



هيئة البيئة - أبوظبي  
Environment Agency - ABU DHABI

# STRATEGIC PLAN

2016  
2020



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**H.H. Sheikh Khalifa bin Zayed Al Nahyan**  
President of the United Arab Emirates



**H.H. Sheikh Mohamed bin Zayed Al Nahyan**  
Crown Prince of Abu Dhabi, Deputy Supreme  
Commander of the United Arab Emirates  
Armed Forces  
Honorary Chairman



**H.H. Sheikh Hamdan bin Zayed Al Nahyan**  
Ruler's Representative in the Western Region  
of Abu Dhabi Emirate  
Chairman



## ABOUT US

Established in 1996, the Environment Agency – Abu Dhabi (EAD) is committed to protecting and enhancing air quality, groundwater as well as the biodiversity of our land and marine ecosystems. By partnering with other government entities, the private sector, NGOs and global environmental agencies, we embrace international best practices, innovation and hard work to institute effective policy measures. We seek to raise environmental awareness, facilitate sustainable development and ensure environmental issues remain one of the top priorities of our national agenda.





# INTRODUCTION FROM OUR CHAIRMAN

Our rich, unique yet frail natural heritage is deeply embedded in our collective national psyche. It is a vital part of who we are; our DNA. Our environment is a legacy, handed down from generation to generation. Our family values incorporate the fundamental belief that we must be wise custodians of the land and sea that we have inherited – it is our responsibility towards the future generations.

As our father the late Sheikh Zayed said: “Our forefathers lived in co-existence and respect to our land and marine environment, knowing by nature and perception the need to preserve it, to take only what they needed from it, and to save what would be useful for coming generations.”

The Environment Agency – Abu Dhabi was established in 1996 to help fulfill this vision of Sheikh Zayed’s and the wise leadership of His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, and to safeguard his environmental legacy for the generations to come. Development of our Emirate is, of course, critical to our

continued growth and prosperity. But our primary focus must be to ensure that development does not come at an unacceptable cost to the environment, to ensure that it goes hand in hand with conservation and sustainability. There should be no doubt that this requires effective, decisive action and fast, agile responses to the rapidly unfolding issues that face us. Decreasing carbon emissions, climate change mitigation and other responses; demand a concerted global effort and we at EAD must ensure that we play our part to the full.

We gladly accept Abu Dhabi’s mandate to be the central authority charged with the regulation and enforcement of Abu Dhabi’s environmental laws and, moreover, to be a catalyst for protection and positive change.

We have passed many milestones on this journey of excellence, with the support of His Highness Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, and the development of the EAD Strategic Plan 2016-2020 is just one of them. We hope it will serve as a clear roadmap to a future in which everyone will be able to enjoy the benefit of a clean, safe and healthy environment.



**H.H. Sheikh Hamdan bin Zayed Al Nahyan**  
Chairman

# FOREWORD

## FROM OUR MANAGING DIRECTOR

On initial introduction to Abu Dhabi, people are often surprised by the rich tapestry of its natural heritage. Our varied landforms of mountains, sandy deserts, wadis and 'sabkha' salt flats provide a home for dozens of species of mammals, amphibians and reptiles. Over 400 plant species grow here, having uniquely adapted to the prevailing conditions of high temperature, high salt levels and low rainfall.

Two to three million migrating birds pass through here every year and our marine habitats are home to the world's densest population of dugongs, as well as the endangered Hawksbill and Green Turtles, four globally threatened species of shark, three threatened species of ray and around 240 species of fish.

But it almost goes without saying that our recent dizzying growth in population and development has increased pressures on the environment and its biodiversity, where today's demands on our natural resources far outweigh their capacity for regeneration.

EAD is working to maintain and protect wildlife and marine biodiversity by implementing and strengthening relevant regulations, policies and laws. At the same time, we have carried out comprehensive research programmes and studies to understand biodiversity, to monitor ecosystems and species, and to anticipate future risks.

We are keenly aware that, by its very nature, our work has to be inclusive. We recognise that multiple sectors of society have a key role to play in all aspects of environmental protection and conservation. We understand that, in general, the stakeholders share a commitment to integrating socio-economic progress with care for the environment. We truly appreciate the important role they play and we value the fact that they share our vision.

EAD Strategic Plan 2016 – 2020 is a plan about change; change that will lead us to a bright, strong and sustainable future today and for generations to come. It will help us meet the many challenges of preserving and protecting our environment, promoting the health and wellbeing of our communities, while stimulating and mapping sustainable economic growth for the next five years.



**H.E. Mohammed Ahmed Al Bowardi**  
Minister of State for Defense Affairs, UAE  
EAD Managing Director

# MESSAGE

## FROM OUR SECRETARY GENERAL

Under the guidance of our Corporate Strategy 2011-2015 and with tremendous effort and commitment from employees, the Agency has made significant progress over the past five years to consolidate its scientific knowledge about the environmental challenges facing the Emirate and to strengthen its regulatory position to address these challenges. We have improved environmental policy and ensured that we have a sound regulatory framework across our mandates. In addition, we have made significant progress in building a coalition of partners committed to fulfilling priorities identified in the Environment Vision 2030 and the UAE Strategy 2021.

I am proud of the success of the Environment Agency – Abu Dhabi and its dedicated leadership team and employees. At the same time, it is important to take stock of the state of the environment on a regular basis, and to assess new opportunities facing the Agency looking forward. In this regard, I am delighted to introduce the EAD Strategic Plan 2016-2020.

The EAD Strategic Plan 2016-2020 defines the Agency's long-term vision and mission, 5-year priorities, objectives, as well as the strategic initiatives that contribute to AD Plan and the successful implementation of our priorities. It further defines how we will monitor and report our strategic performance both internally, as well as with external stakeholders.

Significant improvements over the previous plan include a clear cascading of priorities and strategic outcomes from Abu Dhabi Emirate-level policy and plans; as well as improved alignment between our objectives and key performance indicators with the specific internal units responsible for their implementation.

This is a public version of a more comprehensive document submitted to the General Secretariat of the Executive Council (GSEC), in support of EAD's Annual Business Plan. For brevity and clarity in communication, the document does not include a complete list of EAD's 5-year strategic initiatives or performance indicators. Rather, this summary document seeks to:

- Inform stakeholders from the public and private sectors about the key environmental challenges facing the Emirate of Abu Dhabi, as well as our role and strategy for responding to these challenges.
- Provide a basis for collaboration and cooperation with partners that can contribute to successfully overcome the key environmental challenges facing the Emirate, its biodiversity and its citizens.

We look forward to working with you in the years to come, as we move towards becoming a stronger regulator, equipped with the best available science, technology and talent with a passion to fulfill Abu Dhabi's aspiration for a more sustainable future for us and subsequent generations.



**H.E. Razan Khalifa Al Mubarak**  
Secretary General



## THE NATURAL HERITAGE OF ABU DHABI

Abu Dhabi is the largest of seven Emirates within the federation of the United Arab Emirates (UAE). The Emirate covers an area of 67,340 km<sup>2</sup> with an additional coastal marine area of 37,000 km<sup>2</sup> characterised by a long, shallow shoreline of 1,350 km (including islands). It has a harsh, hyper-arid climate, receiving less than 100 mm of rainfall a year. Temperatures in 2015 ranged from 4.4°C – 50.9°C. The varied geology of mountains (rising above 1,200 m in the East), sandy desert, wadis and salty flats (Sabkha) create the conditions for a diverse range of terrestrial habitats. Similarly, the harsh climate and extreme oceanographic characteristics have created unique marine habitats, some of which may be particularly resistant to some stressors, but are also low in species diversity and particularly sensitive to anthropogenic impacts.

Generally, Abu Dhabi's natural heritage can be categorised into 16 habitat types (9 terrestrial and 7 marine) and 50 sub types. The terrestrial environment is characterised by desert sands in the central and western region of the Emirate; Jabal Hafit and wadi areas in the southern Al Ain region; alluvial and inter-dunal plains in the east near the Dubai border; one of the few complete coastal sabkhas in the world in the western region; and coastal sand dunes and sheets with shrub cover. Some 432 vascular plant species, 51 mammal species, 427 bird species, 54 reptile and amphibian species, 456 fishes and 2219 terrestrial invertebrate species have been identified. These species include the IUCN listed critically endangered Sociable Lapwing (*Vanellus gregarius*) and endangered Arabian Tahr (*Arabitragus jayakari*), Saker Falcon (*Falco cherrug*), and Egyptian Vulture (*Neophron percnopterus*).

The marine environment is typically shallow with waters of less than 20 metres representing over 70% of Abu Dhabi's marine area. The offshore area is generally flat and featureless, broken up by some 61 islands ranging from low lying sand shoals to volcanic salt domes. The structure that is characteristic of these islands provide habitat to some of the 500 marine fish species found in the UAE, and double as a nesting habitat for birds and turtles.

