

# IAPH Awards

# Engineering and Technical Services Unit

June 2023



مجموعة موانئ أبوظبي  
AD PORTS GROUP



**WPSP Theme:**

**Environmental Care**

# Table of Contents

- Who we are
- Our Sustainability Focus Areas
- Biodiversity Conservation
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# A STRATEGIC LOCATION

The capital of the UAE, sits at the crossroads of trade between Europe, Asia and Africa on one of the world's largest trade routes

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Reaching two-thirds of the global population

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Stable political system and highly professional business landscape

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Ranked safest city in the world for 6 years running

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UAE ranked 16th globally for ease of doing business



# Global Connectivity



## Global Reach



**5 international airports** in 90 – 120 mins driving distance

- 2.6 Bn people in **4hrs flight radius**
- 5.2 Bn people in **8hrs flight radius**



## Multimodal Connectivity

- **8 international ports** in close proximity
- Major hubs for upcoming **Etihad Rail**
- **Easy access** to all three major highways

## Air Transport Hub



Dedicated terminal for loose cargo and ULDs



Temperature-controlled storage and cargo



Connections to more than 70 destinations



24/7 dedicated support team

## Khalifa Port



Deep-water port



Strategically located between Abu Dhabi and Dubai



First semi-automated container terminal in the GCC



Over 1000 port-to-port

# Enabling The UAE Economy

| Description                | Abu Dhabi | UAE      |
|----------------------------|-----------|----------|
| GDP Contribution (AED)     | 135.1 Bn  | 152.8 Bn |
| Share of total non-oil GDP | 24.10%    | 13%      |
| Jobs Created               | 191,200   | 373,500  |



\*Source: Annual Economic Report 2020

# A Portfolio of Integrated Businesses Enabling Global Trade

## DIGITAL

 بوابة المقطع  
MAGTA GATEWAY

 atip  
ADVANCED TRADE  
LOGISTICS PLATFORM

 margo  
hub

 TTEK  
www.ttekglobal.com

Providing technologically advanced, innovative solutions for maritime, trade and logistics to aid integrated digital global trade.

## ECONOMIC CITIES & FREE ZONES

 مجموعة كيزاد  
KEZAD GROUP

 كيزاد  
KEZAD

 كيزاد للمجمعات  
KEZAD COMMUNITIES

 كيزاد لإدارة الأصول  
KEZAD ASSETS  
MANAGEMENT

KEZAD Group's vital infrastructure and services span 12 economic zones covering a total area of 550km<sup>2</sup> and including more than 40 staff accommodation complexes under its subsidiary KEZAD Communities.

## LOGISTICS

 موانئ أبوظبي للخدمات اللوجستية  
AD PORTS LOGISTICS

 MICCO ميكو

Global supply chain partner of choice delivering holistic, fully-integrated, and technologically innovative logistics solutions that drive competitive value for its customers.

## MARITIME

 مجموعة سفين  
SAFEEN GROUP

 OFCO  
OFFSHORE INTERNATIONAL

 ديفتيك  
DIVETECH

 سفين انفيكتس  
SAFEEN INVICTUS

 سفين  
SAFEEN  
SURVEY & SUBSEA

 Global  
Feeder  
Shipping

 transmar

 أبوظبي البحرية  
ABU DHABI MARITIME

Providing maritime & port services, transshipment, feeding, offshore and onshore logistics, in addition to maritime training and regulating Abu Dhabi's waterways.

## PORTS

 موانئ أبوظبي  
ABU DHABI PORTS

 ميناء خليفة  
KHALIFA PORT

 ميناء زايد  
ZAYED PORT

 ميناء مصفح  
MUSAFFAH PORT

 AMP

 مرافئ الفجيرة  
FUJAIRAH TERMINALS

 محطة أبوظبي للسفن السياحية  
ABU DHABI CRUISE TERMINAL

 شاطئ صير بني ياس للسفن السياحية  
SIR BANI YAS CRUISE BEACH

 مرافئ أبوظبي  
ABU DHABI TERMINALS

 CMA TERMINALS  
KHALIFA PORT

 autoterminal  
KHALIFA PORT

 COSCO  
SHIPPING

 TCI

Owner and operator of a number of ports and terminals facilitating trade and logistics, alongside cruise terminals boosting regional tourism.

# Major Shareholdings

Established by Emiri Decree, one of the region's largest holding companies with a broad portfolio of major enterprises spanning key sectors. The Group holds a **22.32%** stake in Aramex, **10%** stake in National Marine Dredging Company (NMDC), **80%** stake in Global Feeder Services providing opportunity for industry collaboration, **70%** stake in Transmar and TCI and **100%** stake in TTEK.



