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THE EFFECTS OF GLOBAL WARMING are being felt in every corner of our planet. They affect all species, all societies, and all cultures. They do not observe geopolitical borders, and these devastating events disproportionately affect marginalized communities.

We need to make common cause to address this greatest challenge of our time, through collaboration between the private and public sectors, and between academic institutions, governments, industries, and countries. Meeting this challenge requires all of us to think about how we act and live sustainable lives in the context of our university, our community, and our personal circumstances. It requires universities to lead by producing cutting edge research to identify innovative and pioneering solutions to tackle all components of the climate crisis. And it requires strong international collaboration among countries to ensure that enough is done now to slow and reduce the rate of global warming over the next decade, and much more by 2050.

In 2021, as NYU Abu Dhabi (NYUAD) celebrated its first decade, I established the Office of Sustainability and Stewardship with the mission to transform NYUAD into one of the region's leading campuses in the field of sustainability. Under the leadership of Antonios Vouloudis, the office works closely with faculty, students, and staff to transform this vision into reality. Across every area of university life, we are pursuing strategies to reduce our greenhouse gas emissions, support teaching, research, and technological solutions, and provide resources and guidance in advancing a culture of sustainability at NYUAD.

This Climate Action Plan outlines our goal to achieve carbon neutrality by 2050. It provides a roadmap of how we are planning to achieve this target. Our efforts on climate action are in alignment with the United Arab Emirates (UAE) strategic vision of Net-Zero by 2050, which will make the UAE the first Middle East and North Africa (MENA) nation to achieve that goal and also with New York University's (NYU) carbon neutrality vision. We will also explore and utilize any available future opportunities, and advancements in technology and regulations, to accelerate our university's carbon neutrality journey.

NYUAD is one of the most diverse university campuses in the world, with students from over 125 countries and faculty and staff from almost as many. We are determined to unite across this marvelous diversity to become a truly sustainable community, in which each one of us is empowered to contribute to a greener future for all.

NYUAD is committed to the vital contributions that universities can make by supporting the climate research of our faculty across the sciences, engineering, social sciences, and the arts and humanities. Our students - the generation most impacted by our climate future - are key leaders in the greening of our campus through their Sustainability Committee and several environmental student interest groups. To complement the great work of our researchers and our students, we are now focused on the strategic goal of making NYUAD carbon neutral by 2050

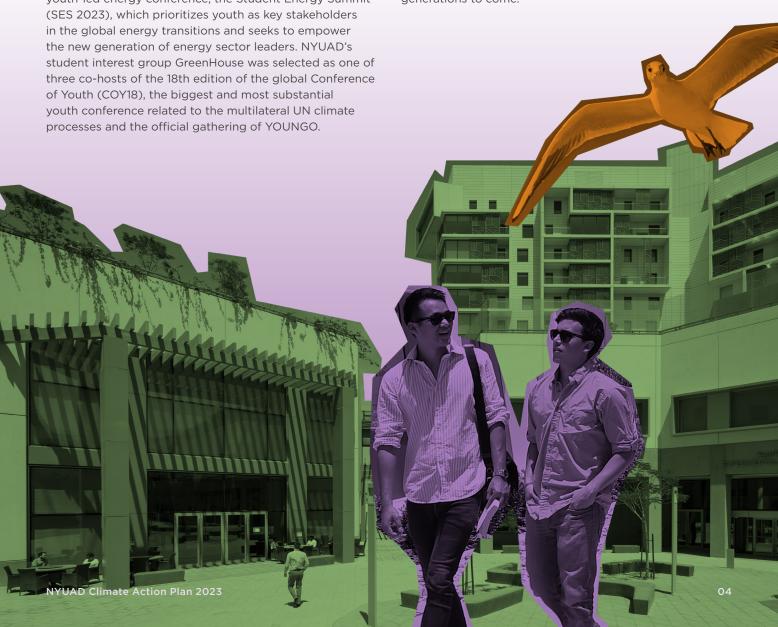
MESSAGE FROM THE VICE CHANCELLOR

In late 2023, the UAE will host the 28th Conference of the Parties to the UN Framework Convention on Climate Change (COP28) bringing the world together at a critical moment for global transformative climate action. NYUAD signed a Memorandum of Understanding (MOU) with the COP28 Presidency to foster cooperation on knowledgesharing activities, public programming focused on climate action, and enhanced youth engagement opportunities in the lead up to the conference. I am proud that NYUAD is the inaugural chair of the Universities Climate Network (UCN), bringing together more than 20 leading higher education institutions in the UAE to leverage collective expertise and resources to support the goals of COP28 and create partnerships that drive meaningful change and legacies beyond the conference.