The near-shore environment comprises critical habitat assemblages of coral, seagrass, algal beds and mangroves, as well as endangered intertidal saltmarshes and flats. These assemblages provide critical habitats for wading and migratory birds and the seagrass-reliant species. The marine waters also provide habitat to the IUCN listed critically endangered Hawksbill Turtle (*Eretmochelys imbricate*) and endangered Green Turtle (*Chelonia mydas*) and Fin Whale (*Balaenoptera physalus*). In addition, some vulnerable species that thrive in the Emirate include Dugong (*Dugong dugon*) and Socotra Cormorant (*Phalacrocorax nigrogularis*).



## ABU DHABI'S ENVIRONMENTAL CHALLENGES

The relatively recent economic prosperity the Gulf has experienced led to a profound transformation of previously small desert principalities to ultra-modern nations. As with most Gulf States, the UAE's rapid growth in population and development has increased human pressures on the environment and its biodiversity. Already, UAE has amongst the highest ecological footprint per capita in the world and a significant ecological deficit, meaning that the demands on natural resources overshoot the regenerative capacity of the natural environment.

Unfortunately, the pace of infrastructure development, environmental controls and enforcement capacity has not always kept pace with development. As a result, impacts of human pressures on the environment are already being experienced such as pollution to land, sea and air, overexploitation of resources, destruction and alteration of habitat, and increased incidents of human health concerns.

SOME OF THE SIGNIFICANT ENVIRONMENTAL CHALLENGES FACING ABU DHABI TODAY:

- 1  **UNSUSTAINABLE USE OF GROUNDWATER**
- 2  **DECLINING AIR QUALITY AND INCREASING RISK OF RESPIRATORY ILLNESS**
- 3  **LOCAL IMPACTS OF CLIMATE CHANGE**
- 4  **INSUFFICIENT WASTE INFRASTRUCTURE**
- 5  **DECLINING MARINE WATER QUALITY**
- 6  **LAND POLLUTION & SOIL DEGRADATION**
- 7  **HABITAT LOSS, ALTERATION & FRAGMENTATION**
- 8  **OVEREXPLOITATION OF WILD POPULATIONS OF FISH**
- 9  **UNSUSTAINABLE WATER USAGE IN FORESTS**

Real GDP growth is expected to grow an average of 3.3 to 4% year-on-year, with significant growth in the Western and Eastern regions of the Emirate. These projections indicate that informed and thoughtful strategies for environmental protection and sustainability will remain vital for the Emirate moving forward\*.

\*Statistics are provided by the Statistics Centre - Abu Dhabi (SCAD) and Department of Economic Development - Abu Dhabi (DED). They are subject to change based on the local and global economic conditions.



## OUR VISION

A Sustainable Environment for a Sustainable Future

## OUR MISSION

To protect and conserve our environment for people's well-being and a better life for all



# OUR MANDATE & ROLES

The Environment Agency – Abu Dhabi was established in 1996 as an independent Agency and mandated to preserve and protect the environment, as best summarised in Article (3) of Law No. (16) Of 2005:

*This Agency aims at protecting the environment and wildlife along with its biological diversity in its natural environment, offering suggestions, making recommendations and conducting necessary studies and research to conserve the environment and wildlife. All government departments and agencies are required to coordinate with the Agency in relation to research, studies and programmes relating to environmental and wildlife affairs.*

EAD's diverse mandates derive from over a dozen different federal and local legislations. However, the core functional roles on behalf of the government can be summarized as follows:

## POLICY, PLANNING AND REGULATIONS

- Review, develop and propose environmental policy and plans on behalf of the government
- Develop, implement and enforce environmental regulations, standards and guidelines
- Permit, license and inspect projects and activities with the potential to impact our environment or biodiversity
- Monitor and investigate compliance against environmental regulations

## SCIENCE

- Identify research needs and strategically fill gaps in knowledge to improve environmental protection and biodiversity conservation
- Monitor, report, assess and model the state of the environment
- Develop and promote technical innovation to resolve environmental challenges

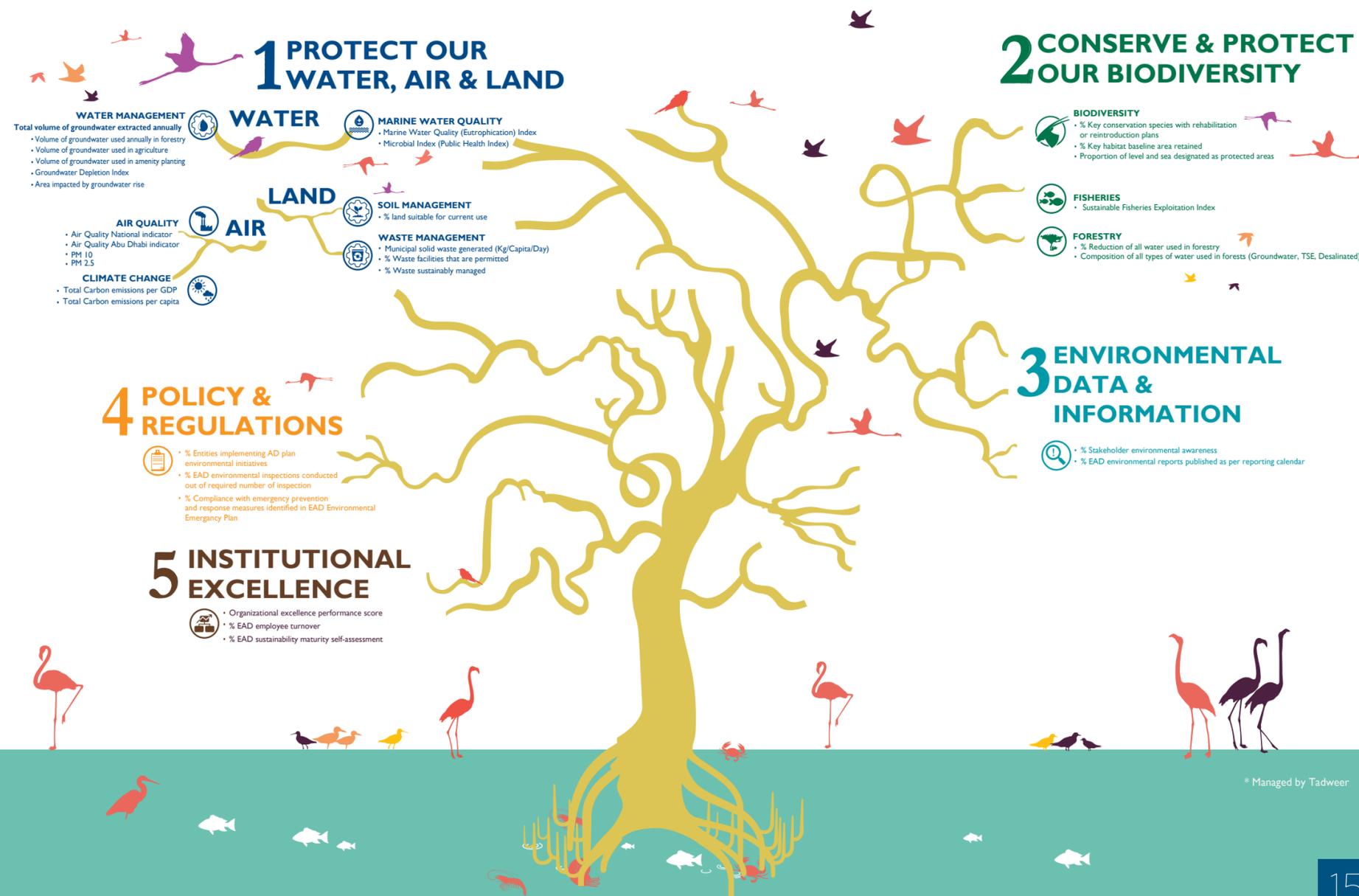
## SERVICE DELIVERY

- Manage environmental data and deliver scientific information
- Provide support and advice to decision makers based on environmental knowledge
- Support environmental education to schools and develop human capital in the environmental field
- Promote environmental awareness and behavioural change through outreach to businesses, governments and community
- Encourage adoption of environmental quality and conformity measures
- Provide leadership and support in preparing for, and responding to, environmental emergencies
- Undertake environmental impact assessment for new/existing projects and activities

## ENVIRONMENTAL MANAGEMENT

- Direct management of protected areas and forests in accordance with federal laws
- *Ex-situ* and *in-situ* species conservation to protect biodiversity

# OUR KEY SUCCESS MEASURES AT GLANCE





## OUR STRATEGIC PLAN

## OUR STRATEGY CORE COMPONENTS

- 1 PROTECT OUR WATER, AIR AND LAND
- 2 CONSERVE AND PROTECT OUR BIODIVERSITY
- 3 PROVIDE SOUND ENVIRONMENTAL INFORMATION AND PROMOTE SHARED RESPONSIBILITY
- 4 ENSURE EFFECTIVE POLICY AND REGULATION FOR THE ENVIRONMENT
- 5 POSITION EAD AS AN ORGANISATION OF EXCELLENCE AND A LEADER IN ENVIRONMENTAL SUSTAINABILITY