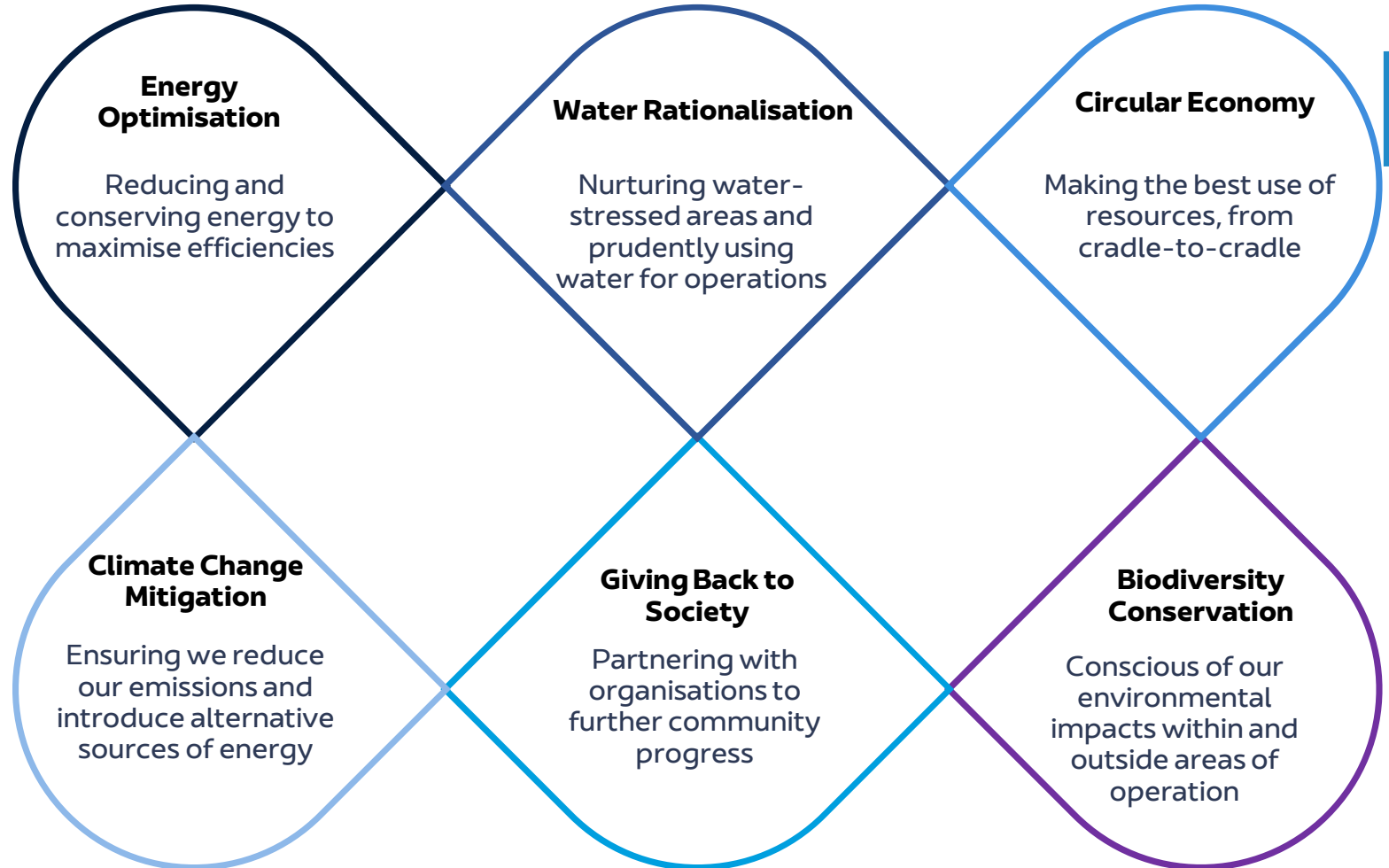




# Our Sustainability Focus Areas

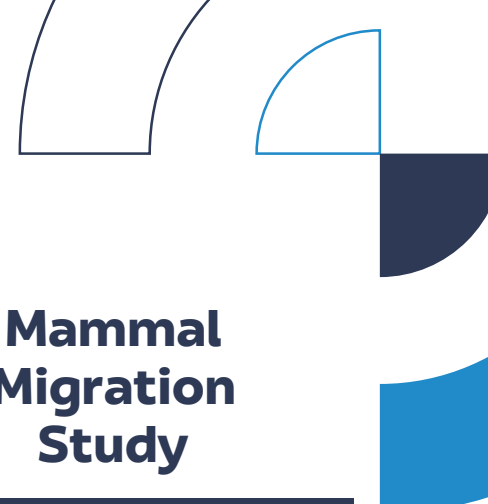


Our Group's mission is to incorporate a broad sustainability strategy that seeks to balance the commercial, environmental, and social dimensions of development into a long-term plan which adheres to the United Nation's Sustainable Development Goals (SDGs) 2030





# Biodiversity Conservation



## Coral Relocation Monitoring

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In 2020, we successfully relocated healthy corals to the environmental breakwater near Ras Ghanada to protect them from the development footprint of Khalifa Port. In 2021, we collaborated with the research team of a local university to monitor the relocated corals



