



IMPORTANCE OF ENVIRONMENTAL STATISTICS TO SUPPORT THE DECISION MAKER

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INTRODUCTION

- Abu Dhabi is the largest emirate in the United Arab Emirates and occupies an area of over 80% of the country's total area and is characterized by the diversity of natural resources.
- Statistics centre – Abu Dhabi (SCAD) is the official source of statistical data in Abu Dhabi Emirate. The centre is also responsible for the integration and harmonization of statistics produced by other local departments and entities, in regard to the standardization of statistical concepts and definitions.
- This development coincided with increasing in consumption of energy and water resources and increasing demand for natural resources. So in light of this development in the emirate, the Environment Agency - Abu Dhabi (EAD) applied different environmental quality monitoring programs to preserve the environment and natural resources.
- The environmental data collection programs provide accurate data to help in the production of environmental statistics and indicators to measure the quality of the environment and the impact of development on the state of the environment.



IMPORTANCE OF STATISTICS

- Environment statistics build to provide the decision maker, Government, Economic establishments and societies with high quality statistical information and easily interpreted data describe environment status.
- Describe the Important changes and trend over time and across locations and the main factors that influence them.
- Identify environmental issues and its impacts on the environmental health.
- Understand the environmental variability and uncertainty.



NEED FOR INFORMATION

- Rapid growth and development
- Socio economic changes
- Increase in awareness of local & global environmental issues
- National, Regional, International obligations
- Environment 2030, State of Environment reporting, EPI, Ecological Footprint, etc...
- Information requests from leadership, stakeholders, etc.



*...requires comprehensive,
accurate, timely and relevant
data & statistical information...*



ENVIRONMENTAL CHALLENGES

Global environment facing a lot of challenges

- Energy
- Food Security
- Climate Change
- Population Growth
- Loss in Natural Resources
- Ecosystems & Endangered Species
- Pollution
- Air
- Land
- Water
- Waste
- Other



ENVIRONMENTAL STATISTICS
CASE STUDY FROM ABU DHABI
GREENHOUSE GAS

GHG INVENTORY BUSINESS PROCESSING MODEL

Define the needs

- EAD & SCAD work to define the needs according to international standards for IPCC, (UNFCCC) and in action to Abu Dhabi environment baseline and strategic priority.
- Define the main sectors and key stakeholder and sources.

Design

- Design Questionnaires according to IPCC by EAD for these sectors Energy – Agriculture – Land use and land use change - Industry - Waste

Data Collection

- Run Field survey through electronic web-based questionnaire
- Transfer needed input data files from admin sources
- Run input processing to ensure data compilation and quality
- Finalize input data gathering

Data processing and interpretation

- EAD worked on processing the data of the greenhouse Gas Inventory for Abu Dhabi based on the methodology contained in Revised IPCC 1996 Guidelines for National Greenhouse Gas Inventories. This is in line with requirements for non-Annex 1 countries under the UNFCCC.