## OUR PRIORITIES

### 1 PROTECT OUR WATER, AIR AND LAND

- Conserve groundwater and actively contribute to integrated water management
- Protect air quality
- Mitigate climate change and adapt to its impacts
- Ensure integrated management of waste to protect the environment
- Protect quality of marine water to preserve ecosystems and public health
- Ensure sustainable and integrated approaches to protecting land and soil

### 2 CONSERVE AND PROTECT OUR BIODIVERSITY

- Ensure effective and evidence-based planning and regulation for Abu Dhabi's biodiversity
- Improve implementation of *in-situ* conservation and build a representative network of protected areas
- Lead *ex-situ* conservation efforts to maintain sustainable populations of key flora and fauna
- Sustainably manage fisheries and aquaculture
- Manage Abu Dhabi's forests and ensure their long-term viability and sustainability

### 3 PROVIDE SOUND ENVIRONMENTAL INFORMATION AND PROMOTE SHARED RESPONSIBILITY

- Deliver scientifically credible environmental information and knowledge
- Promote environmental education and shared responsibility

### 4 ENSURE EFFECTIVE POLICY AND REGULATION FOR THE ENVIRONMENT

- Strengthen Abu Dhabi's environmental policy and planning framework
- Improve the environment regulatory framework and enhance compliance
- Enhance emergency preparedness and effectively respond to environmental emergencies and crises

### 5 POSITION EAD AS AN ORGANISATION OF EXCELLENCE AND A LEADER IN ENVIRONMENTAL SUSTAINABILITY

- Position EAD as an employer of choice that fosters staff excellence and development in a healthy and safe workplace
- Enhance organisational efficiency and service delivery
- Distinguish EAD as a leader in environmental sustainability



1. PROTECT OUR WATER, AIR AND LAND



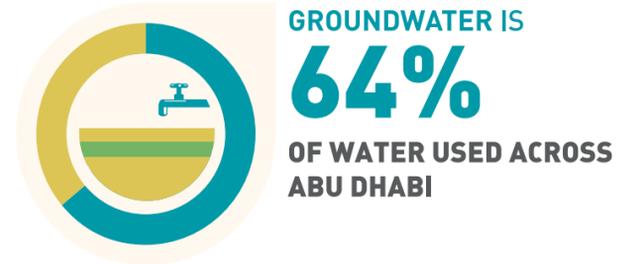
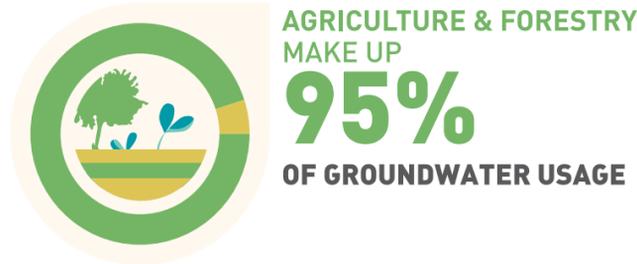
# 1.1

## CONSERVE GROUNDWATER & ACTIVELY CONTRIBUTE TO INTEGRATED WATER MANAGEMENT IN ABU DHABI

### ENVIRONMENTAL CHALLENGE

Groundwater is a non-renewable resource in Abu Dhabi with very limited natural recharge and only in the Hajar mountain region, yet it makes up 64% of water usage across Abu Dhabi. Current groundwater abstraction is estimated to be 20 times its natural recharge rate, with agriculture and forestry making up 95% of groundwater usage. As a result, usable groundwater will last approximately 50 years in the Emirate, but much

less in areas of intensive irrigation. Key aspects of addressing Abu Dhabi's groundwater challenge include regulating the responsible use of available groundwater, wisely planning and managing increases in groundwater demand, maximising usage of recycled water (treated wastewater) for agriculture and forestry, and shifting water supply to desalinated sources where natural groundwater recharge does not occur.



### DESCRIPTION AND SCOPE

In the next five years EAD will focus on both directly conserving groundwater and actively contributing to integrated water management across groundwater, desalinated and recycled sources. The Agency has a direct regulatory role with regard to groundwater abstraction and an operational role over water usage within forests under its supervision. EAD will seek to improve the accuracy of groundwater monitoring, tighten regulatory enforcement

of groundwater abstraction and illegal selling of water; and improve the awareness of user groups about groundwater scarcity and techniques for irrigation efficiency on farms and forests. EAD will actively collaborate with external partners to pursue policies and strategies to replace groundwater usage with recycled water where the infrastructure already exists, or to support the development of infrastructure to supply recycled or desalinated water where economically feasible.

1) Desalinated water comprises 29% of water usage and treated wastewater comprises 7%  
2) Groundwater with suspended solids less than 10,000 ppm

### OUR TARGET (2016-2020)

Reduce total volume of groundwater extracted annually from 2.198 Million m<sup>3</sup> to 1.82 million m<sup>3</sup>

### OUR OBJECTIVES (2016-2020)

- Ensure comprehensive understanding of groundwater resources
- Educate and positively influence stakeholders on groundwater related topics and issues
- Strengthen and enforce the legal and regulatory framework for groundwater
- Explore innovative solutions to conserve groundwater and optimise its use
- Play an active role in advancing integrated water management (across groundwater, desalinated and recycled water types)

### DESIRED ENVIRONMENTAL OUTCOMES

- Increase in the number of effective years remaining in usable groundwater reserves
- Reduction in the volume of groundwater used annually in agriculture
- Salinity levels of groundwater reserves reduced or maintained
- Increase in reuse of recycled water for appropriate purposes

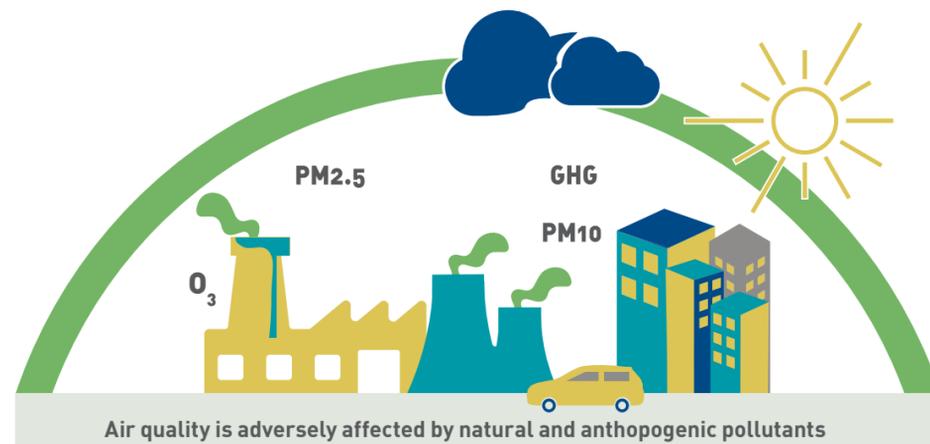


# 1.2 PROTECT AIR QUALITY

## ENVIRONMENTAL CHALLENGE

Protecting air quality and managing ozone depleting substances are vitally important for public health and quality of life in Abu Dhabi. The UAE National Strategy and Action Plan for Environmental Health identified outdoor air pollution as the primary environmental threat to public health. At present, Abu Dhabi experiences high ambient concentrations of particulate matter (PM10 & PM2.5), ground level ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>), all of which can have

detrimental impacts on human health. Particulate matter has both natural and manmade sources in the emirate and PM10 peaks may reach 1,400% (14 times) WHO standards in Abu Dhabi during dust storms. However, appropriately managing manmade sources of PM10 and other air pollutants, primarily related to oil and gas activities, power and water production, transportation and industrial activities, are key aspects of protecting public health and quality of life in the Emirate.



## DESCRIPTION AND SCOPE

The purpose of EAD's air quality priority is to ensure that ambient air quality in Abu Dhabi protects human health and the environment. In addition, EAD considers outdoor noise within the scope of this priority, with the purpose of ensuring that outdoor noise levels have no impact on the health and well-being of wildlife. Over the next five years (2016-2020), EAD will focus on improving the comprehensiveness

of ambient air quality and noise monitoring across the Emirate, advancing capabilities for analysing, modelling and reporting air quality information, and ensuring that emission standards, regulations and enforcement regimes are in place for the key sectors and pollutants that pose the greatest threats to public health, wildlife, and quality of life in Abu Dhabi.