## Eco-Mattress & Eco Sewalls

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The use of ecological mattresses and eco sewalls have been deployed within our marinas to compensate for the loss of habitat and nourish marine ecosystems



## Spiny-tailed Lizard Relocation

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In collaboration with the Environment Agency Abu Dhabi, we have commenced a two-year relocation project for spiny-tailed lizards, which the IUCN list classifies as vulnerable due to their declining population. The lizards will be relocated to a dedicated conservation area to compensate for the loss of habitat



## Mammal Migration Study

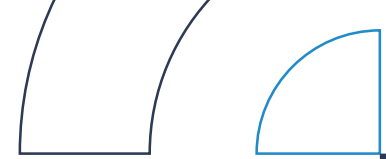
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The Group has commenced a mammal migration study to monitor fauna transiting navigational areas



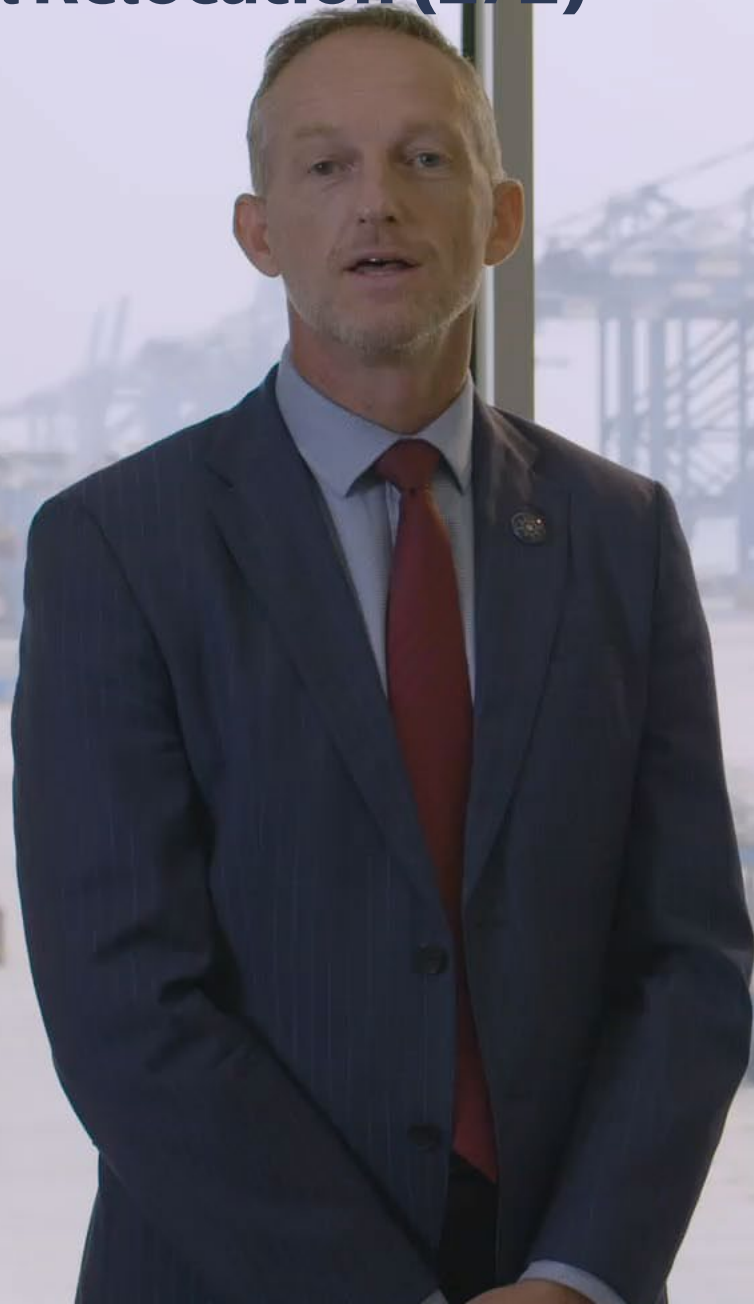
# Coral Relocation (1/2)