Report dissemination

- Design and review
- Approval
- Dissemination



DATA COLLECTION: ADMINISTRATIVE

DATA TYPES AND SOURCES

Data
Type

Energy production and
consumption

Transportation

Agriculture, livestock and
forestry

Wastewater

Solid waste

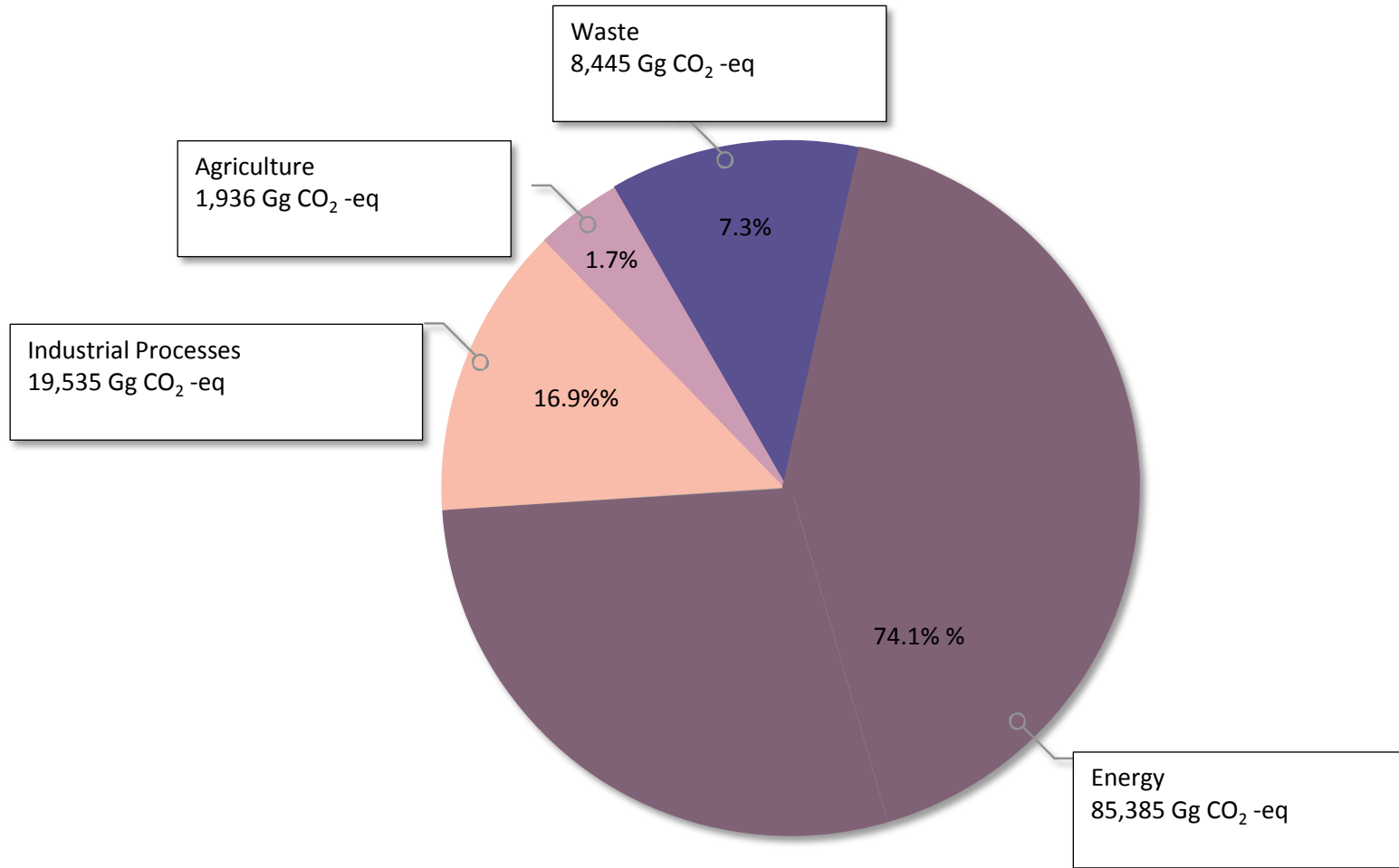
Population

GDP