1) PM10 is particular matter 10 micrometers or less in diameter  
2) PM2.5 is particular matter 2.5 micrometers or less in diameter

## OUR TARGET (2016-2020)

Increase the national Air Quality indicator from 76.7% (2015) to 87%

## OUR OBJECTIVES (2016-2020)

- Establish effective coordination mechanisms with key stakeholders and align on common policies and plans for air quality and noise
- Strengthen the legal and regulatory framework for air quality and noise
- Build a strong and comprehensive understanding and improve analysis of ambient air quality and noise
- Work with relevant stakeholders to educate and advance knowledge on air quality and noise issues

## DESIRED ENVIRONMENTAL OUTCOMES

- Ambient Nitrogen Dioxide, Sulphur Dioxide, Ozone and Particulate Matter (PM2.5) concentrations maintained within accepted standards
- Particulate matter (PM10) concentrations minimised, relative to regional background concentrations
- Noise levels minimised within accepted standards, without impact on wildlife



# 1.3 MITIGATE CLIMATE CHANGE AND ADAPT TO ITS IMPACTS

## ENVIRONMENTAL CHALLENGE

Abu Dhabi's overall contribution to global emissions is quite small. However, Abu Dhabi's per capita contribution to climate change is among the highest in the world: GHGs = 115 Million tonnes CO<sub>2</sub>equivalent (2012) Like other countries of the Arabian Gulf, Abu Dhabi is particularly vulnerable to potential impacts of climate change due to existing high atmospheric temperatures, water scarcity, hyper saline coastal waters, and proximity of human populations to the coast. Current atmospheric and oceanographic modelling of climate change for the Gulf region are limited. EAD conducted the second Green House Gas inventory in 2016 using 2012 data, looking at impacts, mitigation strategies, vulnerability and adaptation

of coastal zones, water resources and dryland ecosystems, respectively. For coastal zones – home to approximately 85% of the population and over 90% of the infrastructure – vulnerability to climate change was very high. The major finding of the study is that coastal areas will be extensively inundated due to sea level rise, with projections ranging from 2.0 – 9.0 m by 2100 under scenarios of the Intergovernmental Panel on Climate Change (IPCC). The studies indicated only a marginal effect on future water supply/demand, but suggested the possibility of ecosystem displacement and/or disappearance of some ecosystems in Abu Dhabi.

### ABU DHABI'S PER CAPITA CONTRIBUTION TO CLIMATE CHANGE IS AMONG THE HIGHEST IN THE WORLD



GHGs = 115 MILLION TONNES CO<sub>2</sub>EQUIVALENT (2012)

## DESCRIPTION AND SCOPE

While the institutional framework for climate change policy is still evolving within the UAE, EAD has a clear role in developing a sound scientific understanding thus improving capacity for local mitigation and adaptation strategies. Over the next five years (2016-2020), EAD will focus on improving data collection, data availability and information services related to GHG and CO<sub>2</sub> emissions, as well as measures related to the impacts and vulnerability of species,

habitats and ecosystem services. The Agency will work with partners to establish clear policy, strategies and institutional relationships to manage emissions and develop adaptation strategies. Within its mandate, EAD will review and update its conservation approaches to take better consideration of climate change impacts on terrestrial and marine species and habitats, as well as the ecosystem services they provide the population.

## OUR TARGET (2016-2020)

Work with stakeholders on the development of a national climate change strategy. Targets will be developed by 2017.

## OUR OBJECTIVES (2016-2020)

- Improve and build comprehensive understanding and knowledge about climate change and its impacts
- Strengthen regulatory framework for climate change mitigation in Abu Dhabi and encourage adoption of mitigating measures
- Ensure adaptive management to protect ecosystems and vulnerable environmentally-valued land from climate change impacts
- Support local and federal governments in driving collective action against climate change

## DESIRED ENVIRONMENTAL OUTCOMES

- Reduction in carbon emissions per capita
- GHG emissions limited within targets relative to the 2010 baseline
- Vulnerable coastal areas protected from sea level rise
- Impacts of climate change on vulnerable species minimised



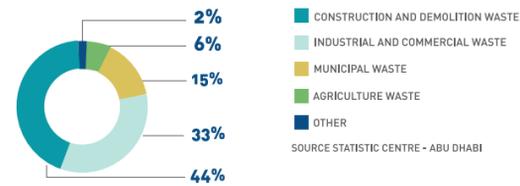
# 1.4 ENSURE INTEGRATED MANAGEMENT OF WASTE IN ABU DHABI TO PROTECT THE ENVIRONMENT

## ENVIRONMENTAL CHALLENGE

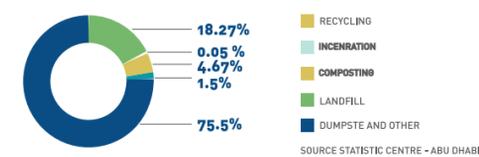
Waste management and treatment are of particular interest to the government of Abu Dhabi in order to protect human health and the environment. The amount of solid waste generated in the Emirate totaled about 10 million tonne in 2014, compared with almost 12 million tonne in 2013, representing a decrease of 15.6%. In 2014, non-hazardous waste formed 99% of total solid waste generated, while hazardous waste accounted for about 1%. Construction and demolition waste comprised 44% of non-hazardous waste in 2014, followed by industrial and commercial waste at 33%. However, the development of waste disposal infrastructure continues to lag behind needs. The Emirate has one small sanitary landfill, ten legal dumpsites, four recycling facilities,

two incineration plants and four composting facilities, as well as an estimated 23,000 illegal dump sites. As a result, only 1.51% of solid waste was disposed in a sanitary landfill in 2014. While 18.3% of solid waste was recycled in 2014, recycling also decreased 43% between 2013 and 2014, far exceeding the 15.6% reduction in waste generation. Key aspects to address the Emirate's waste management challenge are continuing to reduce total waste generation, segregating waste sources to enable differential treatment, investing in appropriate infrastructure, tightening regulatory enforcement of illegal dumping, addressing legacy waste and encouraging growth in reuse and recycling.

PERCENTAGE DISTRIBUTION OF NON-HAZARDOUS SOLID WASTE BY SOURCE ACTIVITY - 2014



PERCENTAGE DISTRIBUTION OF SOLID WASTE BY METHOD OF DISPOSAL - 2014



## DESCRIPTION AND SCOPE

Over the next five years EAD will focus on improving the planning and regulation for waste management, as well as improving data and information on which the waste management system will depend. A critical component of future progress is implementing a waste classification system that will enable segregation of waste streams. Through its regulatory role, EAD will seek to develop an integrated regulatory framework, required policies

and guidelines that promote waste reduction, increase opportunities for recycling and recovery of materials, promote best practices to divert waste from landfills, improve enforcement mechanisms, and ensure proper treatment and final disposal of appropriate waste in sanitary engineered landfills. EAD will also work with its operational partners to prioritise and address legacy waste at illegal dumpsites to protect residents and the environment.

## OUR TARGET (2016-2020)

Decrease the amount of municipal waste produced per capita per day from 1.9kg (2015) to 1.5kg (2020)

## OUR OBJECTIVES (2016-2020)

- Ensure development of integrated waste plans and policies and enhance stakeholder coordination mechanisms
- Improve waste regulatory framework and ensure effective enforcement
- Enhance availability and reliability of waste data and information
- Support awareness and education on waste reduction, reuse and recycling across key sectors

## DESIRED ENVIRONMENTAL OUTCOMES

- Reduction in municipal solid waste generated
- Diversion of municipal solid waste, construction and demolition waste and agricultural waste from landfill
- Increase in municipal solid waste segregation
- Increase in waste recycling
- Improved management and treatment of hazardous waste before reuse or disposal



# 1.5 PROTECT QUALITY OF MARINE WATER TO PRESERVE ECOSYSTEMS AND PUBLIC HEALTH

## ENVIRONMENTAL CHALLENGE

Maintaining marine water quality is extremely important to safeguard public health, protect the environment and sustain fisheries, aquaculture, tourism and recreation. At present, nutrient over-enrichment is a particular concern in coastal waters of Abu Dhabi City and in the Mussafah Industrial Area. These conditions can lead to excessive algal growth and reduced oxygen content resulting in harmful algae blooms, reduced productivity, degraded seagrass and coral ecosystems and lower fisheries production. Sediment concentrations of heavy metals are also a concern in Mussafah South Channel in the industrial area near Abu Dhabi City, which could pose a long-term risk to public health and environment. Current conditions reflect the lagging pace of wastewater treatment infrastructure around Abu Dhabi city compared to population growth, which results in

a daily discharge of 40% of treated wastewater into the sea and risks the need for emergency discharges of untreated sewage. Additionally, there are limited planning and operational controls for coastal construction, land reclamation and dredging, contributing to nutrient loading.

These pressures will likely expand to new areas of the Western region as population and development grow. Longer-term challenges for marine water quality include the expanding number of desalination plants in the Gulf and associated brine discharge, growing port and maritime transport activities and the risk of accidental or illegal discharges, and increasing industrial development along Abu Dhabi coast, which may require seawater cooling or other wastewater discharge.

DAILY DISCHARGE OF **40%** OF TREATED WASTEWATER INTO MUSSAFAH SOUTH CHANNEL



## DESCRIPTION AND SCOPE

EAD's core role includes long-term environmental monitoring of marine water quality for public health and environmental protection; targeted environmental studies at high-risk or impacted sites, data management and information services; permitting, inspection and enforcement activities; and emergency management planning and response for marine incidents.

