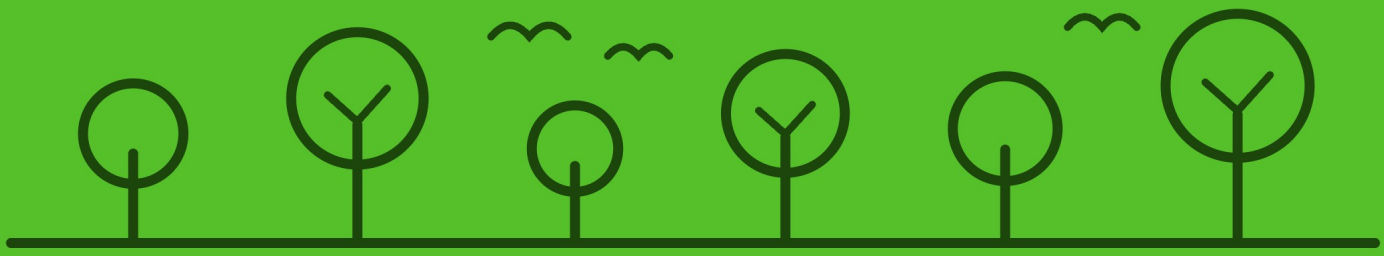
SUSTAINABLE DEVELOPMENT GOAL

15 LIFE ON LAND

الحياة في البر









REPORT 2024–2025

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REVISED BY
International Ranking Office

SDG 15 · 2024–2025

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INTRODUCTION

Assiut University continues to strengthen its commitment to protecting terrestrial ecosystems, conserving biodiversity, combating land degradation, and promoting sustainable land management through education, research, community engagement, and institutional policies. The University integrates environmental sustainability into its strategic planning and operational practices in alignment with SDG 15: Life on Land.

20 acres
Extension Farm for research and student training

2016 · 2023
Conservation policies established and reviewed

7
Soil-laboratory training courses

6
Central laboratories and analytical units

2
Endangered bird species monitored

100M Trees
Presidential initiative supported

01

SUPPORTING LAND ECOSYSTEMS THROUGH EDUCATION

Conferences and awareness events

The University organises conferences, workshops, and awareness events that promote biodiversity conservation and sustainable land use.

Center for Sustainable Development

Provides educational activities and outreach programmes addressing environmental sustainability.

Faculty of Agriculture

Conducts research and training on soil conservation, sustainable agriculture, ecosystem restoration, and land-use management.

02

BOTANICAL GARDEN AND BIODIVERSITY ENHANCEMENT

Educational Botanical Garden

Assiut University established an educational Botanical Garden containing a diverse collection of plant species used for teaching, research, and conservation. The University continues expanding green spaces and biodiversity-friendly landscapes across campus, and promotes biodiversity conservation through awareness activities, research programmes, and sustainable campus development.

Partnerships for land conservation

New training partnerships were established for environmental management. The University collaborates with government organisations, NGOs, and international organisations on projects promoting land conservation and sustainable use, through joint research projects, shared events, and cooperative educational programmes.

Jojoba project, Paris Center, New Valley

COOPERATION PROTOCOL

Cooperation protocol with the Egyptian-Gulf Company for Desert Land Reclamation; a delegation from the Faculty of Agriculture visited the jojoba project.

Second Environmental Forum COP28 – Assiut

NOVEMBER 2023

Activities of the University's second environmental forum.

“100 Million Trees” initiative

PRESIDENTIAL INITIATIVE

Hundreds of seedlings planted on campus and in surrounding areas, with awareness programmes on water conservation and sustainability.

03

GREEN INFRASTRUCTURE AND RESEARCH INITIATIVES



Rooftop farming enhances urban greening and food security.

The University updated its strategic plan to integrate sustainability goals, focusing on green infrastructure, renewable energy, and biodiversity conservation. The plan aligns with Egypt Vision 2030 and the UN SDGs, ensuring that research and campus development support environmental resilience.

Assiut University publishes several academic journals featuring research on soil management, water conservation, and green-infrastructure planning, which serve as a scientific foundation for campus greening and regional sustainability.

04

SUSTAINABLE FOOD POLICIES

Rooftop cultivation project

Vegetables, medicinal, and aromatic plants are grown on campus buildings, supporting food security, reducing climate impact, and promoting sustainable agriculture.

Cassava cultivation project

GLUTEN-FREE FLOUR

A research-based cassava cultivation programme produces gluten-free flour and supports food security, in line with the SDGs and modern agricultural practice.



Cassava cultivation project.

05

MAINTAINING AND EXTENDING ECOSYSTEMS

Research

Biodiversity research across faculties

Maintenance

Green areas, ornamental farms, arboretums, and greenhouses



Campus plant nursery and ornamental farm.