- July 2020 coral was relocated from Khalifa Port to the environmental breakwater next to the Ras Ghanada Reef
- Completed in partnership with the Environment Agency Abu Dhabi (EAD), New York University (NYU) and GHD
- The coral colonies has been monitored over a 3 year period to assess health and survival
- NYU is currently finalising a coral relation best practice guide
- Refer to the following link for additional detail:  
[Successful relocation of corals | AD Ports Group - YouTube](#)  
[Prioritising the protection of corals | Abu Dhabi Ports - YouTube](#)
- The collaborative work won the 2022 IBI Environmental Protection award. Refer to the following link for additional detail:  
[https://www.linkedin.com/posts/adportsgroup\\_adportsgroup-awards-win-activity-7001896080166539264-zoti?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/adportsgroup_adportsgroup-awards-win-activity-7001896080166539264-zoti?utm_source=share&utm_medium=member_desktop)





## Coral Relocation (2/2)



# Eco Mattresses

## Overview

The ETS unit constructed 17 ecological articulated concrete mattresses (eco mattresses) and installed in the Saadiyat Marina project covering an area of 306 sqm

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## Environmental Benefits

Encourages the growth of marine flora and fauna, increase species richness, reduce the influence of invasive species, and enhance biodiversity in the project area

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## Opportunities

- Replicating this model across other marina in Abu Dhabi
- Monitoring growth of biodiversity and publishing research papers





# Archireef Eco Seawalls

## Overview

The ETS Unit is leading a project funded by ADQ called the eco-seawall project. This project is aimed to enhance the ecological function of existing concrete quay walls by installing “Eco Wall” panels that are engineered to provide better refuge for intertidal species

The “Eco Wall” panels will be installed on existing quay walls in the maritime Projects of Al Alya Ferry Terminal and Saadiyat Marina and Ferry Terminal

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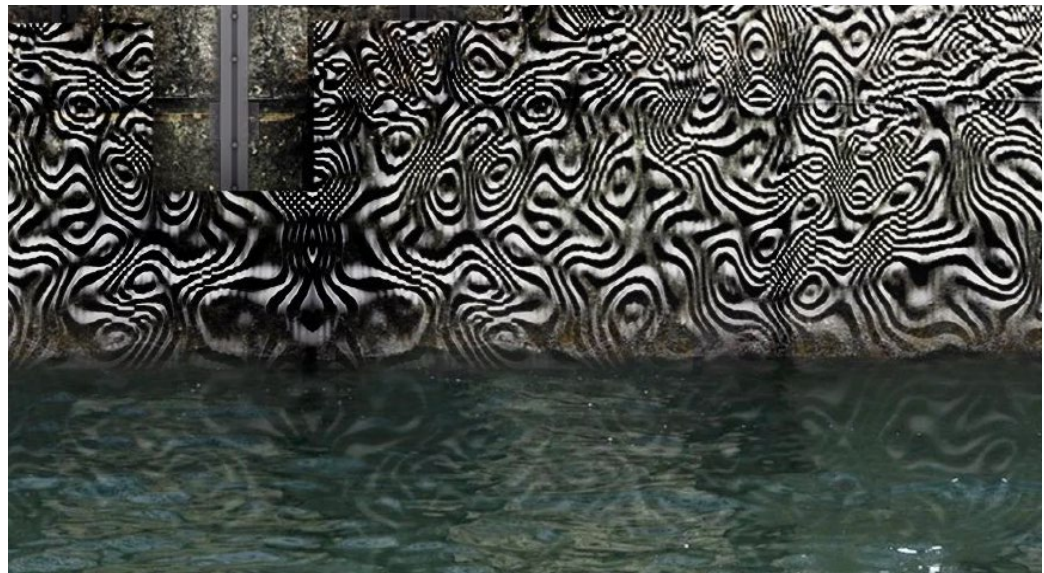
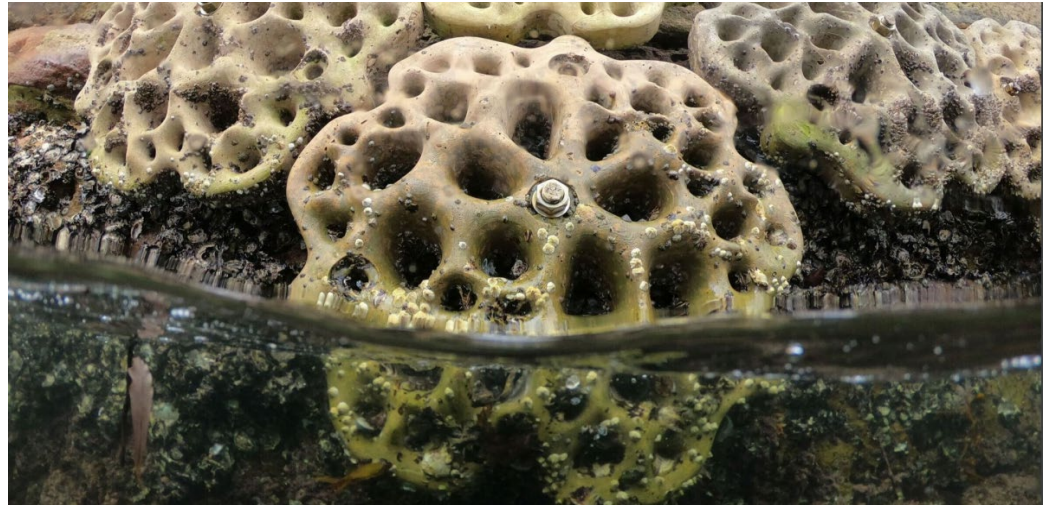
## Environmental Benefits

