MARRAKECH

جامعة القاضي عياض

UNIVERSITÉ CADI AYYAD

Annual Report

Report on Sustainable Development Actions and Activities

Sustainable Development Goal 6

Clean Water and Sanitation



2024 / 2025

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1. Clean Water and Sanitation – SDG 6

Cadi Ayyad University (UCA) considers the sustainable management of water resources a key priority in its sustainable development strategy. In response to the challenges associated with preserving this essential resource, the University is committed to promoting the rational use of water, improving water consumption monitoring, and encouraging practices that help reduce waste.

This approach is based on monitoring water supply, optimizing the irrigation of green spaces, raising awareness among the university community, and developing research and innovation projects related to sustainable water management. These actions contribute to achieving Sustainable Development Goal 6 (SDG 6), which aims to ensure the availability and sustainable management of water and sanitation for all.

1.1 Water Supply and Total University Water Consumption

Cadi Ayyad University (UCA), through its 15 constituent institutions, uses water resources to support its educational, administrative, and scientific activities, as well as the maintenance of its infrastructure and green spaces. Its water supply relies mainly on two sources: the public water distribution network and wells used by certain institutions.

Water supplied through the public distribution network is provided by the Marrakech-Safi Regional Multiservice Company (SRM), while wells provide access to groundwater resources, particularly for the irrigation of green spaces.

During the 2024–2025 academic year, water consumption from the public distribution network amounted to 63,098 m^3. This figure corresponds to the recorded consumption of institutions connected to the public network. The University's total water consumption will also include the volumes extracted from wells once the relevant data have been collected and consolidated.

Monitoring water consumption enables UCA to gain a better understanding of its water needs, identify the main areas of use, and guide initiatives aimed at improving water-use efficiency, reducing waste, and promoting sustainable water management across its campuses.

Supporting evidence: SRM water bills and consumption records; water consumption data from individual institutions; well water meter readings; consolidated water consumption data; academic year 2024–2025.

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1.2 Water Management and Reuse Policy

Cadi Ayyad University (UCA) has an institutional water management policy, developed in 2024, to provide a framework for the sustainable management of water resources across its institutions. This policy is reviewed and updated annually to reflect changing needs, management practices, and the

University's objectives regarding water conservation and the rational use of water resources.

The policy was most recently reviewed and updated in 2026, demonstrating UCA's commitment to continuously improving its water management practices.



Référence : https://sustainable.uca.ma/wp-content/uploads/2026/04/Politique_Gestion_Durable_Eau_UCA-V3.pdf

1.3 Access to Drinking Water

Cadi Ayyad University provides free drinking water facilities for its university community, including administrative, technical, and teaching staff, as well as students. Drinking water fountains are installed throughout the various facilities, schools, and campuses, allowing members of the university community and visitors to access drinking water free of charge, 24 hours a day, seven days a week.

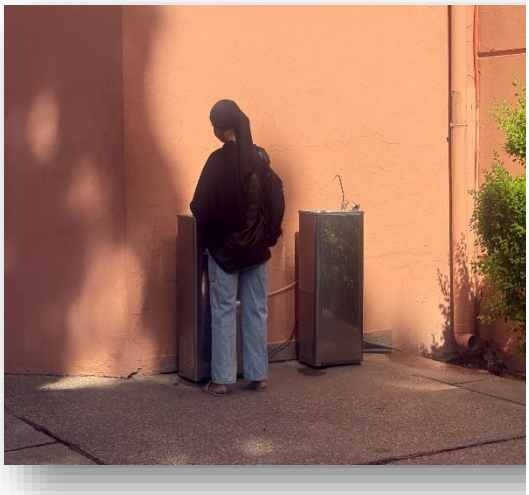
This initiative aims to ensure continuous and equitable access to drinking water while promoting the well-being and comfort of the entire university community. It also encourages healthy hydration habits and helps reduce reliance on single-use plastic bottles by promoting the use of reusable water bottles and containers.

This initiative is therefore part of UCA's broader commitment to sustainable resource management and the reduction of plastic waste across its campuses.

Photo 1 : Provision of drinking water dispensers across UCA institutions



Safi Multidisciplinary Faculty-UCA



Faculty of Arts and Humanities of Marrakech-UCA



Marrakech Innovation City-UCA

1.4 Awareness-Raising and Education on Sustainable Water Management

Cadi Ayyad University (UCA) places particular importance on raising awareness and educating its university community and various audiences about the challenges associated with water conservation and the sustainable management of water resources. This approach aims to strengthen knowledge, promote good practices, and encourage responsible behaviour in water use and waste prevention.