Greenhouses for ornamental plants.



Students in the University greenhouses.

05

EXTENSION FARM AND EL-GHAREEB FARM

20 acres The Extension Farm serves research and student training.





FOLLOW-UP ON THE CULTIVATION OF SIWI DATE PALMS AT EL-GHAREEB FARM, ASSIUT VALLEY





06

ECOSYSTEM EDUCATIONAL PROGRAMMES

Faculties of Science and Agriculture

Programmes on biodiversity, pollution, ecosystem management, and soil conservation.

Workshops and conferences

On plant tissue culture, genetics, and biodiversity assessment.



Practical training on the design and installation of modern irrigation systems at the Assiut University Farm.

07

LAND MANAGEMENT AND COMMUNITY TRAINING

The Soil Laboratory for Analysis and Technical Consultations offers the following training courses, covering soil, water, and fertiliser analysis and land evaluation:

1. Physical analyses of soils
2. Chemical analyses of soils
3. Analysis of nutrients in plants and soils
4. Chemical and physical analyses of water
5. Fertiliser analysis
6. Assessing soil, water, and plant contamination with heavy metals, and remediation methods
7. Land survey and evaluation for optimal use

07

CENTRAL LABORATORIES, FACULTY OF AGRICULTURE

The Central Laboratories at the Faculty of Agriculture, Assiut University comprise a range of specialised units and laboratories equipped to serve researchers, students, and production sectors.

MAIN LABORATORIES AND ANALYTICAL UNITS

- Chemical Analysis Laboratory (including an HPLC system)
- Molecular Biology Laboratory
- Plant Tissue Culture Laboratory
- Microbiology / Applied Microbiology Laboratory
- Plant and Agricultural Animal Physiology Laboratory
- Microinjection Unit

SERVICES PROVIDED

Research
Scientific and research support for students and researchers

Testing
Specialised and advanced analytical tests for individuals and institutions

Training
Courses preparing students, agricultural engineers, and technical staff for the labour market

The Central Laboratories play an important role in supporting research, education, and community services by offering advanced analytical facilities and practical training in agricultural and life sciences.

08

WATER-QUALITY STANDARDS

Assiut University has formal policies and guidelines to uphold water quality and manage water discharges in order to protect ecosystems, wildlife, and human health, using modern irrigation technologies to minimise water loss.

Water-quality monitoring

The University monitors water quality in local water bodies and campus facilities, comparing results with Egyptian Law No. 458/2007 and WHO guidelines for drinking and discharge standards.

Environmental Stewardship Program

Programmes to protect and restore aquatic ecosystems, including monitoring water quality and biodiversity and offering grants for research on improving water quality.

Community Service and Environmental Development Sector

Oversees compliance with environmental regulations, including water-discharge standards, and implements training programmes for sustainable water management.

Wastewater treatment and reuse

The University operates wastewater treatment facilities so that discharged water meets safety standards before entering local water systems, preventing pollution and protecting aquatic ecosystems. Its comprehensive water-management policy includes the treatment and reuse of wastewater and greywater in accordance with the Egyptian Code for Wastewater Reuse (2015). Treated water is used only for approved purposes, particularly irrigation of green areas, in line with national environmental and public-health requirements.

Digital monitoring and GIS

Digital monitoring systems and Geographic Information Systems (GIS) continuously monitor water quality, distribution networks, and consumption across the campuses. Regular inspections detect leaks and prevent contamination or unnecessary water losses.

Law 458/2007
Egyptian drinking-water standard

WHO
Drinking and discharge guidelines

Code 2015
Egyptian Code for Wastewater Reuse

08

MINIMISING THE DISCHARGE OF POTABLE WATER

Treated wastewater and greywater

Reused for landscape irrigation.

Air-conditioning condensate

Collected and reused.

Modern irrigation

Drip, sprinkler, and mist irrigation for efficient application and less runoff.

Lysimeter studies

Scientific assessment of crop water requirements to optimise irrigation and prevent overwatering.

These measures safeguard local ecosystems, reduce pressure on freshwater resources, improve water-use efficiency, and ensure that water management supports environmental sustainability and human well-being. Through these integrated policies and monitoring mechanisms, Assiut University maintains water-quality standards and responsible water-discharge management across its campuses and agricultural facilities.



Treatment and reuse of greywater, and reuse of air-conditioning water, to irrigate green areas.

09 · Policies supporting conservation

Policies ensure sustainable management of drylands and terrestrial ecosystems. Established in 2016 and reviewed in 2023.