Eco wall panels will increase biodiversity and abundance of marine species compared to conventional seawalls

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## Opportunities

- Replicating this model across other marinas in Abu Dhabi
- Monitoring growth of biodiversity and publishing research papers





# Spiny Tailed Lizards Relocation



## Protection

Lizards will be translocated to designated conservation area in KIZAD area B2



## Monitoring

Lizards are tagged with GPS trackers to collect valuable monitoring data



## Research

Relocation Best Practice Manual

# Marine Mammal Migration Study

## Overview

Boat strikes are a risk to marine fauna and the ships navigating in the port.

The ETS unit has engaged marine ecologist to deploy acoustic devices in and around marinas and channels to survey the fauna transiting navigational areas.

This is in collaboration with research institutions and the Environment Agency.

The aim is to gather data to understand migratory patterns so as to inform vessel operations (avoid using channels during high migratory periods). In addition the results will enable AD Ports to install technologies to deter marine mammals when vessels are entering or exiting ports.

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## Opportunities

- Train staff in survey techniques
- Monitor results in a centralized database
- Expand the Group's research endeavors
- Enhance collaboration with institutions







# Engineering and Technical Services Unit Awards – Environment and Sustainability

## IBJ International Award – Environmental Protection



## MENA Green Building Award – Net Zero Building of the Year



## Maritime Standards Award – Environmental Protection



The ETS unit have been recognized for excellence in environmental protection and sustainability. For more details refer to the following links:

IBJ Standards Award

[https://www.linkedin.com/posts/adportsgroup\\_adportsgroup-awards-win-activity-7001896080166539264-zoti?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/adportsgroup_adportsgroup-awards-win-activity-7001896080166539264-zoti?utm_source=share&utm_medium=member_desktop)

MENA Green Building Award – Net Zero Building of the Year

[https://www.linkedin.com/feed/update/urn:li:activity:6993139312103964672?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/feed/update/urn:li:activity:6993139312103964672?utm_source=share&utm_medium=member_desktop)

# Partnerships & Collaborations (1/2)



وزارة التغير المناخي  
والبيئة  
MINISTRY OF CLIMATE CHANGE  
& ENVIRONMENT

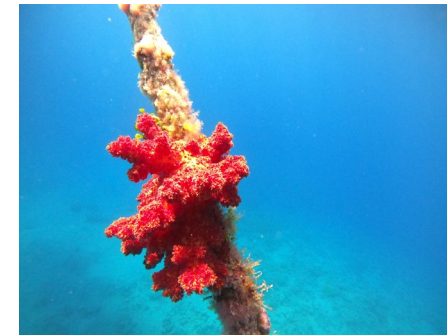
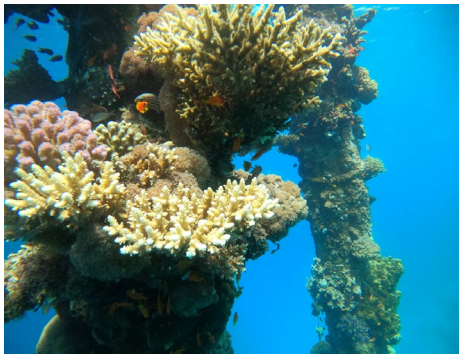