Through its academic programmes, communication materials, student engagement, and educational and scientific initiatives, UCA contributes to fostering a culture of responsible water management both across its campuses and among stakeholders within its local communities.

Training and Educational Activities Related to Sustainable Development and Water

Cadi Ayyad University offers training programmes, courses, and educational activities related to sustainable development, the environment, natural resource management, and water conservation. These courses enable students to acquire knowledge and skills concerning environmental challenges, the sustainable management of water resources, and the issues associated with their preservation.

This educational offering helps integrate sustainable development principles into academic programmes and prepares future graduates to take environmental considerations into account in their respective professional fields.

Référence : https://sustainable.uca.ma/education/

Awareness-Raising Campaigns and Promotion of Good Practices in Sustainable Water Management

In addition to its academic activities, UCA implements communication and awareness-raising initiatives to promote the rational use of water in everyday life. As part of these efforts, the University has developed and distributed awareness posters promoting good water-use practices, designed to inform and engage members of the university community.

These materials highlight simple actions to prevent water waste, including turning off taps properly, promptly reporting leaks, and using water responsibly in washrooms and other campus facilities. They help reinforce appropriate behaviours and strengthen individual and collective responsibility for water conservation.

These communication initiatives complement the technical measures implemented across the University's institutions to manage water consumption. They contribute to changing user practices and gradually fostering a shared culture of water conservation.

Figure 1 : Awareness poster promoting good practices for water management and conservation





Mobilisation of Student Clubs and Associations

Student clubs and associations play an important role in mobilising the university community around environmental issues and sustainable development. Through their activities, they can help promote good practices and encourage student involvement in the conservation of natural resources, particularly water.

Awareness campaigns, workshops, themed events, and field activities organised by student clubs provide opportunities for interaction and knowledge-sharing among students while encouraging the

adoption of environmentally responsible behaviours. These initiatives strengthen student participation and help transform university campuses into spaces for learning and engagement in support of sustainable development.

Référence : https://sustainable.uca.ma/clubs/

Public Awareness and Knowledge-Sharing on Sustainable Water Management

Cadi Ayyad University also contributes to raising public awareness of water conservation through initiatives that promote knowledge-sharing, innovation, and participation among diverse audiences. These activities help connect university initiatives with societal concerns and promote sustainable solutions to water-related challenges.

One of these initiatives was the Water4Future Hackathon, held in Marrakech on 23 and 24 January 2025. The event brought together UCA master's and engineering students, as well as young professionals, to address issues related to water conservation, reuse, and sustainable management. It was organised in collaboration with the UNESCO International Centre for Water (ICIREWARD-Montpellier). This initiative encouraged collective thinking and the development of innovative solutions to water-related challenges.

UCA also organised a competition for the best short video on water conservation. The initiative aimed to encourage the creation of awareness-raising content and engage participants in protecting this essential resource. The use of audiovisual materials helps communicate awareness messages in an accessible format suited to different audiences.

These initiatives demonstrate the University's contribution to knowledge dissemination and public awareness of water-related challenges beyond the strictly academic environment.

Référence : https://www.instagram.com/p/DD9qHUdI7SC/?utm_source=ig_web_copy_link&igsh=MzRlODBiNWFlZA%3D%3D

Référence : https://www.uca.ma/fr/news/gagnants-du-concours-de-la-meilleure-capsule-video-sur-la-preservation-de-leau

"Green School" Project – Sustainable Water Management and Awareness-Raising

As part of its efforts to promote sustainable water management, Cadi Ayyad University (UCA), through the École Normale Supérieure (ENS) of Marrakech, one of its constituent institutions, is implementing the "Green School" project. This initiative combines practical measures for the rational use of water with educational and awareness-raising activities aimed at school pupils.

As part of this project, ENS Marrakech has installed smart irrigation systems to optimise water use for the maintenance of green spaces and help reduce water waste. This initiative aims to reduce and

optimise water consumption for irrigation, promote the sustainable and rational management of water resources, and encourage the adoption of environmentally responsible practices.

In parallel, the project includes awareness-raising activities for school pupils to strengthen their understanding of water conservation challenges and highlight the importance of using natural resources responsibly. The implementation of these activities involves the technical services of ENS Marrakech, in partnership with Abou Bakr Assadik Primary School.

The outcomes of this initiative include the commissioning of a smart irrigation system and the delivery of awareness-raising activities for pupils. The project therefore contributes to optimising water use for the maintenance of green spaces while strengthening pupils' awareness of the importance of water conservation.