Over the next five years (2016-2020) EAD will focus on reviewing and updating ambient marine water quality

standards, as well as discharge standards. The Agency will improve its baseline understanding of conditions at key locations such as the Barakah nuclear power plant site. It will implement an automated data buoy programme that will report continuous real-time data and enable early warning of red tide incidents. It will implement targeted studies in problem areas to identify measures to control the sources of marine pollution. EAD will also continue to ensure the environmental soundness of proposed projects and employ the permitting process to control discharge of pollutants into the sea.

## OUR TARGET (2016-2020)

Improve Marine Water Quality Eutrophication Index from 22% to 66%

## OUR OBJECTIVES (2016-2020)

- Strengthen planning around marine water quality and effectively influence key stakeholder decisions
- Ensure comprehensive understanding, knowledge and awareness about marine water quality
- Improve marine water quality regulatory controls and compliance
- Play an effective role in ensuring preparedness, response and restoration against marine water incidence and emergencies to protect society and the environment

## DESIRED ENVIRONMENTAL OUTCOMES

- Protect the coastal marine environment from over-enrichment with nutrients
- Reduce risk to public health of bacterial or viral contamination during water sports and bathing at public beaches
- Reduce incidence of potentially harmful algal blooms



# 1.6 ENSURE SUSTAINABLE AND INTEGRATED APPROACHES TO PROTECTING LAND AND SOIL

## ENVIRONMENTAL CHALLENGE

Due to its hyper-arid climate and extremely limited usable groundwater, careful land use planning and the protection of land and soil quality in Abu Dhabi are particularly important for environmental sustainability. In general, the Emirate already has poor soil conditions, exacerbated by impacts of grazing and hyper-salinity. More than 26% of land is overgrazed and the

livestock population exceeds the carrying capacity by over six times. More than 30% of irrigated agriculture occurs in areas unsuitable for agriculture, further degrading the land and soil. The incidence of land and groundwater contamination due to accidental spills or illegal dumping is increasing, as well as expanding in areas of new development in the Eastern and Western regions.



## DESCRIPTION AND SCOPE

Over the next five years (2016 - 2020) EAD will focus on improving soil information services to support wise land-use planning, as well as addressing soil degradation and contamination, including hyper-salinization of irrigated agricultural land. The scope of this work will include

conducting a soil survey, developing local standards, characterising contaminated sites, investigating sources and levels of contamination based on international standards and proposing suitable remediation strategies.

## OUR TARGET (2016-2020)

Improve land suitable for current use.  
Target is dependent on 2017 soil monitoring programme.

## OUR OBJECTIVES (2016-2020)

- Strengthen the policy and planning framework around soil quality and effectively influence key stakeholder decisions
- Improve and enforce the regulatory framework for soil quality
- Ensure comprehensive understanding, knowledge and awareness of soil quality
- Play an effective role in ensuring contaminated land is managed and restored

## DESIRED ENVIRONMENTAL OUTCOMES

- Soil salinity on irrigated agricultural lands reduced
- Coastal and inland soil degradation and contamination minimised



2. CONSERVE AND PROTECT OUR BIODIVERSITY

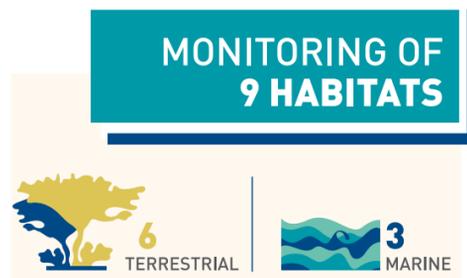
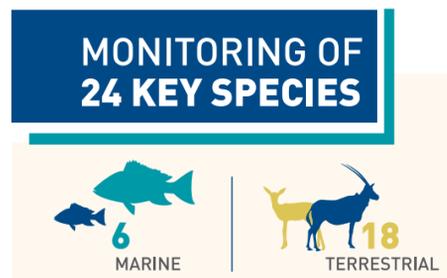


# 2.1 ENSURE EFFECTIVE AND EVIDENCE-BASED PLANNING AND REGULATION FOR ABU DHABI'S BIODIVERSITY

## ENVIRONMENTAL CHALLENGE

Since establishment, EAD has conducted research studies and periodically assessed the abundance, health and distribution of particular habitats and species. At present, EAD has monitoring programmes in place for 24 key species (18 terrestrial, 6 marine) and 9 habitats (6 terrestrial, 3 marine), and is seeking to improve its ability to systematically identify changes to biodiversity. It is currently developing a new environmental monitoring framework that will include 16

habitat types (9 terrestrial and 7 marine) and 50 sub types, as well as a consistent method for long term monitoring. Additionally, EAD has 2 conservation plans for habitats (both marine) and 4 conservation plans for species (2 terrestrial, 2 marine) in place, stemming from its monitoring findings. Management plans for protected areas also reflect conservation targets and strategies applied within protected areas.



**A NEW ENVIRONMENTAL MONITORING FRAMEWORK WILL INCLUDE KEY SPECIES, 16 HABITAT TYPES AND 50 SUB-TYPES**

## DESCRIPTION AND SCOPE

The scope of this priority includes two essential elements:  
1) conducting necessary research and monitoring to understand biodiversity status and trends  
2) planning for its protection, including ensuring that appropriate policy and regulatory frameworks are in place to enable protection.

Over the next five years (2016-2020) EAD will focus on realigning its existing habitat monitoring methods to the new framework and establishing a long-term monitoring

programme based on standardised methods. It will fill critical gaps in baseline information for habitats and key species, while maintaining current monitoring activities where aligned with the updated framework. EAD will begin to build an understanding of the presence, potential impacts and vectors of invasive species. It will review existing legal and regulatory frameworks to ensure effective management controls for biodiversity conservation, and ensure management or conservation plans for key habitats and species are in place.

## OUR TARGET (2016-2020)

Maintain key habitat baseline area at 80% of 2014 baseline

## OUR OBJECTIVES (2016-2020)

- Ensure comprehensive assessment and monitoring of biodiversity
- Strengthen policy and planning framework for biodiversity conservation
- Strengthen legal and regulatory framework for biodiversity conservation
- Work with relevant stakeholders to educate, raise awareness and engage the community on biodiversity

## DESIRED ENVIRONMENTAL OUTCOMES

- The extent, health and distribution of critical and ecologically sensitive habitats is understood and the conservation and protection of habitat types planned
- The abundance, health and distribution of threatened, rare and endangered species is understood and the conservation and protection of species planned
- The legal and regulatory framework exist to adequately conserve and protect habitat types and species (within or outside protected areas)
- The presence, potential impacts and vectors of invasive species is understood and mitigation or management plans are in place



## 2.2 IMPROVE IMPLEMENTATION OF *IN-SITU* CONSERVATION AND BUILD A REPRESENTATIVE NETWORK OF PROTECTED AREAS

### ENVIRONMENTAL CHALLENGE

Despite improved conservation programmes introduced in the last decade, a pattern of continued habitat degradation and loss of biological diversity remains. Some progress has been made in protecting components of biodiversity, promoting sustainable use and addressing threats to biodiversity in Abu Dhabi.

This is evident in the increases in the proportion of declared protected area to the total extent of the Emirate's total land and coastal area, which is currently 10.45% (terrestrial) and 13.22% (marine), with proposals submitted to increase the extent to 15.43% (terrestrial) and 13.45% (marine) respectively. EAD has additionally developed an understanding of the representation of habitat types within current protected areas, as a basis for conservation planning.

PROPORTION OF DECLARED PROTECTED AREA



### DESCRIPTION AND SCOPE

In the next five years (2016 - 2020) EAD will focus on improving the representation of habitat types within the network of marine and terrestrial protected areas, building internal and partner capacity to effectively enforce regulations, implementing protected areas management plans, improving infrastructure to support compatible uses within protect areas, and engaging the community in

biodiversity conservation through protected areas. Because protected areas are not the sole approach for the protection of biodiversity, EAD will also document key habitats and species for protection to engage with partners in spatial planning. EAD will develop conservation management plans for key habitats and species where determined appropriate by environmental monitoring.