10 · Monitoring IUCN species

No formal policy, but the University monitors endangered species including the Egyptian vulture and the greater spotted eagle.

11 · Biodiversity in campus planning

Biodiversity is integrated into construction and green-building policies.

12

ALIEN SPECIES CONTROL

The University conducts monitoring and pest-control research in the Faculty of Agriculture, including work on the red palm weevil, an invasive pest of date palms.

RESEARCH · DEPARTMENT OF PLANT PATHOLOGY

Isolation, identification and efficacy of three bacterial isolates against the red palm weevil, Rhynchophorus ferrugineus (Olivier) (Coleoptera: Curculionidae)

Najeeb M. Almasoudi, Khalid A. Asiry, Kamal A. M. Abo-Elyousr · Egyptian Journal of Biological Pest Control

Thirty-seven bacterial isolates were taken from red palm weevil larvae on infested date palms. Sequencing identified Serratia marcescens, Klebsiella pneumoniae, and Bacillus thuringiensis. B. thuringiensis was the most potent, reaching 100% larval mortality four days after treatment at 1 × 10^8 CFU/ml, suggesting these strains as candidate biocontrol agents.

RESEARCH · DEPARTMENT OF PLANT PROTECTION · 1 MARCH 2024

Formaldehyde's insecticidal potential on immature stages of red palm weevil (Rhynchophorus ferrugineus)

Ali Ahmed Ali, Ezzat Faraj Al-kheit, Islam El-zoghby, Aly Ahmed Abd-Ella · Aswan University Journal of Environmental Studies

Formalin (a 40% solution of formaldehyde) had a significant effect on second-instar and newly hatched larvae, with mortality rising as exposure lengthened. The study suggests formalin may suit integrated pest management of this pest as a protective or curative agent.

13

REDUCING PLASTIC WASTE ON CAMPUS

Assiut University has adopted a Policy for Reducing Paper and Plastic Usage on Campus to minimise the environmental impacts of plastic consumption and promote sustainable alternatives. It encourages eco-friendly alternatives, reusable and refillable containers, and awareness programmes for students and staff, and promotes replacing bottled water with water dispensers, paper cups instead of plastic cups, and biodegradable or non-plastic cleaning materials. The policy also supports digital-transformation measures that reduce resource consumption, alongside awareness campaigns encouraging the university community to reduce plastic use.

The University's policy on preventing and reducing pollution also includes provisions to ban single-use plastics on campus and promote environmentally friendly alternatives, alongside educational initiatives that encourage reusable materials.

14

WASTE DISPOSAL COVERING HAZARDOUS MATERIALS

Assiut University has a formal waste-disposal policy that distinguishes between ordinary and hazardous waste and sets procedures for the safe handling, collection, treatment, and disposal of hazardous materials. Hazardous waste is collected in designated red bags, handled by trained personnel using personal protective equipment (PPE), and transferred to the incinerator complex at Assiut University Hospitals for safe disposal. The University operates under a cooperation protocol with the Ministry of Health for hazardous-waste incineration and uses sterilisation and treatment equipment for medical and infectious waste.

HAZARDOUS WASTE CATEGORIES COVERED

Medical waste	Infectious materials	Pathological waste
Sharp materials	Radioactive materials	Electronic waste

15

COMMUNITY PARTNERSHIPS

Workshops for farmers and local stakeholders

The Faculty of Agriculture organises workshops and training sessions for farmers and local stakeholders on sustainable land management and ecosystem preservation.

Soil Laboratory services

The Soil Laboratory for Analysis and Technical Consultations provides soil, water, and plant analysis services to local farmers and organisations, helping them adopt sustainable land-management practices.

Agronomy Department

Works with scientific organisations on applied research and training to solve agricultural problems, focusing on crop production and sustainable land use.

100M Trees
Initiative with government and NGOs

Jojoba
Plantations

Farmers
Training programmes

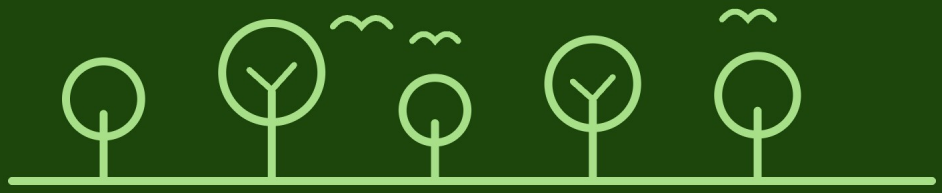
SDG 15 IN SUMMARY

A botanical garden, a 20-acre Extension Farm, greenhouses and rooftop farms; soil and central laboratories serving farmers and researchers; water reuse under national standards; conservation policies since 2016; and research against invasive pests.

15

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