Photo 2 : Green School project at Abou Bakr Assadik Primary School



1.5 Research, Knowledge Production, and Innovation in the Water Sector

Cadi Ayyad University contributes to the advancement of scientific knowledge and innovation in the water sector through the activities of its laboratories, research teams, and research structures. The research conducted covers several aspects of sustainable water resource management, including water

resource conservation, hydrology and hydrogeology, water quality, wastewater treatment and reuse, agricultural water management, and challenges related to climate change and drought.

Référence : https://sustainable.uca.ma/research/

These research activities contribute to the development of scientific knowledge and solutions tailored to the challenges of water resource conservation, management, and recovery. They also lead to scientific publications, research projects, doctoral studies, scientific partnerships, and expert activities in the water sector.

This research dynamic is supported in particular by the National Centre for Studies and Research on Water and Energy (CNEREE), a university research and development centre that aims to bridge the gap between scientific research and the needs of the socio-economic sector. Through its applied research projects and innovation activities, the Centre contributes to the development of technological solutions in water treatment and recovery, wastewater management, water disinfection, and wastewater reuse. Its research also addresses issues such as risks associated with irrigation water, agricultural adaptation to climate change and drought, and solar-powered water desalination.

Key achievements in wastewater treatment and reuse include:

- A horizontal subsurface-flow constructed wetland designed to treat greywater at a school;
- A wastewater treatment and reuse plant associated with an energy-efficient prototype building, established at the annex of UCA's Faculty of Law;
- An algae-based photobioreactor developed at the Faculty of Sciences Semlalia in Marrakech for the treatment of domestic wastewater.

Référence : https://cneree.uca.ma/realisations/#

These achievements demonstrate how scientific knowledge can be applied through experimental systems and technical solutions designed to improve wastewater treatment and promote the recovery and reuse of water resources.

CNEREE's applied research is also supported by collaborations with public and regional stakeholders. The Centre develops projects and partnership agreements related to wastewater management and the implementation of model wastewater treatment plants using the “Ecobiofiltre” filtration process in several municipalities. These collaborations facilitate knowledge transfer and the adaptation of developed solutions to local needs.

Référence : https://cneree.uca.ma/projets-et-conventions/

Furthermore, the valorisation of research results is reflected in the development of prototypes, technologies, and patents in the fields of water treatment and wastewater management. These activities help strengthen the University's scientific and technical capacities and foster the development of innovative solutions to address the challenges associated with water resource conservation.

Through its research activities, experimental achievements, partnerships, and technology transfer initiatives, Cadi Ayyad University contributes to the production and dissemination of scientific knowledge, innovation in the water sector, and the promotion of sustainable water resource management, in line with the objectives of Sustainable Development Goal 6 (SDG 6).

Photo 3 : Horizontal constructed wetland for greywater treatment at a school



1.6 Events, Conferences, and Scientific Meetings on Water

Cadi Ayyad University regularly organises and participates in events, conferences, symposia, study days, workshops, and scientific meetings dedicated to water-related issues and the sustainable management of water resources. These activities provide platforms for exchanging and sharing knowledge among researchers, faculty members, students, professionals, institutional stakeholders, and other relevant parties.

The topics addressed include water resource conservation, sustainable and integrated water resource management, water security, climate change, water quality and treatment, wastewater reuse, irrigation, and innovation in the water sector.

Through these events, UCA contributes to disseminating scientific research findings, sharing best practices, and strengthening dialogue between the academic community and stakeholders involved in water-related issues. These meetings also help raise awareness among the university community and the general public about current challenges related to water resource conservation.

Référence : https://sustainable.uca.ma/events/

1.7 Promoting Responsible and Efficient Water Use

Cadi Ayyad University (UCA) is committed to sustainable water resource management, with the aim of monitoring and controlling consumption and promoting water-efficient practices across its campuses.

In this regard, drip irrigation systems are used in some university institutions to water green spaces. This technology delivers water directly to the roots of plants, thereby helping to minimise water losses and improve irrigation efficiency.

These practices contribute to optimising water use and complement awareness-raising initiatives designed to encourage responsible behaviour among the university community. They therefore support efforts to conserve water resources and implement Sustainable Development Goal 6 (SDG 6), which

focuses on clean water and sanitation.