NYUAD is redoubling its own efforts to propel research, teaching, and action on climate change in alignment with the UAE's vital national priorities. I am motivated by the myriad ways in which NYUAD faculty, students, and staff are demonstrating leadership and innovation both in the country and across the many global sites where we work.

Our students won the bid to host the world's largest youth-led energy conference, the Student Energy Summit Our faculty are co-chairs of the UAE Climate Change Research Network (CCRN) with the Ministry of Climate Change and Environment (MOCCAE) and pioneers of regional climate solutions to global challenges. Our public programs invite communities to engage in scholarly discourse and artistic exploration of climate change. Our staff and research experts have been seconded to represent the UAE in global negotiations in the lead up to COP28. Central to all of these commitments is an obligation to make globally and locally significant contributions that help drive the sustainable growth and development as well as thought leadership of Abu Dhabi, the UAE, and the broader region.

The UAE's ambitious Net Zero by 2050 initiative showcases the country's commitment to the Paris Agreement of 2016, through which 196 parties agreed to reduce greenhouse gas emissions and limit the rise in global temperature to 1.5 C compared to pre-industrial levels. Events like Expo 2020 and COP 28 demonstrate the country's visionary leadership and commitment towards a sustainable future. NYUAD is fully dedicated to these principles, and will do everything possible to help the country and the world ensure a livable planet for many generations to come.



Key Initiatives

NYUAD IS EMBARKING ON A JOURNEY OF MINIMIZING ITS IMPACT ON THE ENVIRONMENT

NYUAD is committed to achieving the ambitious target of Carbon Neutrality by 2050. Our first ever Climate Action Plan (CAP) details NYUAD's GreenHouse Gas Emissions (GHG) and establishes the framework for achieving this overarching vision. In this document, we provide our plans for achieving NYUAD's goals, and discuss NYUAD's GHG inventory. Here are some key messages of this Climate Action Plan:



We're Becoming More Efficient

The majority of NYUAD's emissions come from buildings. This is one of the main reasons that we're focused on reducing building energy use and chilled water consumption. NYUAD has committed to identifying, planning, prioritizing and implementing efficiency projects across campus that will enhance our campus buildings operations, minimize energy and water use and improve occupants' health and performance on campus.



We're Aligned

In 2021, the Unted Arab Emirates announced a plan for net-zero emissions by 2050, which entails a 600 billion dirhams (\$163 billion) investment in renewable energy. This makes it the first country in the Middle East and North Africa region to launch a concrete initiative to achieve that climate commitment.

NYUAD is aligned with this strategic initiative and is actively engaged in exploring opportunities concerning enhanced building energy efficiency and the adoption of renewable energy sources. NYUAD has recently initiated a comprehensive audit process aimed at assessing the feasibility of achieving carbon neutrality for its campus. This audit entails a meticulous evaluation of the economic viability, regulatory compliance, and operational feasibility of these prospects, while concurrently addressing the three pillars of sustainability: economic, social, and environmental considerations.



We're Leading the Way

In alignment with NYU's broader vision, NYUAD aims to become a leading institution in sustainability in the MENA region through actions aimed at achieving the Carbon Neutrality Goal.



SUMMARY OF NYUAD'S GHG EMISSIONS REDUCTION GOALS

NYUAD will employ strategies to reduce energy in academic and office buildings through conservation and efficiency methods. Energy-saving strategies will include building retrofits, operational innovations through building management systems, advanced controls, active monitoring, and operator engagement.