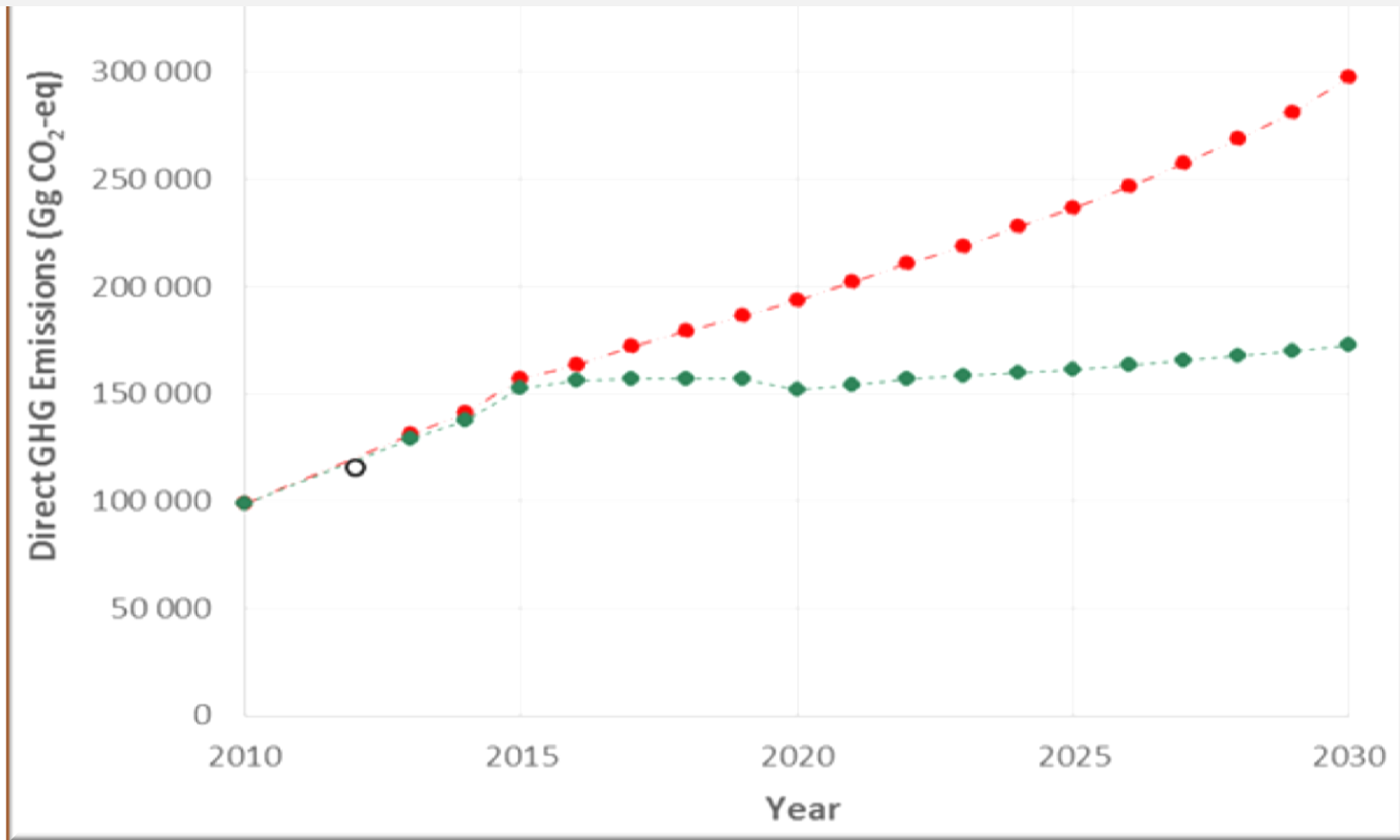
INFORMATION FOR DECISION MAKER

Contribution of each sector towards total direct GHG emissions in the Abu Dhabi



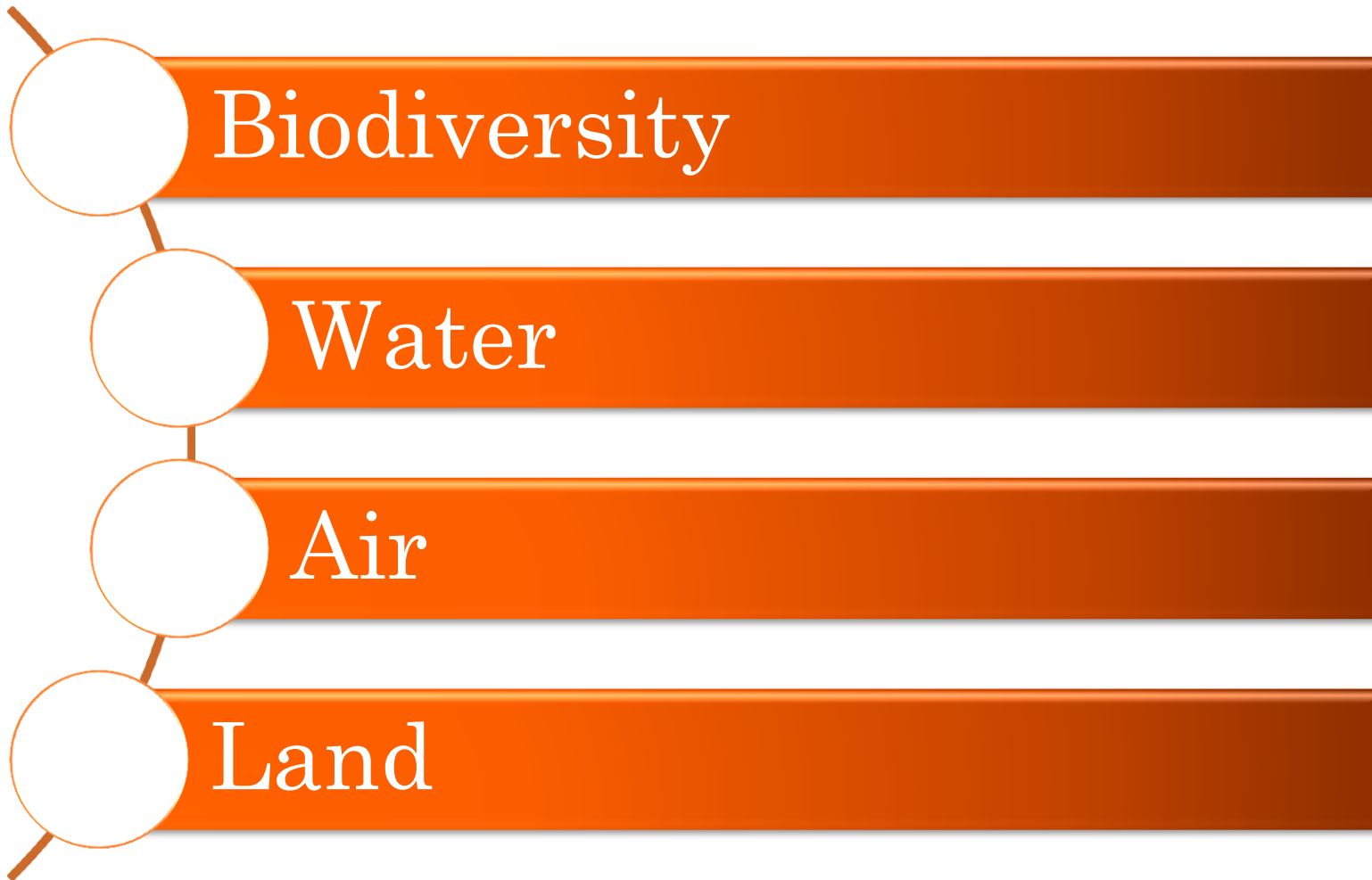
INFORMATION FOR DECISION MAKER

Comparison of projected annual total direct GHG emissions until 2030, according to business-as-usual (BAU) and business-as-usual