Photo 4 : Drip irrigation system implemented at selected UCA institutions





Faculty of Sciences Semlalia of Marrakech – UCA





Faculty of Economics and Management of Marrakech – UCA

1.8 Water-Efficient Landscaping

Cadi Ayyad University strives to design and maintain its green spaces in a way that takes into account the need to conserve water resources and adapt to local climatic conditions. At some of its institutions, gardens, lawns, and landscaped areas are irrigated using water from wells, making groundwater available for these purposes and helping reduce reliance on drinking water supplied through the public distribution network.

UCA also promotes, where appropriate to local conditions, landscaping that incorporates native or climate-adapted plant species, particularly drought-tolerant species that require little irrigation once established. This approach helps reduce the water needed to maintain green spaces while supporting biodiversity conservation and improving the quality of the campus environment.

These practices contribute to more sustainable outdoor space management by balancing irrigation needs, adaptation to climatic conditions, and the preservation of the landscape quality of the University's institutions.

Photo 5 : Green spaces across UCA institutions



Faculty of Economics and Management of Marrakech - UCA



Faculty of Letters and Human Sciences of Marrakech - UCA



Faculty of Letters and Human Sciences of Marrakech - UCA



Faculty of Sciences Semlalia of Marrakech - UCA

These practices therefore contribute to more sustainable green space management by balancing water resource conservation, adaptation to climatic conditions, and improvements to the quality of the campus environment.

1.9 Cooperation with Public Authorities on Water Security

Cadi Ayyad University (UCA), through its constituent institutions and research structures, contributes to efforts to preserve water resources and strengthen water security at the territorial level. This contribution is based in particular on research, education and training, scientific expertise, and awareness-raising activities carried out by the University.

In this context, the Faculty of Sciences Semlalia (FSSM) cooperates with various government bodies on issues related to water security and the sustainable management of water resources. Such cooperation may include applied research projects focusing on sustainable water management, scientific studies and expert assessments to support public policies, as well as participation in water resource monitoring and assessment programmes.

The University also contributes to knowledge sharing and capacity building among relevant stakeholders through the organisation of scientific meetings, workshops, and training sessions in collaboration with the competent authorities and organisations. These interactions help bridge the gap between academic research, scientific expertise, and the needs of public sector stakeholders in water resource management and security.

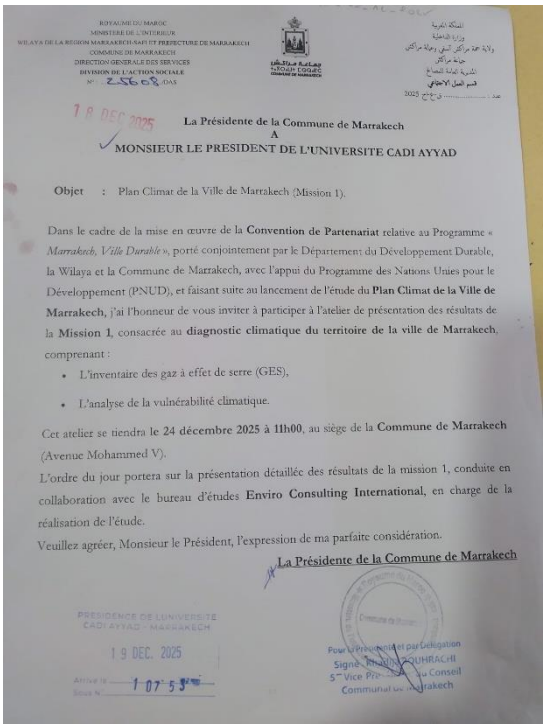
Through these various forms of cooperation, UCA contributes to the generation and dissemination of knowledge that supports sustainable water management and helps inform policies and strategies related to water security.

As part of this ongoing cooperation with local authorities, Cadi Ayyad University was also invited by the Municipality of Marrakech to contribute to the development of the Marrakech City Climate Plan. This initiative falls within the framework of the partnership agreement relating to the “Marrakech, Sustainable City” programme, jointly led by the Department of Sustainable Development, the Wilaya of the Marrakech-Safi Region and the Municipality of Marrakech, with the support of the United Nations Development Programme (UNDP).

In this regard, the President of the University was invited to attend a workshop presenting the results of the first mission, held on 24 December 2025 at the Municipality of Marrakech headquarters. This mission focuses in particular on preparing an inventory of greenhouse gas (GHG) emissions and assessing the climate vulnerability of the city’s territory.

This initiative illustrates the contribution of the University's expertise to local climate planning and sustainable development initiatives, while strengthening cooperation between the University and local authorities.