NYUAD's green campus buildings will have significant health benefits. In fact, medical studies show that cognitive function doubles in offices with better indoor air quality. Therefore, our students, faculty, and staff perform better — academically and professionally — in a more comfortable indoor environment with cleaner air.

ULTIMATE GOAL

CARBON NEUTRALITY BY 2050

This goal pertains to the **Abu Dhabi campus.**

Greenhouse Gas Inventory

WHAT WE MEASURE AND HOW WE TRACK IMPROVEMENTS

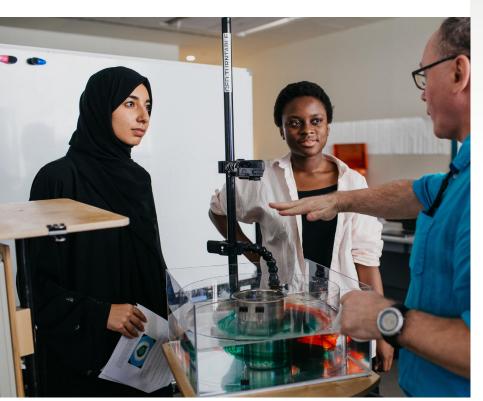
IN ALIGNMENT WITH NYU and for NYUAD's 2050 carbon neutrality goal, NYUAD has developed a GHG inventory according to standard methodologies developed by the **GHG Protocol Initiative** to track progress. In line with our dedication to broader emissions reduction, our plan harmonizes with and follows a progressively cleaner, zero-emission Abu Dhabi grid by 2050 as part of this endeavor.

Emissions Sources

For GHG accounting purposes, NYUAD's most immediate emissions can be organized into **two scopes**:

Scope 1: emissions are direct emissions from NYUAD entities (e.g., on-site fuel combustion in NYUAD's buildings and vehicles).

Scope 2: emissions are indirect emissions from purchased energy for NYUAD entities (e.g., grid electricity and purchased chilled water).



NYUAD campus, Saadiyat Island

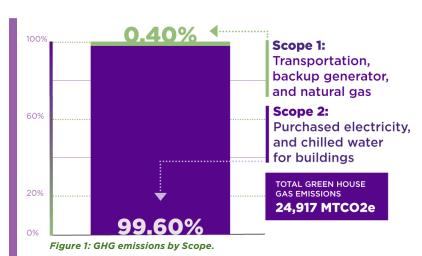
Inventory Notes and Limitations

- NYUAD has developed its GHG inventory in alignment with NYU's methodology to ensure that the results are consistent and comparable.
- Emissions were calculated by multiplying NYUAD's usage by industry-established emissions factors.
- NYUAD measures emissions for this inventory in "metric tons of carbon dioxide equivalent" (MTCO2e). This measurement accounts for the global warming potential of non-carbon dioxide emissions in addition to carbon dioxide itself.
- Baseline data for the 2050 goal is based on 2019 calendar year (CY19). This year was the last one before the COVID-19 pandemic and represents the year with the highest population on campus.
- O5 For accounting purposes and in alignment with NYU, NYUAD considers the fleet from the two contracted vendors as a Scope 1 emission because the vehicles are solely used for transporting NYUAD community members despite their operation by a third party.
- See Page 7 for NYUAD's GHG Scope 1 & 2 emissions inventory for CY19; Scope 3, e.g., waste, is not included in alignment with NYU methodologies.

Emissions Reduction Strategies

NYUAD's Goals

NYUAD endeavors to achieve carbon neutrality by the year 2050. This includes NYUAD's emissions from activities across both the main campus and the North site as well. Scope 1 and 2 emissions include on-site power generation, fuel for vehicle use, purchased electricity and chilled water. The 2019 baseline is illustrated in the graph below:





Abu Dhabi, United Arab Emirates

The Case For Carbon Neutrality

Carbon Neutrality would result in multiple **tangible** and **intangible** benefits and future proof NYUAD's assets against future risks:

CHAMPIONING THE CLIMATE CHALLENGE

Universities are drivers of postive change and looked up to for leadership. NYUAD rises to the challenge and establishes itself as a regional and global climate trendsetter.