with extended emission control (BAU-EXEC) scenarios.

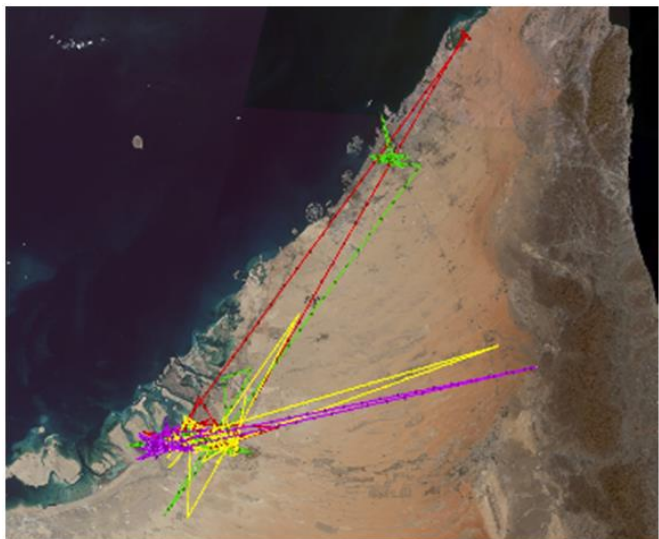
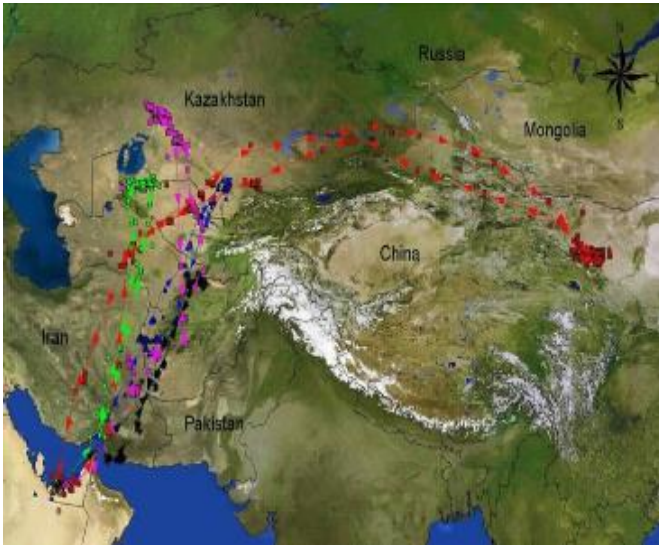


**ENVIRONMENTAL MONITORING PROGRAMS
CASE STUDY FROM ABU DHABI**

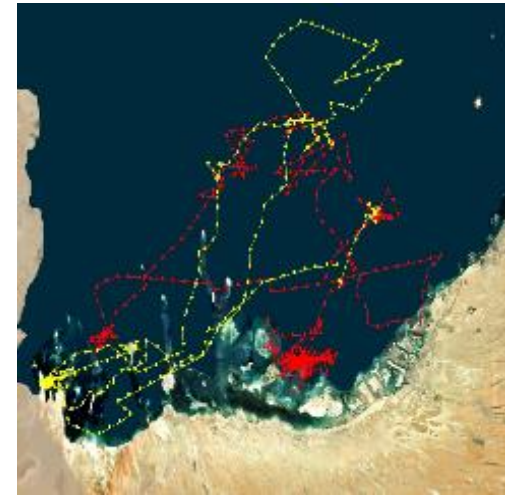
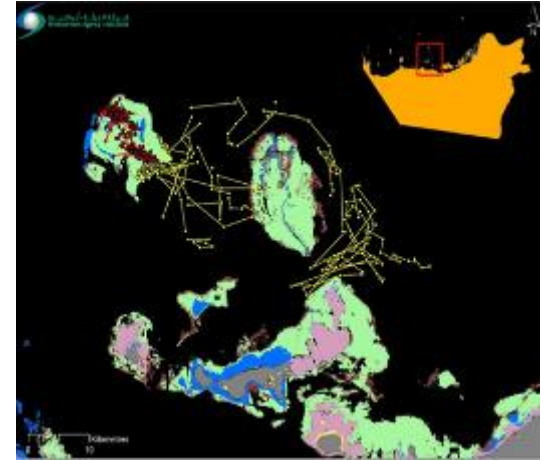
ENVIRONMENTAL MONITORING PROGRAMS IN EAD