Figure 2 : Example of an invitation to participate in the development of the Marrakech City Climate Plan



ROYAUME DU MAROC
MINISTERE DE L'INTERIEUR
WILAYA DE LA REGION MARRAKECH-SAFI ET PREFECTURE DE MARRAKECH
COMMUNE DE MARRAKECH
DIRECTION GENERALE DES SERVICES
DIVISION DE L'ACTION SOCIALE
N° 2566 /DAS

المملكة المغربية
وزارة الداخلية
ولاية جهة مراكش آسفي وعمالة مراكش
جماعة مراكش
المديرية العامة للشؤون
قسم العمل الاجتماعي
عدد ..... في 2025

18 DEC 2025

La Présidente de la Commune de Marrakech
A
MONSIEUR LE PRESIDENT DE L'UNIVERSITE CADI AYYAD

Objet : Plan Climat de la Ville de Marrakech (Mission 1).

Dans le cadre de la mise en œuvre de la **Convention de Partenariat** relative au Programme « *Marrakech, Ville Durable* », porté conjointement par le Département du Développement Durable, la Wilaya et la Commune de Marrakech, avec l'appui du Programme des Nations Unies pour le Développement (PNUD), et faisant suite au lancement de l'étude du **Plan Climat de la Ville de Marrakech**, j'ai l'honneur de vous inviter à participer à l'atelier de présentation des résultats de la **Mission 1**, consacrée au **diagnostic climatique du territoire de la ville de Marrakech**, comprenant :

- L'inventaire des gaz à effet de serre (GES),
- L'analyse de la vulnérabilité climatique.

Cet atelier se tiendra **le 24 décembre 2025 à 11h00**, au siège de la **Commune de Marrakech** (Avenue Mohammed V).

L'ordre du jour portera sur la présentation détaillée des résultats de la mission 1, conduite en collaboration avec le bureau d'études **Enviro Consulting International**, en charge de la réalisation de l'étude.

Veuillez agréer, Monsieur le Président, l'expression de ma parfaite considération.

La Présidente de la Commune de Marrakech

PRESIDENCE DE L'UNIVERSITE CADI AYYAD - MARRAKECH
19 DEC. 2025
Arrivé le 1 07 59
Sous N°

Pour la Présidente et par Délégation
Signé : [illegible] OUHRACHI
5ème Vice Président du Conseil
Communal de Marrakech

1.10 Prevention of Water Pollution from University Activities

Cadi Ayyad University (UCA) contributes to the prevention of water pollution through the management of wastewater generated by its university activities. Institutions connected to the public sewerage network discharge their wastewater into the network operated by the Regional Multiservice Company of Marrakech-Safi (SRM), in accordance with the applicable connection requirements. This system ensures that wastewater is directed to the appropriate infrastructure for collection and treatment.

Photo 6 : Example of an invoice between UCA and SRM



FACTURE EAU N° 2025216642499 فاتورة الماء رقم

Ville de MARRAKECH
Agence: GRANDS
Avenue Mohammed VI
Tel: 05 24 42 43 00

Tournée	041002918	جولة
N° Contrat	0633370	رقم العقدة
Client	0713451	زبون
Compteur	GCO01116202	عداد
Usage	EAU ADMISTRATIONS G.	استعمال

Nom et Adresse du client إسم و عنوان الزبون
UNIVERSITE CADI AYYAD ABDE LKRIM EL KHATTABI
9999 SECTEUR SECTEUR PROVISOIRE
PRESIDENCE CADI AYYAD ABDELK KHA

Période facturation 12/2025 فترة الفوترة

المرجع القديم Ancienne référence	قطر العداد Diamètre compteur	البيان السابق Ancien index	البيان الجديد Nouvel index	التاريخ السابق Ancienne date	التاريخ الجديد Nouvelle date	عدد الايام Nbr jours	الإستهلاك Consommation	الإستهلاك المحتسب Consommation Facturée
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In addition to managing wastewater discharges, the University conducts research on wastewater treatment and reuse through the National Centre for Water and Energy Studies and Research (CNEREE) and its research structures. Examples of initiatives include a vegetated horizontal-flow filter designed to treat greywater at a school, a wastewater treatment and reuse plant associated with an energy-efficient prototype building at the annex of the Faculty of Law, and an algae-based photobioreactor for domestic wastewater treatment at the Faculty of Sciences Semlalia in Marrakech.

Référence : https://cneree.uca.ma/realisations/#

These complementary actions combine the management of wastewater generated by university activities with applied research into water treatment and recovery solutions. They form part of the University's broader commitment to preserving water resources and reducing the risks of pollution associated with wastewater discharges.