami), Cairo (Heliopolis), Giza (Dokki, Smart Village), Matrouh (El Alamein), Port Said and Aswan (South Valley). About 62,000 m² of the main campus at Abu Qir is planted.
- **Green areas and nurseries.** Lawns, trees, hedges, flower beds, green walls and green roofs, and the planting nurseries at Abu Qir that supply them.
- **Water.** Ponds, irrigation channels, rain tanks and the greenhouse.
- **Aquaculture and laboratories.** Fish tanks, aquaponics and hydroponics units, laboratory organisms and student training at fish farms and hatcheries.
- **Ships.** AASTMT training ships and sea-training voyages, through ballast water and hull fouling.
- **Supplies and events.** Plants, seeds, soil, compost, timber and live animals brought onto campus for building work, landscaping, teaching or events.

3. Definitions (IUCN)

- **Alien species:** a species, subspecies or lower taxon introduced outside its natural past or present range, including any part, seeds, eggs or propagules that might survive and reproduce.
- **Invasive alien species:** an alien species whose introduction or spread threatens biological diversity.
- **Native species:** a species that occurs naturally in Egypt within its natural range.
- **Pathway:** the route by which an alien species is moved, such as plant trade, soil, ballast water, hull fouling, aquaculture or the release of pets.

4. Our commitments

Prevent

- Grow AASTMT campus plants in our own Abu Qir nurseries or buy them from certified suppliers, and inspect every delivery of plants, soil and compost for pests, weeds and seeds.
- Plant from an approved planting list that favours native and drought-adapted species, and plant no species known to be invasive, such as lantana (Lantana camara), creeping oxeye (Sphagneticola trilobata) and water hyacinth (Pontederia crassipes, also called Eichhornia crassipes).
- Keep alien fish and other aquatic organisms used in teaching and research only in closed systems, screen water discharged from tanks, and never release fish, plants or pets into the wild.

- Manage ballast water on training ships under the IMO Ballast Water Management Convention, and keep hulls clean under the IMO Biofouling Guidelines, so that our ships do not carry marine organisms between seas.
- Compost green waste on campus at temperatures that kill seeds, and never dump garden waste in natural areas.

Detect early

- Survey the plants of every campus at least once a year, and the trees and palms every season.
- Pilot the use of an AI tool from the AASTMT College of Engineering, which identifies invasive plants in aerial images, to map green areas.
- Let students and staff report any suspected invasive plant or pest to the Sustainability Office.
- Record alien marine species, such as the silver-cheeked toadfish (Lagocephalus sceleratus) from the Red Sea, during fisheries training and research.

Respond and control

- Remove any newly found invasive species within 30 days, before it spreads.
- Keep alien ornamentals that are already established and spreading inside managed beds, prevent them from seeding, and replace them step by step with native species, completed by 2028.
- Use integrated pest management: inspection, pheromone traps for the red palm weevil (Rhynchophorus ferrugineus), manual removal, and pesticides only as a last resort.
- Dispose of removed invasive material by bagging it or composting it at high temperature, so that it cannot regrow.

Restore, educate and report

- Replant cleared areas with native and drought-adapted species suited to each region, from a short list verified by the landscape department and a botanist: on the Mediterranean coast (Abu Qir, Miami, El Alamein, Port Said), species such as the Mediterranean saltbush (Atriplex halimus), Limoniastrum monopetalum, Nitraria retusa and the Nile tamarisk (Tamarix nilotica); in the Nile Valley (Aswan), species such as the Nile acacia (Vachellia nilotica), the desert date (Balanites aegyptiaca) and Christ's thorn (Ziziphus spina-christi); in Greater Cairo (Heliopolis, Dokki, Smart Village), species such as the Nile tamarisk and Christ's thorn. The date palm (Phoenix dactylifera), long cultivated in Egypt, may be planted on all campuses.
- Teach students about invasive species and biosecurity in biology, fisheries, maritime and architecture courses, and involve them in surveys.
- From 2026, publish a yearly summary of alien species found, removed and contained on the AASTMT website.

5. Alien species watch list

The table lists alien species that could affect AASTMT campuses and operations. It is updated after every survey.

Species	Type	Where it matters for AASTMT	Action
Creeping oxeye (Sphagneticola trilobata)	Ornamental ground cover; on the IUCN list of 100 of the world's worst invasive alien species	Flower beds of the Abu Qir campus (recorded in the 2026 baseline)	Contain in beds, no new planting, replace with native ground cover by 2028
Mexican petunia (Ruellia simplex)	Ornamental flowering plant; invasive in other regions	Flower beds of the Abu Qir campus (recorded in 2026)	Contain, remove seed heads, no new planting; replace by 2028
Lantana (Lantana camara)	Ornamental shrub; on the IUCN 100 worst list	Any campus landscaping	Not planted
Water hyacinth (Pontederia crassipes)	Floating water plant; on the IUCN 100 worst list	The Nile near the South Valley campus, ponds and channels	Never grown; removed at once if found

Species	Type	Where it matters for AASTMT	Action
Red palm weevil (Rhynchophorus ferrugineus)	Insect pest of palms	Palms on all campuses, especially Abu Qir	Seasonal inspection, traps, treatment or removal of infested palms
Silver-cheeked toadfish (Lagocephalus sceleratus)	Toxic fish that entered the Mediterranean through the Suez Canal	Fisheries training and research in the Mediterranean	Record, never release, teach safe handling
Striped catfish (Pangasianodon hypophthalmus)	Farmed fish from South-East Asia	Aquaculture training at fish farms	Studied only in closed systems
Organisms in ballast water and on hulls	Plankton, larvae, algae and fouling organisms	AASTMT training ships	Ballast water management and hull cleaning

6. Roles

- **SDGs Workforce Committee:** approves the policy and its reviews; the Dean of Scientific Research and Innovation signs it.
- **SDG 15 officer and Sustainability Office:** keep the watch list, coordinate surveys, receive reports and publish the yearly summary.
- **Facilities and landscape departments and the Abu Qir nurseries:** apply the planting list, inspect deliveries, remove and contain invasive plants and restore cleared areas.
- **College of Fisheries and Aquaculture Technology:** biosecurity of aquaculture and laboratory organisms and records of alien marine species.
- **College of Maritime Transport and Technology:** ballast water and biofouling management on training ships.
- **College of Engineering and Technology:** AI tools for mapping invasive plants.

7. Review programme

Item	Detail
Owner	SDGs Workforce Committee (approving body), through the SDG 15 officer and the Sustainability Office
Applied by	Facilities and landscape departments, the Abu Qir planting nurseries, the College of Fisheries and Aquaculture Technology and the College of Maritime Transport and Technology
In place	Approved in academic year 2024-2025
Reviewed	October 2026
Next review	2028, and earlier if a new invasive species is found on campus
Related policy	AASTMT Policy for Identifying, Monitoring and Protecting IUCN Red List and National Conservation List Species
Approval signature	Dean of Scientific Research and Innovation 