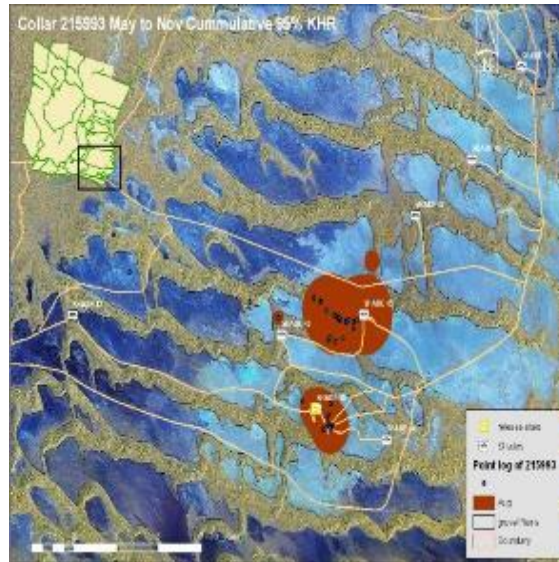
WILDLIFE TRACKING - BIRDS



WILDLIFE TRACKING – MARINE SPECIES



WILDLIFE TRACKING – ARABIAN ORYX



MARINE WATER QUALITY



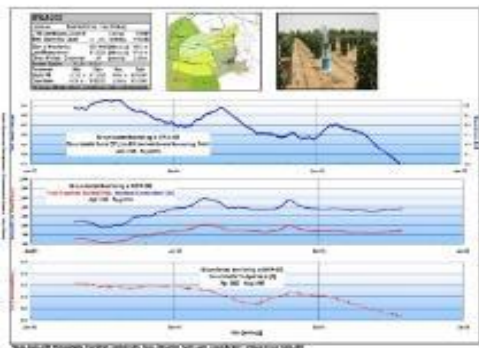
GROUNDWATER QUALITY



Monitoring Network



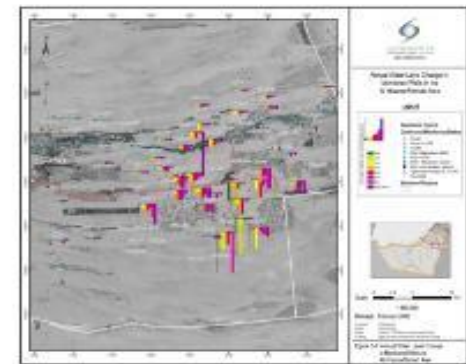
Monitoring Station



Daily Water Level Fluctuations

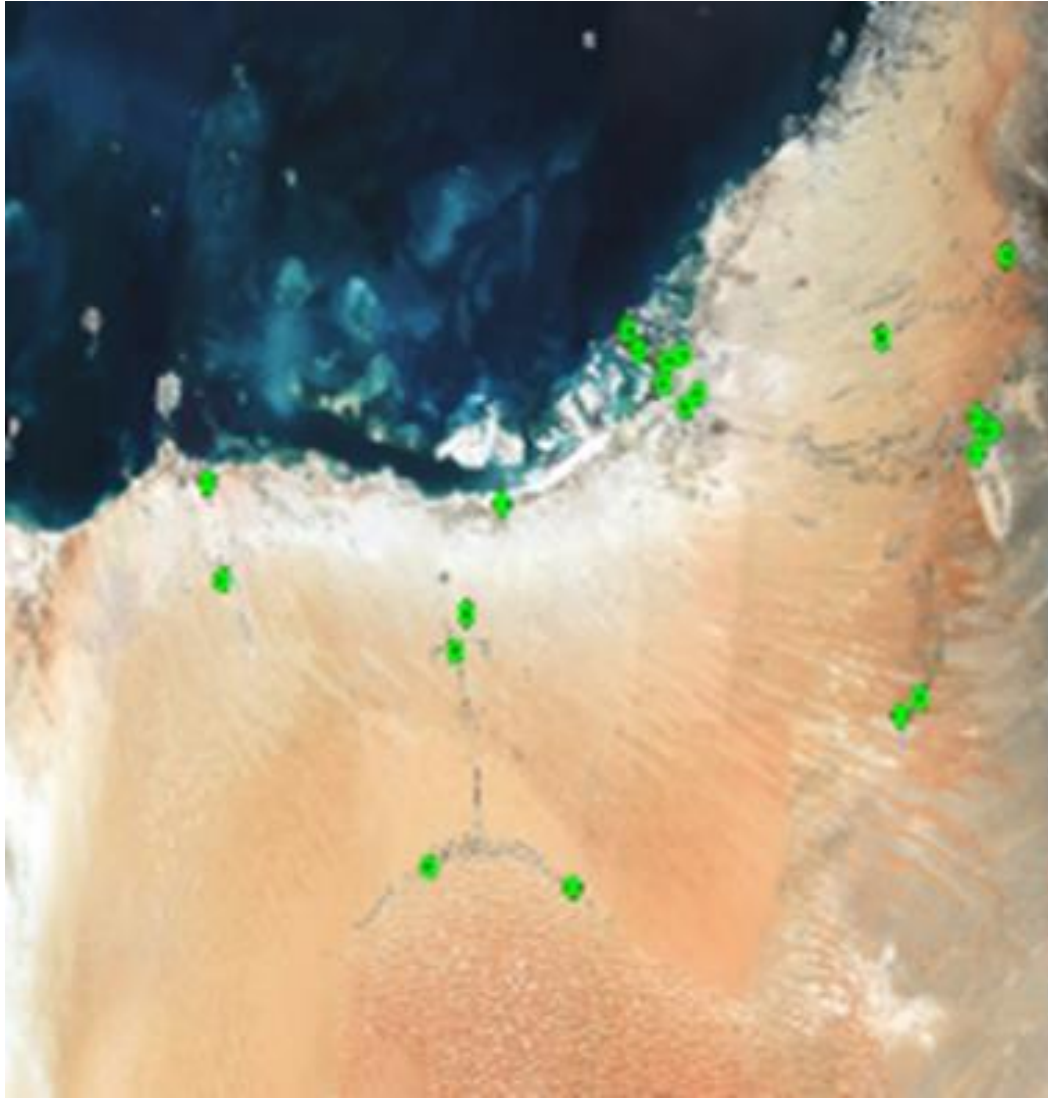


Monthly Water Level Change



Annual Water Level Change

AIR QUALITY



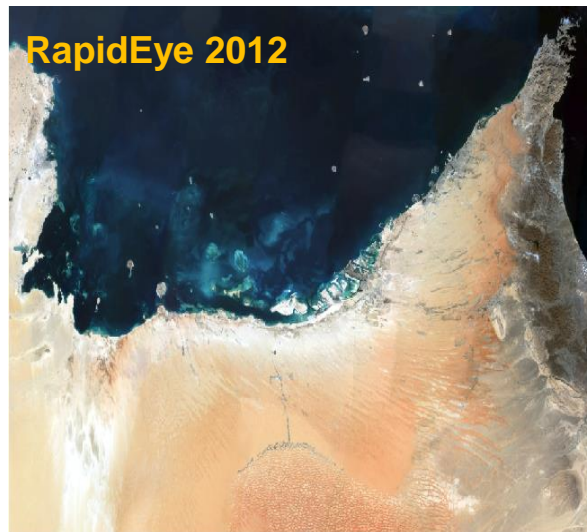
FIELD DATA COLLECTION

- Develop field data collection App.
- Use tablet devices to collect field data.
- Use camera traps to collect.
- Use Radio/GSM/satellite transmitters to track marine and terrestrial key species.



EAD IMAGERY DATABASE

- WorldView 2 2013/14
- RapidEye 2012
- MODIS 2012
- IRS 2006
- IRS 2004
- Landsat 2002
- LandSat 2000
- LandSat1998
- Landsat 1996
- LandSat1990
- LandSat1985
- LandSat1972



**ENVIRONMENTAL INFORMATION
DISSEMINATION
CASE STUDY FROM ABU DHABI**



Reports

Spatial
information

Statistical
information



هيئة البيئة - أبوظبي
Environment Agency - Abu Dhabi

BIODIVERSITY ANNUAL REPORT 2015

STATUS OF MANGROVES IN ABU DHABI



هيئة البيئة - أبوظبي
Environment Agency - Abu Dhabi

AIR QUALITY QUARTERLY REPORT



هيئة البيئة - أبوظبي
Environment Agency - Abu Dhabi

one full page to window

MARINE WATER QUALITY QUARTERLY REPORT

JUL - SEP 2015
ABU DHABI



ENVIROPORTAL

The screenshot shows the Enviroportal website interface. At the top, there is a navigation bar with links for Home, Search, Download, Browse, and Map Gallery. The main content area is divided into several sections: a search bar, a 'Map Gallery Browser' with a grid of map thumbnails, a 'Map Viewer' section with a map of Abu Dhabi, an 'Events' calendar for January 2012, and a 'Related Links' section featuring a sea turtle and news articles. The footer contains copyright information for the Environment Agency - Abu Dhabi.

هيئة البيئة - أبوظبي
Environment Agency - ABU DHABI

Home Search Download Browse Map Gallery

You can simply...
Search

Welcome to the Environment Agency - Abu Dhabi's Geoportal.
This is your virtual gateway to our entire catalogue of geospatial information, finished maps and the most up-to-date environmental data.
You're one click away from exploring geographic data and building your own maps.

Map Gallery Browser

Map Viewer

Events
January 2012
S M T W Th F S
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