### OUR TARGET (2016-2020)

Increase marine and terrestrial protected area from: 10.54% terrestrial to 15.43%  
13.22% marine to 13.45%

### OUR OBJECTIVES (2016-2020)

- Build a strong planning and legislative framework to set-up and manage representative networks of terrestrial and marine protected areas
- Effectively manage and maintain terrestrial and marine protected areas
- Ensure effective implementation of *in-situ* conservation plans
- Improve regulatory enforcement and compliance inside and outside terrestrial and marine protected areas
- Create better involvement of the community in terrestrial and marine protected areas

### DESIRED ENVIRONMENTAL OUTCOMES

- Scientifically meaningful extents of habitat types are represented and effectively managed in a network of marine and terrestrial protected areas
- Threatened, rare and endangered species representation is maximised and effectively managed within a network of marine and terrestrial protected areas
- Scientifically-sound management and conservation of biodiversity outside of protected areas



## 2.3 LEAD *EX-SITU* CONSERVATION EFFORTS TO MAINTAIN SUSTAINABLE POPULATIONS OF KEY FLORA AND FAUNA

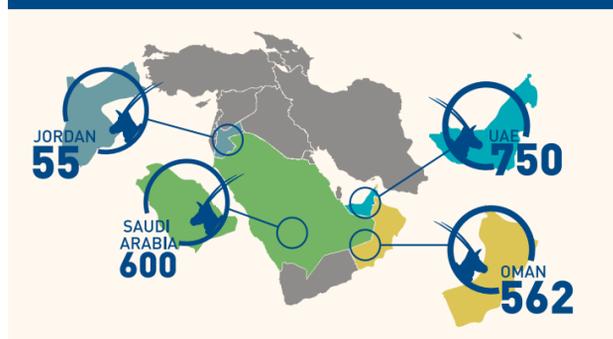
### ENVIRONMENTAL CHALLENGE

Today, EAD has more than 50,000 native and non-native animals under its management at its primary holding facilities at Al Faya, Deleika, as well as several managed forests. Among the more important local species are the Arabian Oryx (*Oryx leucoryx*), Sand Gazelle (*Gazella subgutturosa marica*), and Mountain Gazelle (*Gazella coral*). Additionally, EAD is managing Scimitar Horned Oryx (*Oryx dammah*), Indian Blackbuck (*Antelope cervicapra*) and Indian Gazelle (*Gazella bennettii*) of international conservation importance, among other species. EAD has already been a key player in re-introduction of Arabian Oryx in Al Maha in UAE, Wadi Rum in Jordan and Al Wusta Wildlife Reserve in Oman. It is establishing a world herd of Scimitar Horned Oryx to ensure the genetic diversity for global management of this species. Some of the current challenges facing EAD are an excessive number of animals in facilities, many of which are non-threatened. Some stocks of key species have a relatively low genetic diversity and require outbreeding with other populations. Within the core holding sites,

improvements to veterinary and staff facilities are underway and animal fencing is being repaired or replaced. However, additional investments are required to meet the ambitious conservation goals.

For Flora species, EAD currently maintains one native plant nursery based in Baynouna in the Western region about 300 km west of Abu Dhabi city. There are currently 40 different native species propagated at this nursery, of which 14 are considered as threatened and near-threatened. The nursery also currently plays a major role in seed collection for rehabilitation projects by winter seeding to encourage natural habitats and vegetation enhancement. EAD currently maintains a seed collection for 53 different species, where 12 species will be re-seeded in winter months. Current seed collections will serve as a nucleus for the region's first gene bank operation in 2017. The new plot for this facility was recently allocated to EAD in Al Wathba area.

#### THE WILD ARABIAN ORYX RE-INTRODUCTION TO THE WILD SO FAR



#### OUR SCIMITAR HORNED ORYX REINTRODUCTION PROGRAMME AIMS TO CREATE A SUSTAINABLE POPULATION IN THE NEXT 5 YEARS



### DESCRIPTION AND SCOPE

Over the next five years (2016 - 2020) EAD will focus on improving animal facilities and husbandry standards at the primary Al Faya and Deleika sites, controlling populations and reducing overcrowding of stocks to protect against disease. In parallel, the Agency will increase genetic diversity of priority conservation species through exchanges and establishing managed breeding programmes.

EAD will implement its reintroduction projects and agreements and seek to identify potential new opportunities locally, regionally and internationally. Major milestones will include the successful completion of a world class breeding facility at Deleika Wildlife Conservation Centre, re-introduction over five years of the Scimitar Horned Oryx into Ouadi Rime-Ouadi Achim Game Reserve in Chad, and the construction of the region's first gene bank for conservation of native flora.

### OUR TARGET (2016-2020)

Increase key conservation species with reintroduction/rehabilitation plans from 25% to 75%

### OUR OBJECTIVES (2016-2020)

- Efficiently and effectively manage *ex-situ* facilities and programmes
- Ensure successful implementation of wildlife re-introduction and rehabilitation programmes

### DESIRED ENVIRONMENTAL OUTCOMES

- The captive breeding and maintenance of healthy and genetically diverse stocks of key conservation species
- Effective contributions to local and international wildlife re-introduction and rehabilitation programmes

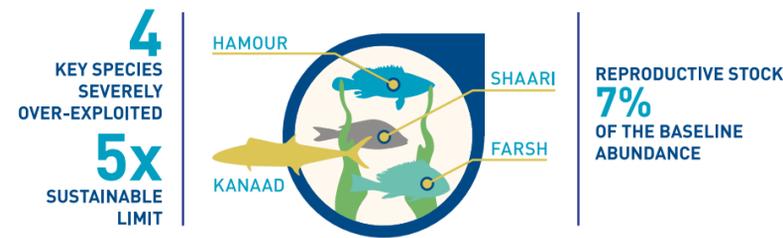


## 2.4 SUSTAINABLY MANAGE FISHERIES AND AQUACULTURE

### ENVIRONMENTAL CHALLENGE

Based on international standards, Abu Dhabi's fisheries are severely overexploited for 4 key species, with over 90% of fish stocks currently being caught unsustainably. Four key species Hamour (*Epinephelus coioides*), Shaari (*Lethrinus nebulosus*), Farsh (*Diagramma pictum*) and Kanaad (*Scomberomorus commerson*) are being over-exploited by nearly five times the sustainable limit. The reproductive stock of these four species is on average only 7% of the baseline abundance, with Hamour at only 4%.

Thirty percent is the international sustainable fisheries management threshold below which these stocks are considered to be overexploited. Consistent with the decline in global fisheries resources by approximately 85%, pressures on Abu Dhabi's fisheries include an increased demand for fish due to a rapidly growing population and tourism industry; loss and degradation of key habitats and marine water quality due to coastal development, pollution and climate change; illegal, unreported and unregulated fishing; and overcapacity of the fishing sector.



### DESCRIPTION AND SCOPE

In response to the state of the fishery - as informed by the comprehensive fisheries resources assessments and scientific studies completed by EAD and others over the past 15 years, internationally benchmarked management measures have been implemented for the emirate of Abu Dhabi. This has included limitations on licensing in the commercial fishery, establishment of a representative network of protected areas (which include habitats critical to key life stages of fish and no-take zones), regulating gear use including limitations on the number and design of fishing gear (Abu Dhabi is the only emirate to require escape panels in fish traps to manage undersized fishing), season bans during reproductive seasons, a strategy to grow the aquaculture sector, and minimum size limits for key species.

Despite striving to achieve best practice in fisheries management, the fishery continued to decline, and in recognition of this, in 2016, EAD and the Ministry of Climate Change and Environment launched the strategic 'UAE Sustainable Fisheries Programme' (2016-2018), a comprehensive two year plan with a vision of 'Sustainable Fisheries for the United Arab Emirates' resulting in an environmentally sustainable, economically viable, socially responsible fishing sector. EAD will work with federal partners to improve enforcement, compliance and eliminate un-licensed fishing. EAD will also work to establish recreational fishing regulations that support fishery recovery, as well as sustain the fishing heritage of Abu Dhabi. We will further ensure the policy and regulatory frameworks are in place for sustainable growth of the aquaculture industry.

### OUR TARGET (2016-2020)

Improve our sustainable fisheries exploitation index from 12.6% [2013] to 20%

### OUR OBJECTIVES (2016-2020)

- Strengthen coordination mechanisms with key stakeholders, and ensure development of required fisheries and aquaculture policies and plans
- Improve understanding and build knowledge and awareness about fisheries and aquaculture
- Enhance fisheries and aquaculture legislative and regulatory frameworks

### DESIRED ENVIRONMENTAL OUTCOMES

- The reproductive stocks of severely over-exploited fisheries species recovery to sustainable thresholds
- The overall fishery of Abu Dhabi recovered to international standards of sustainability



## 2.5 **MANAGE ABU DHABI'S FORESTS AND ENSURE THEIR LONG TERM VIABILITY AND SUSTAINABILITY**

### ENVIRONMENTAL CHALLENGE

Now greatly expanded beyond the natural ghaf stands and sustainable date palm plantations of the past, Abu Dhabi's current forested areas are unsustainable without significant artificial irrigation. Forests are currently irrigated using primarily groundwater in Abu Dhabi and consumed an estimated 214 million m<sup>3</sup> of water in 2014. This is contributing

to the rapid depletion of groundwater aquifers and increasing the challenge for sustainable water management. However, some of these forests provide benefits such as protection of infrastructure, like roads and railway tracks, from moving sands and they create artificial habitat for an estimated 36,000 animals managed and fed by EAD.



**FORESTS USE  
214,090,95 m<sup>3</sup>  
OF GROUNDWATER**



### DESCRIPTION AND SCOPE

EAD now manages all Government forests in Abu Dhabi and some private forests through a number of contracts with a single provider of operations. These forests total more than 400 and comprise an estimated 19 million trees covering an area of 228,000 hectares. In addition to increasing the challenge for sustainable water management, the current extent of forests require extensive investment in infrastructure such as pumps, water storage tanks and irrigation systems to abstract, store and supply water to the trees.