ANTICIPATING FUTURE TRENDS AND REGULATIONS

Moving forward, market and regulatory changes can present pressures and risks to NYUAD. Stringent climate regulations include carbon tax, higher or time-of-use tariffs, and other forms that would increase costs in the long run.

IMPROVING THE QUALITY OF LIFE FOR CAMPUS USERS

Optimization, upgrade, and maintenance of assets like Air Handling Units and lighting can lead to improved cognitive function and wellbeing of campus users.

MEETING STAKEHOLDER EXPECTATIONS

NYUAD community is evaluating the university's environmental and social sustainability engagement. A climate action plan communicates the University's commitment to these issues and helps attract climate conscious talent.

EXTENDING THE LIFE OF NYUAD ASSETS

Prolonging asset life through better maintenance and asset management. Thereby improving environmental performance and optimizing the asset lifecycle costs.

OPERATIONAL SAVINGS

With electricity tariffs likely to rise, there are strong incentives to reduce energy dependence on the grid and other sources. Energy efficiency, renewables, and other measures can present significant operational savings, especially given future uncertainty.

Carbon Neutrality by 2050

NYUAD is committed to achieving carbon neutrality by 2050 and has developed a decarbonization roadmap accordingly, which is illustrated below.

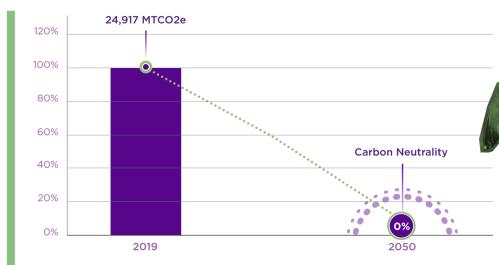


Figure 2: Projected reductions by 2050.

NYUAD's 2050 carbon neutrality goal is arrived at through a stepped approach that begins with collating a comprehensive greenhouse gas (GHG) inventory of the campus's scope 1 and 2 emissions following the GHG Protocol accounting standard. This is followed by a technical and financial feasibility assessment of GHG reduction measures. **The GHG reduction measures leading up to 2050** are presented below:

ENERGY EFFICIENCY MEASURES (EEMS)

Retrofit measures which include the installation, upgrade and/or replacement of building equipment such as lighting systems, fan systems, cooling systems, hot water systems etc.

BEHAVIORAL DEMAND SIDE MANAGEMENT

Behavior-change initiatives such as awareness and sustainable living programs.

GRID EMISSION FACTOR IMPROVEMENTS

In tandem with our commitment to broader emissions reduction, our plan aligns with a progressively cleaner, zero-emission Abu Dhabi grid by 2050.

Figure 3: NYUAD's Greenhouse gas emissions reductions measures



GHG Emissions Reduction Measures Explained

RETROFITS & RENOVATION

Prioritizing energy-efficient retrofit projects, which include highly efficient lighting, HVAC systems, and solar films on windows.

■ EQUIPMENT REPLACEMENT

Replacing building equipment at end of life with more efficient options.

AUTOMATION & OPTIMIZATION

Targeted efficiency projects such as data center cooling optimization, tenant set-point restrictions, installing occupancy sensors and controls to automatically turn off equipment when not in use.

PROCUREMENT OPTIMIZATION

Working with procurement to ensure minimum energy efficiency standards are established during procurement.

BEHAVIORAL CHANGE

Behavior-change initiatives such as awareness campaigns, education & training, demand side management initiatives.

FEASIBILITY STUDY OF ON-SITE RENEWABLE ENERGY GENERATION

Feasibility study of renewable energy sources such as solar and wind to reduce purchased electricity requirements.



GHG Emission Reductions Strategies Hierarchy

The GHG reduction measures leading up to 2050 are presented below in order of highest priority.

REDUCING ON-SITE ENERGY USE

Implementation of additional EEMs based on evolving technologies. New EEMs will be explored and evaluated on a continual basis.

PROCURE CARBON FREE-ENERGY

Procure carbon free electricity from the grid (if the market and regulations evolve to allow it), equal to the amount purchased from local utilities.