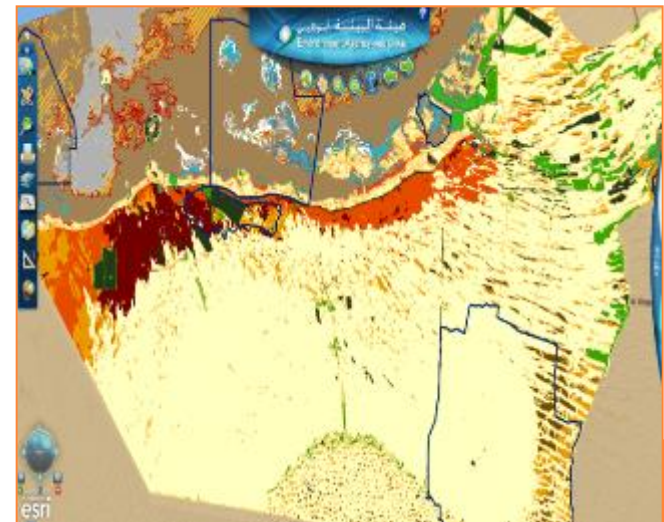
Related Links

JEWELS OF THE UAE
Environment Competition ADAEP Abu Dhabi EHS Center

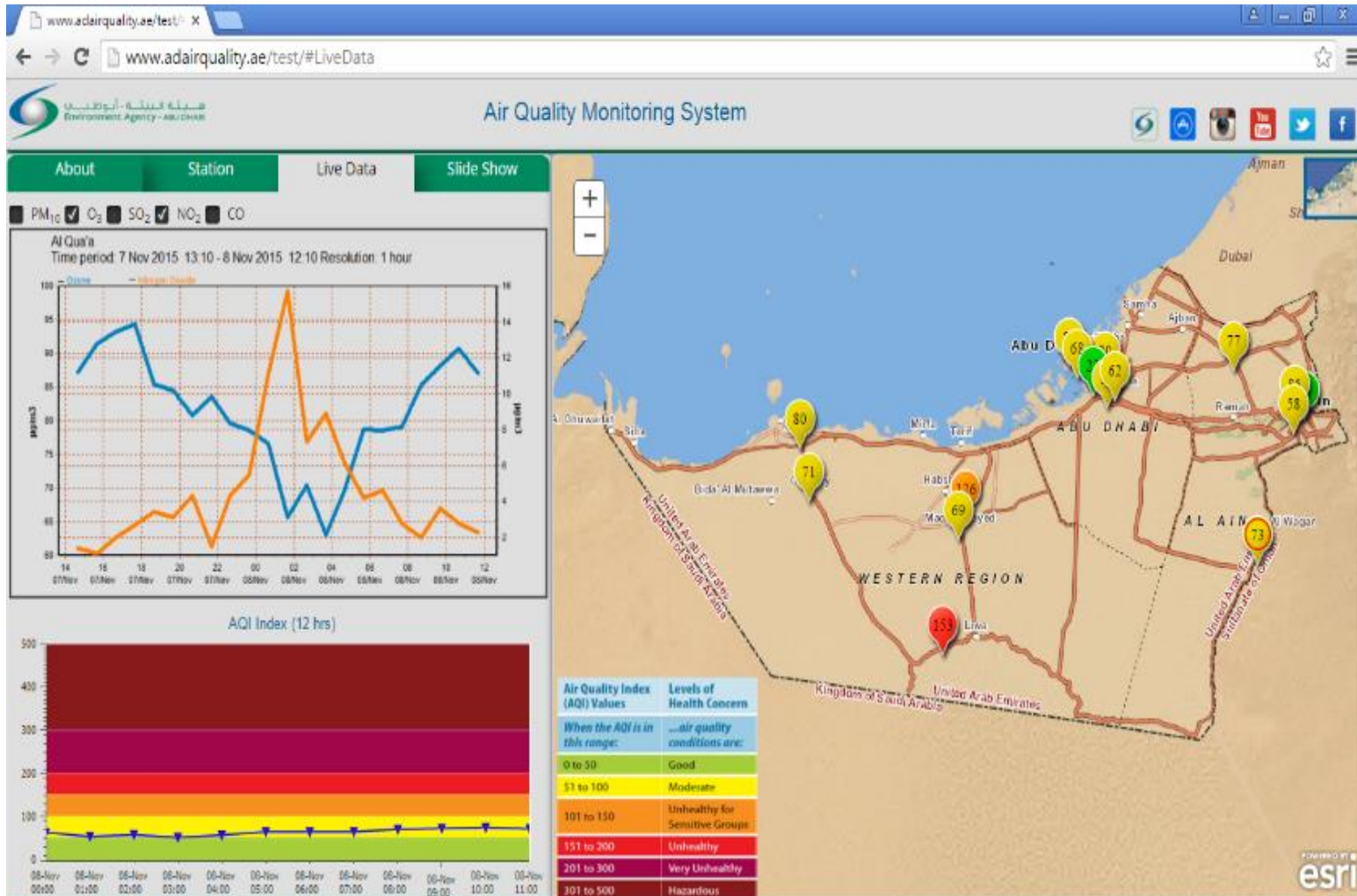
Ruler's Representative Court Western Region Turn it off Campaign Sustainable Schools

0 Jan: World-famous environmentalists ...

2012 Environment Agency - Abu Dhabi. All Rights Reserved



AIR QUALITY PORTAL



MARINE WATER PORTAL

The screenshot displays the Marine Water Portal interface. At the top, a banner for the Environmental Protection Agency (EPA) is visible. The background is a map of the Red Sea region, showing the coastlines of Saudi Arabia, Yemen, and Djibouti, with major cities like Aden, Hodeidah, and Sana'a marked. Two windows are overlaid on the map:

Sample Details

This window contains a sidebar with expandable sections: Basic Information, Hydrography, General Chemistry, Inorganic Chemistry (Metals in Water), Inorganic Chemistry (Metals in Sediment), Organic Chemistry, Microbiology, and Comments. The main area features a table for data entry:

| | Value | MQL | Test Method |
|----------------------------------|----------------------|----------------------|----------------------|
| Nitrite-N ($\mu\text{g/L}$): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Nitrate-N ($\mu\text{g/L}$): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Silicate-Si ($\mu\text{g/L}$): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ammonia-N ($\mu\text{g/L}$): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Phosphate-P ($\mu\text{g/L}$): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| BOD(mg/L): | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| TSS(mg/L): | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Handle Samples Data (Active List)

This window displays a table of sample data with columns for Sample No., Sampling Site, and Status. The status is indicated by a colored cell: Green for 'None', Yellow for 'Submitted', Orange for 'Retest', Red for 'Resubmit', and Light Green for 'Resubmitted'.

| Sample No. | Sampling Site | Status |
|----------------------------|---------------|-------------|
| Sn-No-00000000000000000000 | Site Name | None |
| Sn-No-00000000000000000000 | Site Name | Submitted |
| Sn-No-00000000000000000000 | Site Name | Retest |
| Sn-No-00000000000000000000 | Site Name | Resubmit |
| Sn-No-00000000000000000000 | Site Name | None |
| Sn-No-00000000000000000000 | Site Name | Retest |
| Sn-No-00000000000000000000 | Site Name | Resubmitted |
| Sn-No-00000000000000000000 | Site Name | None |
| Sn-No-00000000000000000000 | Site Name | Retest |
| Sn-No-00000000000000000000 | Site Name | Resubmitted |
| Sn-No-00000000000000000000 | Site Name | None |



UAE SOIL INFORMATION

Environment Agency - Hudaib UNITED ARAB EMIRATES SOIL INFORMATION SYSTEM

Introduction

The United Arab Emirates Soil Information System (UAESIS) comprises of data from the Soil Survey of Abu Dhabi Emirate, and the Soil Survey of the Northern Emirates. The Environment Agency – Abu Dhabi has undertaken the Soil Survey of Abu Dhabi Emirate in partnership with the International Center for Biosaline Agriculture (ICBA) (2006-2009) and the Soil Survey of the Northern Emirates in partnership with the Ministry of Environment and Water (2010-2012). Both surveys were completed using the latest norms and standards of the United States Department of Agriculture - Natural Resources Conservation Service (USDA-NRCS), modified to fit the United Arab Emirates conditions. A total of 65,000 observation sites have been fully described, classified and populated to the database. Additionally, various thematic maps, such as irrigated suitability, soil salinity, current land use, land degradation, vegetation, etc. are also included, and available to users.

User Access

The United Arab Emirates Soil Information System (UAESIS) provides you with access to a comprehensive range of soil information of the Nation. There are two types of user access, **Guest** and **Advanced User**. For basic soil information the user can access the system as **Guest** and this does not require registration. However, if the user would like to have detailed soil and related information, the user has to use the **Advanced User** User access. To register as **Advanced user**, please contact [Environment Agency Abu Dhabi](#).

<http://www.uaesis.ae>

I agree to the [Conditions of Use](#) and wish to continue accessing ADGIS Data.