In the next five years (2016 - 2020) EAD will focus on undertaking a field based research programme to assess and optimize the water used in forestry, and identifying the benefits provided by each forest such as protection of infrastructure from moving sands, the provision of habitats for animals, the opportunity for recreational activity and the opportunity for economic activities such as agroforestry. EAD will work with stakeholders to determine and agree the right balance between the investment of water and capital and the benefits forests provide.

### OUR TARGET (2016-2020)

Reduce all water used in forestry by 27.42% by 2020

### OUR OBJECTIVES (2016-2020)

- Strengthen forestry policy and regulatory framework through scientifically sound information
- Effectively manage and maintain forestry assets and operations
- Ensure environmental sustainability of Abu Dhabi's forests
- Explore diversification of outdoor and economic activities

### DESIRED ENVIRONMENTAL OUTCOMES

- Reduce the volume of water used annually in forestry



3. PROVIDE SOUND ENVIRONMENTAL INFORMATION  
AND PROMOTE SHARED RESPONSIBILITY



## 3.1 DELIVER SCIENTIFICALLY CREDIBLE ENVIRONMENTAL INFORMATION AND KNOWLEDGE

### CURRENT STATE

An essential role served by EAD is to understand, track, report and advise on the state of the environment. This role cuts across all environmental issues. EAD must provide a common basis to ensure that standards, methods and systems are in place to support this essential function. At present, EAD supports this role with a standards-based Environmental Database (EDB) and a variety of portals, visual analytics tools, and reports to support regular information

dissemination. EAD has recently adopted a Driver, Pressure, State, Impact, Response (DPSIR) framework for assessment of the environment and is in the process of developing a monitoring framework that will both guide future data collection activities and serve to systematically integrate essential environmental information. EAD has also developed a draft research agenda to focus future studies of EAD and its partners on the highest-value areas.

### DESCRIPTION AND SCOPE

This cross-cutting priority will provide internal standards, methods and systems for the collection, management and delivery of regular and robust information on the state of the environment in Abu Dhabi, as a basis for improved decision making inside and outside the Agency. In the next five years (2016 - 2020) EAD will focus on identifying and filling data gaps under the monitoring framework and improving data quality and consistency across the Agency. It will expand data accessibility and increase the regularity

of information dissemination and state of the environment reporting following the DPSIR framework. EAD will also implement the United Nations Statistics Divisions Framework for the Development of Environmental Statistics (FDES) and the System of Environmental-Economic Accounting (SEEA) to enable appropriate contribution to national, regional and global efforts. EAD will finalize and initiate implementation of its research agenda, with a focus on collaborative partnerships.

### OUR TARGET (2016-2020)

Increase environmental reports published per year as per reporting calendar from 70% to 100%

### OUR OBJECTIVES (2016-2020)

- Enhance environmental data acquisition and reliability
- Deliver comprehensive and timely environmental information to inform decision-making
- Activate environmental research and innovation unit/agenda



## 3.2 PROMOTE ENVIRONMENTAL EDUCATION AND SHARED RESPONSIBILITY

### CURRENT STATE

An essential role served by EAD is to raise awareness on the importance of the protection of the environment and wildlife through its educational programmes. This role is particularly important in Abu Dhabi where there are few organisations addressing environmental outreach and/or education and where the rate of new arrivals is high. EAD already has a number of very successful and recognised

programmes targeting school children, businesses and government, as well as the general community. A reoccurring challenge in this area is achieving the appropriate balance between general education and awareness about the environment and biodiversity, and affecting specific changes in behaviour or decisions aligned to high-priority environmental challenges.

### DESCRIPTION AND SCOPE

This cross-cutting priority seeks to encourage environmentally sustainable practices, through engagement with school children, businesses and government, as well as the general community. EAD will accomplish this through general

education programmes, awareness campaigns, toolkits and resources, capacity building, as well as through targeted outreach to specific stakeholders with the purpose of changing behaviour or influencing decisions.

### OUR TARGET (2016-2020)

Increase stakeholder environmental awareness from 71% to 82%

### OUR OBJECTIVES (2016-2020)

- Educate our community about environmental sustainability
- Work with government and private sector to promote and encourage resource efficiency
- Deliver specific environmental outreach and education activities targeting EAD strategic priorities



4. ENSURE EFFECTIVE POLICY AND REGULATION FOR THE ENVIRONMENT



# 4.1 STRENGTHEN ABU DHABI'S ENVIRONMENTAL POLICY & PLANNING FRAMEWORK

## CURRENT STATE

As the government authority for environmental protection and biodiversity conservation, EAD has an essential role to propose and provide advice on environmental policy and plans consistent with these mandates. In 2011, EAD facilitated the development of the Abu Dhabi Environment Vision 2030, which provides a baseline assessment of environmental issues, and captures the trade-offs between economic expansion, ecological preservation and cross-sectorial interests that are inherent to a comprehensive

integrated policy framework. Since 2012, EAD has developed five specific environmental strategies with other government entities to guide whole of government 5 year environmental planning. In 2014, the Agency assisted GSEC to cascade these efforts to the Abu Dhabi Emirate Plan. EAD is also currently facilitating the development of the Abu Dhabi Environment Policy Agenda that will consolidate all existing and future initiatives into a single document.



## DESCRIPTION AND SCOPE

The scope of this priority includes championing the development, agreement and implementation of environmental policy and plans consistent with the Abu Dhabi Environment Vision 2030 and the Policy Agenda. In the next five years (2016-2020) EAD will focus on establishing monitoring and reporting frameworks for the state of the environment, as well as for providing support

to GSEC on the government-wide performance against the Abu Dhabi Environment 2030 Vision, Policy Agenda and strategies. EAD will further lead the development of environmental policies and initiatives cascading from the Abu Dhabi Emirate Plan, and seek to ensure consistency of policies and plans proposed by other entities to the Environmental Vision, Policy Agenda and Strategies.

## OUR TARGET (2016-2020)

Increase entities implementing environmental initiatives from the Abu Dhabi Plan from 25% to 100%

## OUR OBJECTIVES (2016-2020)

- Actively contribute to the development and implementation of whole-of-government environmental policy and plans
- Ensure environmental considerations are timely and properly integrated into government policy and plans across different sectors



# 4.2 IMPROVE THE ENVIRONMENT REGULATORY FRAMEWORK AND ENHANCE COMPLIANCE

## CURRENT STATE

EAD's legal authorities derive from over a dozen different federal and local laws. These authorities provide both direct, and delegated responsibility to EAD for regulation, compliance and enforcement of legislation in various environmental areas. Due to this diversity of mandates and the incremental development of EADs regulatory roles over

time, there are currently inconsistent approaches applied across EAD's regulatory roles. EAD has the need to consistently review proposed environmental legislation, identify and address regulatory gaps, develop new or amend existing regulations, improve compliance monitoring, strengthen enforcement capabilities, and support the development of judicial courts.



## DESCRIPTION AND SCOPE

The purpose of this cross-cutting priority is to establish and implement a comprehensive enforcement-based regulatory framework across EAD's regulatory mandates. The priority is not intended to replace existing regulations within specific environmental areas, but to provide a common basis to ensure a comprehensive and consistent approach to the Agency's regulatory roles. In addition, this priority will address EAD's role in the management of hazardous materials. In the next five years (2016 - 2020) EAD will

focus on establishing the core regulatory framework and assessing current practices against this framework to identify gaps and inconsistencies. EAD will establish environmental information decision support tools and improve technology supporting permitting, licensing and enforcement processes. The Agency will also build capacity for consistent regulatory enforcement across its environmental mandates and support the development of the environmental courts.

## OUR TARGET (2016-2020)

Increase environmental inspections conducted out of required number of inspections to 100%

## OUR OBJECTIVES (2016-2020)

- Build an effective and best-in-class legislative and regulatory framework for the environment
- Improve environmental permitting and compliance
- Ensure effective management of hazardous materials

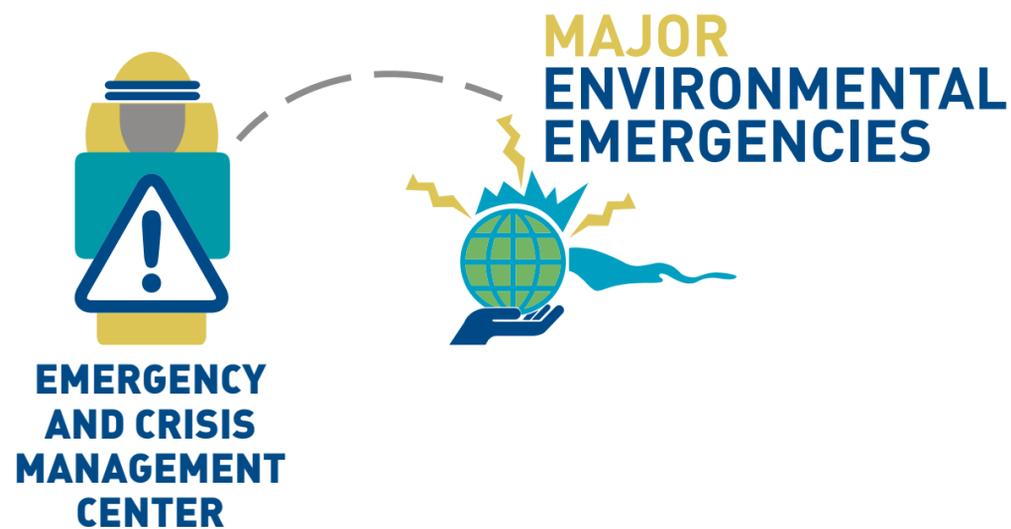


## 4.3 ENHANCE EMERGENCY PREPAREDNESS AND EFFECTIVELY RESPOND TO ENVIRONMENTAL EMERGENCIES AND CRISES

### CURRENT STATE

As the authority for environmental protection, EAD's role includes working with strategic-partnered stakeholders (government entities) to prepare for, respond to, and possibly restore the natural environment from emergency incidents. EAD must be prepared to act as a lead or support agency if an emergency situation demands. At present, EAD has developed an Emergency and Crisis Management Plan intended as a guide to the management of any environmental incident irrespective of scale, severity, impact or threat.