FEASIBILITY STUDY OF ON-SITE CARBON-FREE ENERGY

Generate carbon free electricity on-site (depending on future availability of space), equal to the amount purchased from the local utilities.

GENERATING OFF-SITE CARBON FREE-ENERGY*

Generate carbon free electricity off-site equal to the amount purchased from the local utilities.

PROCUREMENT OF CLEAN ENERGY CERTIFICATES (CECS)*

Purchase of CECs, each equating to 1 kWh of consumption, thereby certifying that their purchased electricity originates from a clean source.

Figure 4: NYUAD's Greenhouse gas reduction priorities.

*NYUAD's Climate Action Plan does not incorporate procurement of carbon offsets, CECs or off-site renewable energy as part of the strategy.



Sustainability on Campus

GREEN EVENTS STANDARDS

NYUAD is committed to reducing the environmental impact of the hundreds of events hosted every year. This standard includes actions that reduce waste and improve the food and beverage service at events through minimizing single-use and landfill-bound materials; opting for more reusable, long-lasting, or sustainably produced goods; increasing recycling and composting rates; and offering healthier and lower-impact food options.

GREEN WORKPLACE CERTIFICATION

NYUAD's Green Workplace Certification is a self-reporting program for administrators to be recognized for the measures they are taking to make their workplaces more sustainable. The Office of the Vice Chancellor is Certified as a Platinum Green Workplace "

WATER STRATEGY

Plastic has devastating effects on the environment, as well as on an individual's health. One of NYUAD'S goals is to significantly reduce the use of wasteful single-use plastics in particular plastic water bottles which is currently done through the installation of: kitchen taps (with installed filters), water fountains, water refill stations and atmospheric water generators.

CLIMATE CONVERSATIONS

A series of panels and talks featuring environmental justice researchers, policymakers, and advocates.

In March 2022, a 1,000 pages soft printing cap was implemented to all campus members. This is part of the printing mindfulness pilot initiative which aims to transform NYUAD into a more sustainable and environmentally friendly campus by managing excess printing through the central management of networked printing devices. The objective is to increase printing mindfulness and reduce the number of pages that are printed on campus every year. The soft printing cap is reset on September 1st and March 1st of each academic year.

AIR TRAVEL

PRINTING MINDFULNESS

NYUAD will aim to promote responsible decision-making regarding air travel, prioritizing thoughtful consideration of the benefits, costs, time, and environmental impact associated with university-related travel. The institution will enncourage community members to explore alternative options such as teleconferencing and low-carbon transportation alternatives whenever possible. Additionally, NYUAD will aim to actively monitor flight data year on year to gain insights into travel trends and promote sustainable practices.

Cool Food Pledge

In addition to NYUAD's 2050 carbon neutrality goal, NYU is a signatory to the **Cool Food Pledge**, a commitment to reduce food-related greenhouse gas emissions by 25% by 2030. This pledge encompasses all contracted dining facilities at NYU's campuses in New York, Shanghai, and Abu Dhabi, collectively. Additionally, NYU joins over 30 other global organizations serving over 800 million meals annually.

To accomplish this, NYUAD will incorporate the <u>EAT-Lancet</u> and <u>Menus of Change</u> frameworks into its dining principles, emphasizing a variety of sustainability objectives.



Major Milestones

HIGHLIGHTS FROM 2007 TO THE PRESENT

To learn more about our climate and sustainability accomplishments, visit **our web page.**

2009

Saadiyat Island campus Master Plan gets approved. The Saadiyat Island campus of NYUAD is a pedestrian-friendly campus that blends traditional and modern architectural elements to reflect the University's three identities: Abu Dhabi, New York, and the rest of the globe. The campus, which spans approximately 40 acres and is designed by Rafael Violy Architects, encourages interaction among scholars, students, and staff, as well as living and learning, research and teaching, and disciplines.



o----2007

The idea for NYUAD is announced as the first elite, complete liberal arts, sciences, and engineering university in Abu Dhabi to be run by a prominent American research university.