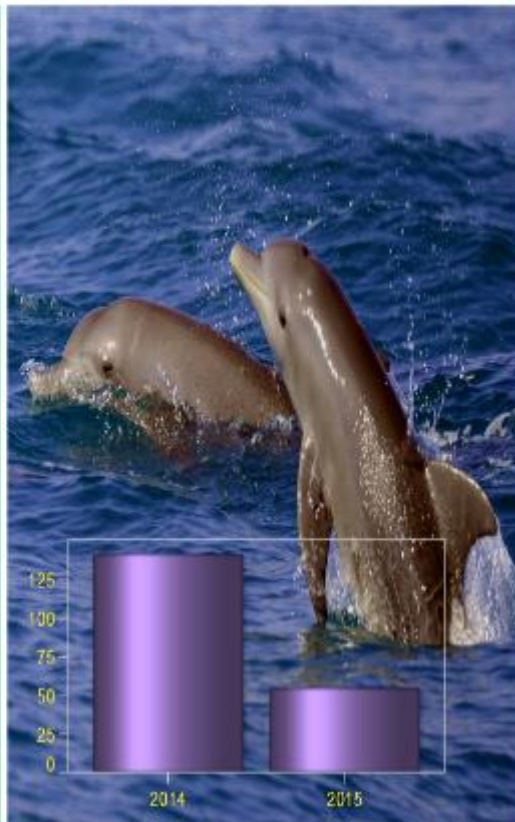
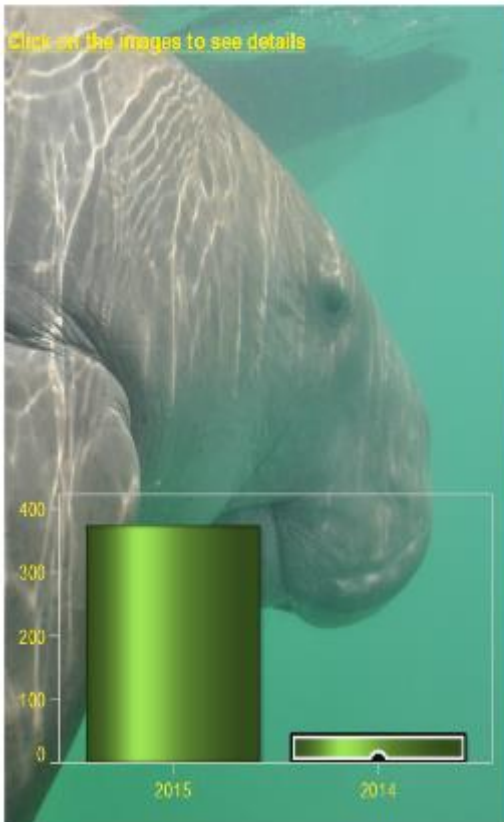
SAS REPORTS - BIODIVERSITY

Marine_Mar * sas Sign Out

File Help

Overview DolphinSurveySightings DolphinSightings TurtleNests DugongSightings

Click on the images to see details



SAS REPORTS – TURTLE NESTING

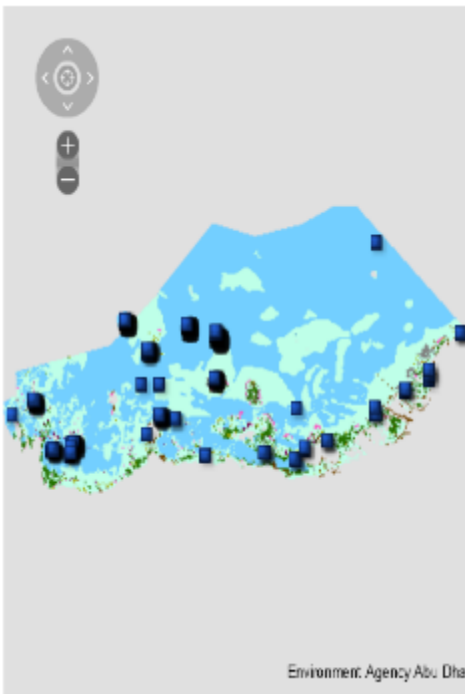
Marine_Mar *
sas

File Help
Sign Out

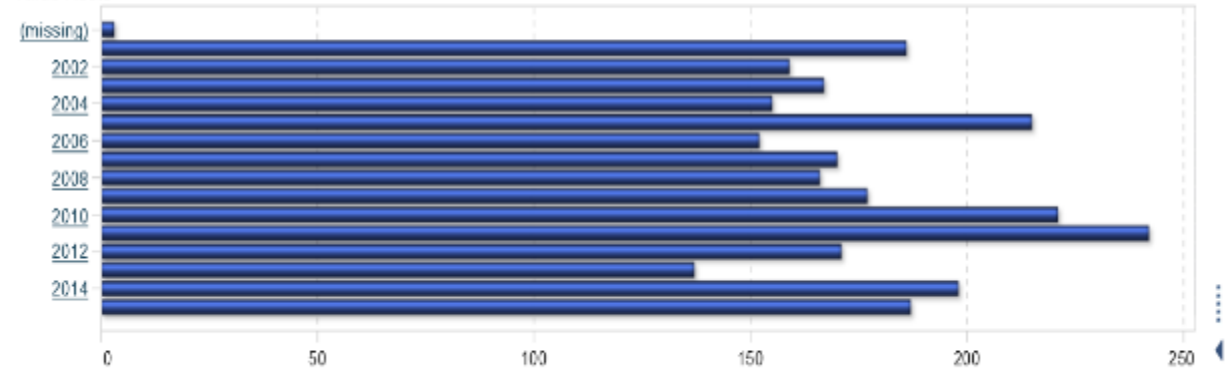
Overview DolphinSurveySightings DolphinSightings **TurtleNests** DugongSightings

[Click here for more information](#)