دائرة البلديات والنقل  
DEPARTMENT OF MUNICIPALITIES  
AND TRANSPORT



# Collaboration (2/2)

- October 2022 AD Ports group conducted a collaborative workshop with the Aqaba environmental regulator, researchers in the Marine Science Station (research arm of the University of Jordan), Aqaba Development Corporation and New York University (NYU)
- Workshop focused on marine ecosystems across the red Sea and Arabian Gulf
- In the collaborative workshop Professors from NYU highlighted the important role marine infrastructure takes to enhance marine biodiversity
- [https://www.linkedin.com/posts/adportsgroup\\_jordan-aqaba-redsea-activity-6987760536654393345-UbTu?utm\\_source=share&utm\\_medium=member\\_ios](https://www.linkedin.com/posts/adportsgroup_jordan-aqaba-redsea-activity-6987760536654393345-UbTu?utm_source=share&utm_medium=member_ios)
- [AD Ports group conducts workshop on marine ecosystems | Arab News](#)



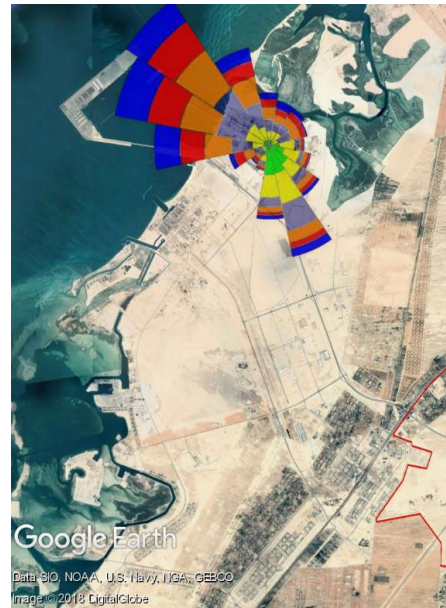
# Managing Impacts

## Addressing Air Pollution

Air quality is continuously monitoring in and around Khalifa Port. The parameters include:

- SO<sub>2</sub>
- NO<sub>2</sub>
- O<sub>3</sub>
- Particulates
- Meteorology

Parameters are assessed to ensure they are within the regulatory requirements set by the Environmental Agency Abu Dhabi. In addition, in the event there are spikes in parameters, investigations are undertaken to understand the drivers/triggers and mitigation measures deployed if required.



Air Quality Monitoring Stations located in around Khalifa Port

# Managing Impacts

## Marine Biodiversity

- In accordance with the Environmental Management Plans, teams working in and around Khalifa Port, are trained in how to manage sick and injured sea reptiles, including turtles
- If found, the team rescue turtles and keep them safe until they are handed over to the EAD and National Aquarium Team
- The EAD take the turtles back to the national aquarium for treatment and recovery and eventual returned to the ocean
- Through out 2022 and 2023 a number of hawksbill turtles with barnacles were rescued by the diving team working in Khalifa Port and the turtles were successfully handed over to the EAD.



# Addressing Water Pollution – On Land

- Previously waste water was trucked from the AD Ports Group Office 280
- The ETS Facilities Management team lead the installation of a reed bed system that recycles waste water.
- The waste water is treated in the reed bed and converted to irrigation water
- This minimizes the CO2 foot print and operational costs by the reduction of trucking the waste water from the office
- In addition this saves water as the treated waste water is used for irrigation
- In addition the reed beds results in an increase in oxygen through photosynthesis
- Staff are trained in the environmental benefits of this reed bed system.





# Addressing Water Pollution – On Water

- Khalifa Port is located next to a protected marine reef system known as Ras Ghanadah Reef.
- AD Ports Group deploy extensive measures to ensure the port construction and operations do not impact on this protected and valuable coral reef. This includes deployment of silt curtains to minimize sediment dispersion.
- Continuous water quality monitoring buoys are deployed to ensure water quality parameters set by the EAD are not exceeded so as to manage impacts on the neighbouring protected coral reef.



# Thank you

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