NYUAD Torch, Saadiyat Island

-2014

NYUAD announced the completion of its main campus on Saadiyat Island.

The design of the NYUAD project received a 2 Pearl Estidama rating. The Abu Dhabi Urban Planning Council mandates new buildings to meet Estidama criteria, a new sustainability framework based on worldwide best practice championed by the LEED and BREEAM certification systems in the United States and the United Kingdom, respectively. Estidama goes above and beyond existing certifications by incorporating additional criteria that reflect Abu Dhabi's unique environmental, social, cultural, and economic milieu.

Highlights from 2007 to the present

2018

The campus received a 2 Pearl Construction Rating as per the Estidama Pearl Building Rating System. As a project progresses from a design team to a construction team to a facility management team, the Estidama programme recognizes the realities of ownership and responsibility changes. Therefore the Construction Rating verifies that the Design Rating's commitments have been fulfilled.



Antonios Vouloudis, Director of Sustainability and Stewardship at NYUAD

2021

Appointment of Antonios Vouloudis as NYUAD's inaugural Director of Sustainability and Stewardship, effective March 15, 2021. NYUAD sets the goal to deepen institutional efforts by better connecting the great sustainability work that so many stakeholders are already doing throughout campus.



NYUAD campus, Saadiyat Island

2020

NYU signs the Cool Food Pledge, pledging to cutting food-related GHG emissions by 25% by 2030.

To accomplish this, NYUAD will incorporate the EAT-Lancet and Menus of Change frameworks into its dining principles, emphasizing a variety of sustainability objectives such as:

- Featuring daily menus that have vegetarian and vegan options.
- Offering vegan alternatives wherever dairy products are offered.
- Bringing educational programs to teach students how to make delicious, healthy, planet-friendly choices.

MAJOR MILESTONES

Highlights from 2007 to the present



Green workplace certification pilot launch: The Green Workplace Certification program at NYUAD is a self-reporting initiative that allows administrators to be acknowledged for their efforts to make their workplaces **more sustainable.**

2022

Launch of **Printing Mindfulness** pilot program, which aims to contribute towards making NYUAD a more sustainable and environmentally friendly campus by centrally managing networked printing machines.

2023

The first release of the **Climate Action Plan** at NYUAD forecasts information about current goals for the GHG reduction plans and initiatives that align with UAE's national goals toward reaching Net Zero by 2050.



Green Events guide launch: NYUAD is committed to reducing the environmental impact of the hundreds of events hosted every year. This standard includes actions that reduce waste and improve the food and beverage service at events.



NYUAD in Context

United Arab Emirates

NET ZERO 2050

The **Net Zero initiative** leads the UAE to achieve net-zero emissions by 2050, as the first Middle East and North Africa (MENA) nation. This initiative aligns with the Paris Aagreement, a long-term strategy to reduce greenhouse gas emissions and limit the rise in global temperature to 1.5 C compared to pre-industrial levels. New measures are introduced to reduce emissions while still ensuring economic growth. Among many key sectors, the UAE focuses on the energy sector to address climate change, as the country has been financing local and worldwide clean energy projects for more than 15 years.

COP28

The **28th session** of the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) will be hosted by the UAE in 2023. With commitments and partnerships between many nations, progress towards sustainable development and climate action plans would be made. The UAE particularly places importance on inclusivity, with developed and developing countries, public and private sectors, and youth approaching the issue of climate change in unity. In 2023, NYUAD signed a **Memorandum of Understanding** (MOU) with the incoming Presidency of the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC). This MOU signifies our shared commitment to addressing the climate crisis and supporting the goals of COP28. As part of this collaboration, NYUAD will actively contribute to the discussions and initiatives of COP28, leveraging our expertise and resources to drive meaningful change.