The Agency has established an Emergency and Crisis Management Centre in its headquarters. EAD has initiated internal environmental emergency related training for staff, collaborated with other government entities in developing government-wide specific scenario-based response plans, and participated in emergency and crisis drills and exercises at a local, federal, regional and international level. EAD regularly responds to environmental incidents that may represent environmental risks and plans mitigation measures.



### DESCRIPTION AND SCOPE

This cross-cutting priority includes the Agency-wide preparedness and coordinated response to environmental emergency incidents, with the view of protecting people, environment, assets and reputation (PEAR - in that order). In the next five years (2016-2020) EAD will focus on strengthening and enhancing its Emergency and Crisis Management Plan and building internal capacity to effectively continue executing and deploying the plan when activated. It will raise awareness of EAD's emergency preparedness and response role with other government

entities, develop joint plans where appropriate and continue to practice and test its roles and procedures via emergency drills and exercises at the Emirate level. EAD developed and will continue developing specific scenario-based response plans (e.g. oil spill, sewage discharge, ship capsizes, marine ships accidents) that will be subordinate to this plan, based on a risk assessment. It will further assess the necessary resources and other support required supported to manage each scenario, with a view to building capacity necessary to effectively respond.

### OUR TARGET (2016-2020)

Increase compliance with emergency prevention and response measures to 100% from the EAD Emergency Management Plan

### OUR OBJECTIVES (2016-2020)

- Improve preparedness for environmental emergencies and incidents, which affect society and the environment
- Ensure effective and efficient responses to environmental emergencies, incidents and crises



5. POSITION EAD AS AN ORGANISATION OF EXCELLENCE AND A LEADER IN ENVIRONMENTAL SUSTAINABILITY

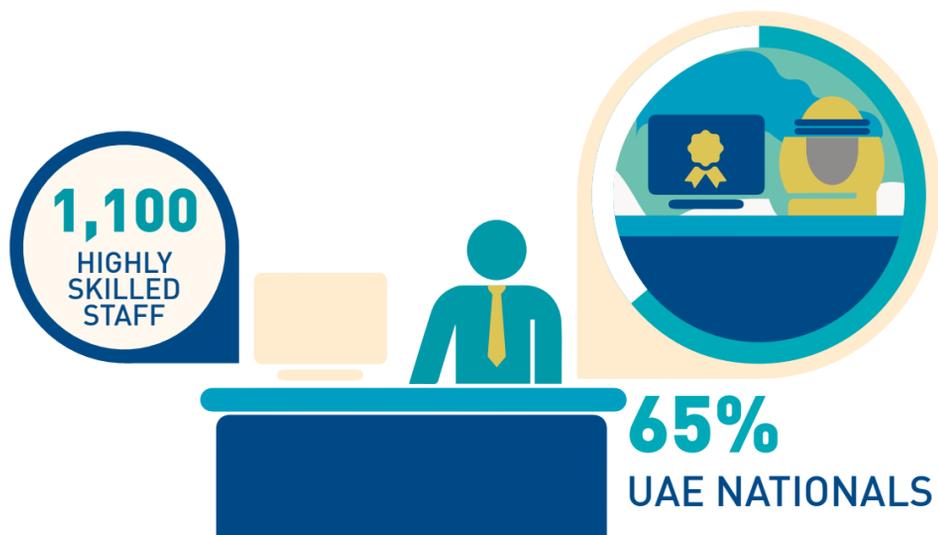


# 5.1 POSITION EAD AS AN EMPLOYER OF CHOICE THAT FOSTERS STAFF EXCELLENCE AND DEVELOPMENT IN A HEALTHY AND SAFE WORKPLACE

## CURRENT STATE

In 2016, EAD employs approximately 1,100 skilled staff, of which 65% are UAE Nationals. The Agency enjoys a low employee turnover of 3% and low occurrence of reportable health/safety incidents, but a moderate rate of acceptance to job offers to candidates. EAD has a sustained need to

successfully recruit top quality candidates and develop and retain individuals to meet the Agency's evolving needs, as well as to foster a culture of "safety first" across its 33 operational locations.



## DESCRIPTION AND SCOPE

In the next five years (2016 - 2020) EAD will focus on building on its high employee satisfaction and low turnover rates to improve its ability to attract, develop and retain high potential employees. This includes providing effective

and transparent employment processes, comprehensive employee benefits, capacity building opportunities for all levels of experience, and a commitment by leadership to fully utilise and acknowledge excellent employees.

## OUR TARGET (2016-2020)

Maintain an annual employee turnover rate below 3%

## OUR OBJECTIVES (2016-2020)

- Attract, develop and retain qualified and high-performing staff
- Promote a transparent and open organisational culture
- Improve Emiratisation within EAD
- Maintain a healthy and safe workplace for EAD employees, contractors and visitors



## 5.2 ENHANCE ORGANISATIONAL EFFICIENCY AND SERVICE DELIVERY

### CURRENT STATE

EAD has undergone substantial organisational change in recent years including a full restructuring in 2012 and the establishment of new capabilities to better respond to environmental challenges. It adopted new frameworks for strategic planning and annual planning and significantly improved its performance reporting. EAD adopted an Agency-wide project management method and developed

an internal excellence award programme to encourage continuous improvement. The Agency implemented an enterprise resource planning system in 2014 and has improved the accuracy and frequency of internal financial reporting. However, further implementation of these initiatives, as well as additional initiatives, is planned to fully realise intended benefits.

### DESCRIPTION AND SCOPE

In the next five years (2016-2020) EAD will focus on continuing to implement new business processes and further improve internal service delivery with a focus on supporting strategy implementation. The Agency will improve budget alignment to the annual business plan and strategic performance reporting and project evaluation.

It will execute the Al Dana internal excellence award programme and strive to improve its performance in the Abu Dhabi Excellence Award cycles. EAD will seek to strengthen internal service delivery of systems, processes, facilities and assets where these investments contribute to the strategic execution and performance.

### OUR TARGET (2016-2020)

Achieve an organisation excellence score of 500 or greater

### OUR OBJECTIVES (2016-2020)

- Build robust planning, performance management, reporting and assurance services
- Enhance financial management and cost optimisation at the Agency
- Improve efficiency and effectiveness of internal service delivery
- Deliver outstanding service to EAD customers and other external stakeholders



## 5.3 DISTINGUISH EAD AS A LEADER IN ENVIRONMENTAL SUSTAINABILITY

### CURRENT STATE

EAD produced its first sustainability report in 2007 and has led numerous sustainability initiatives since then, including the establishment of Abu Dhabi Sustainability Group (ADSG) in 2008, which has since grown into a 48-member organisation, representing most of the sectors of the

economy. EAD has numerous environmental performance and corporate social responsibility initiatives directed both internally and externally, although these are not currently guided by a single vision or reflect a focused strategic approach.

**Abu Dhabi Sustainability Group (ADSG) has grown into a 48-member organisation**



### DESCRIPTION AND SCOPE

This cross-cutting priority is intended to bring together these numerous initiatives and the commitment of its employees under a common vision and strategy for EAD's sustainability performance. In the next five years (2016-2020) EAD will focus on documenting its internal corporate sustainability policy and strategy, and improving internal performance of EAD's ecological footprint at all EAD

facilitates and operational sites through tracking water and electricity consumption, fuel use by vehicles, and waste generation. The Agency will produce annual sustainability reports based on the Global Reporting Initiative (GRI) guidelines and implement green procurement and IT practices, as well as other measures to reduce its ecological footprint.

### OUR TARGET (2016-2020)

Improve EAD sustainability maturity self-assessment to 70%

### OUR OBJECTIVES (2016-2020)

- Lead by example on corporate sustainability
- Establish EAD as a local and global ambassador for environmental sustainability

PRESERVING OUR HERITAGE  
PROTECTING OUR FUTURE





هيئة البيئة - أبوظبي  
Environment Agency - ABU DHABI



هيئة البيئة - أبوظبي  
Environment Agency - ABU DHABI

preserving our heritage - protecting our future

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