UNIVERSITIES CLIMATE NETWORK

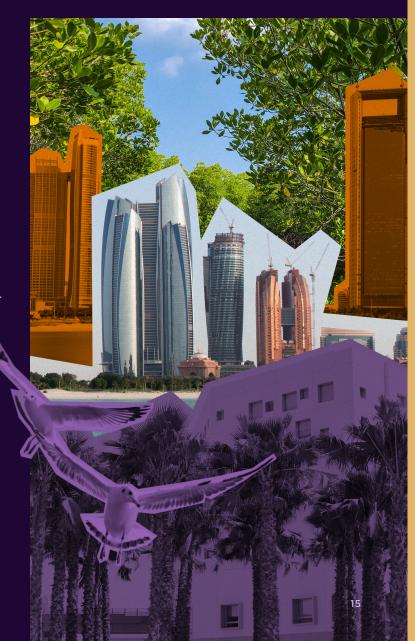
Aimed at encouraging youth engagement in the United Arab Emirates in the lead up to COP28, <u>Universities</u>

<u>Climate Network (UCN)</u>, which is chaired by NYU Abu Dhabi, is comprised of more than 20 universities and higher education institutions. Through UCN, NYUAD collaborates with universities to share knowledge, best practices, and innovative solutions for climate action. This network amplifies our impact and enables collective efforts towards a sustainable future.

Emirate of Abu Dhabi

ENVIRONMENT VISION 2030

With the goal to preserve and enhance
Abu Dhabi's natural heritage while maximizing resource
efficiency and improving everyone's quality of life. The
emirate of Abu Dhabi's **Environment Vision 2030** was
created to ensure integration of the three pillars of
sustainability: Environmental, Economic, and Social vision.
With five priority areas including: Climate change, Clean
air and noise pollution, Water resources, Biodiversity,
habitats and cultural heritage, and Waste management.
NYUAD current goals for the GHG reduction plans are
aligned with Abu Dhabi Environment vision 2030 and
forecasted through the targets and initiatives.



Be a Part of The Journey



LED BY THE OFFICE OF SUSTAINABILITY AND STEWARDSHIP,

in partnership with the Office of Facilities Management and many other departments and offices, NYUAD's Climate Action Plan will ensure that people at every level of the organization can contribute to the University's progress.

Be a part of the change. Be a part of the transformation. Be a part of the journey.

0

Reduce your Plastic Footprint

Grab your reusables from the bookstore and your lunch boxes from dining halls! Learn More about 500ml Plastic Water Bottles phasing out initiative

02

Go Paperless

Avoid print-outs for classes and in-person meetings as much as possible. Learn more about NYUAD's Printing Mindfulness Initiative



03

Recycle

Make sure to recycle, and recycle properly, consulting bin signage. Learn more about NYUAD's commitment to waste minimization

04

Power Down

Switch off lights and power down electronics when they are not in use. Learn more about how to Reduce your Environmental impact

<u>05</u>

Move Around

Explore NYUAD's outdoor spaces and consider taking the stairs if you can to avoid using the elevator. Find out more wellness best practices

06

campus

Drink Tap Water

The water on campus is safe to drink as it arrives treated by the Abu Dhabi Distribution Company, undergoes a second treatment, and gets tested on a regular basis by the Facilities team. Learn more about drinking tap water on

07

Minimize Food Waste

When at the store, buy only what you need. When eating at the dining halls, **ask for smaller portions** to prevent plate waste.



NYUAD Climate Action Plan 2023



NYUAD CLIMATE
ACTION PLAN / 2023

FOR STUDENTS: Find your sustainability interest group Check out student sustainability committees and organizations.
Learn more about Student
Organizations

FOR FACULTY AND STAFF: Green your Workplace

Contact the Office of Sustainability and Stewardship and complete a checklist of actions to receive a certification. Learn more about Green Workplace Certification

FOR THE NYUAD COMMUNITY: Apply for a Green Grant!

The Green Grants program aims to encourage students interested in undertaking sustainability projects on campus to utilize their potential toward the pathway of learning and implementing sustainability related innovations in the institution.

Learn more about Green Grants

FOR THE NYUAD COMMUNITY: Host Green Events

The **Green Events Standard** provides the grounds for event planners on campus to comply with sustainable and environmentally friendly practices when hosting an event.

Stay Connected with the Office of Sustainability in Abu Dhabi

Email us at nyuad.sustainability@nyu.edu