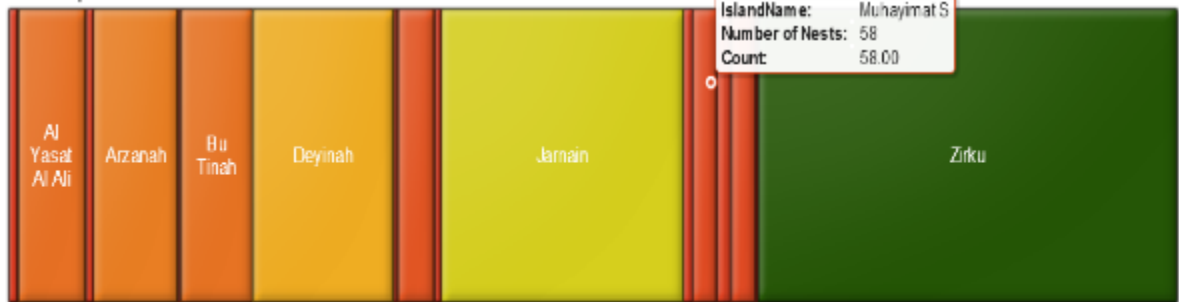
Turtle Nests Location



Turtle Nests



Nest Population in Islands



IslandName: Muhayimat S
 Number of Nests: 58
 Count: 58.00

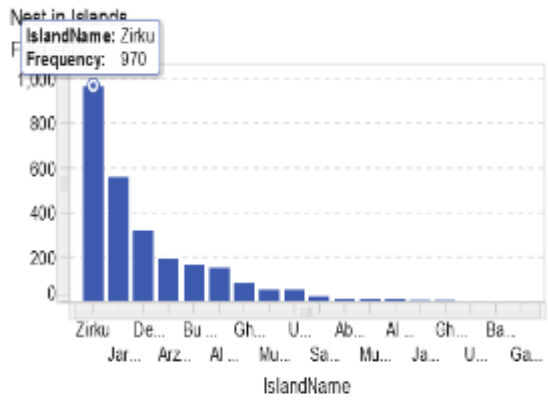
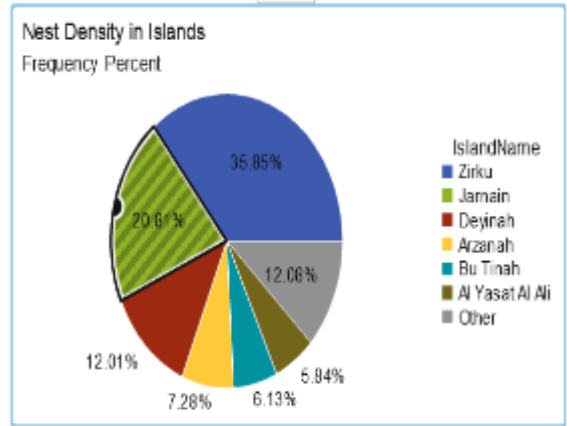
◀ Nest Locali... Nest Popul... Distance Fr... ▶

SAS REPORTS - TURTLE NESTING

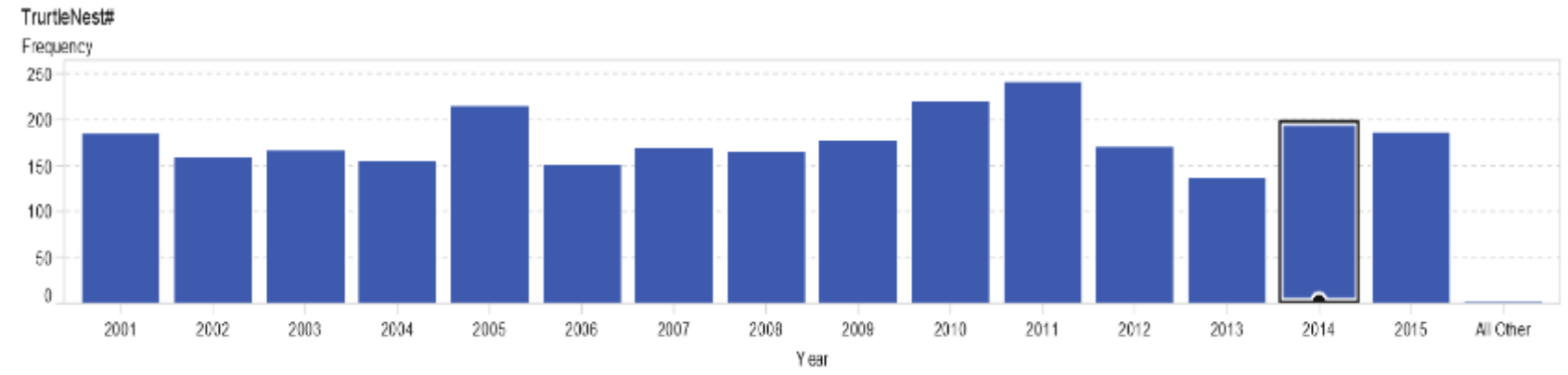
Home TurtleNests *
sas

File Help Print Refresh Logout
Sign Out

Section 1 Section 2 Section 3



| Frequency | Y... | IslandName |
|-----------|------|---------------|
| 73 | 2015 | Zriku |
| 5 | 2015 | Saadiyat |
| 24 | 2015 | Bu Tinah |
| 33 | 2015 | Deyinah |
| 13 | 2015 | Arzanah |
| 39 | 2015 | Jamain |
| 54 | 2014 | Jamain |
| 11 | 2014 | Abu Al Abyadh |
| 11 | 2014 | Arzanah |
| 7 | 2014 | Bu Tinah |

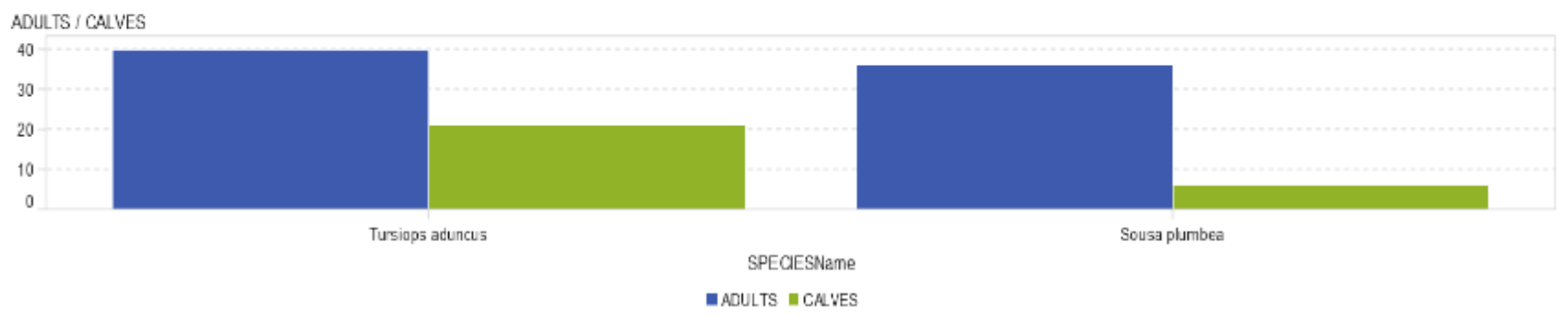
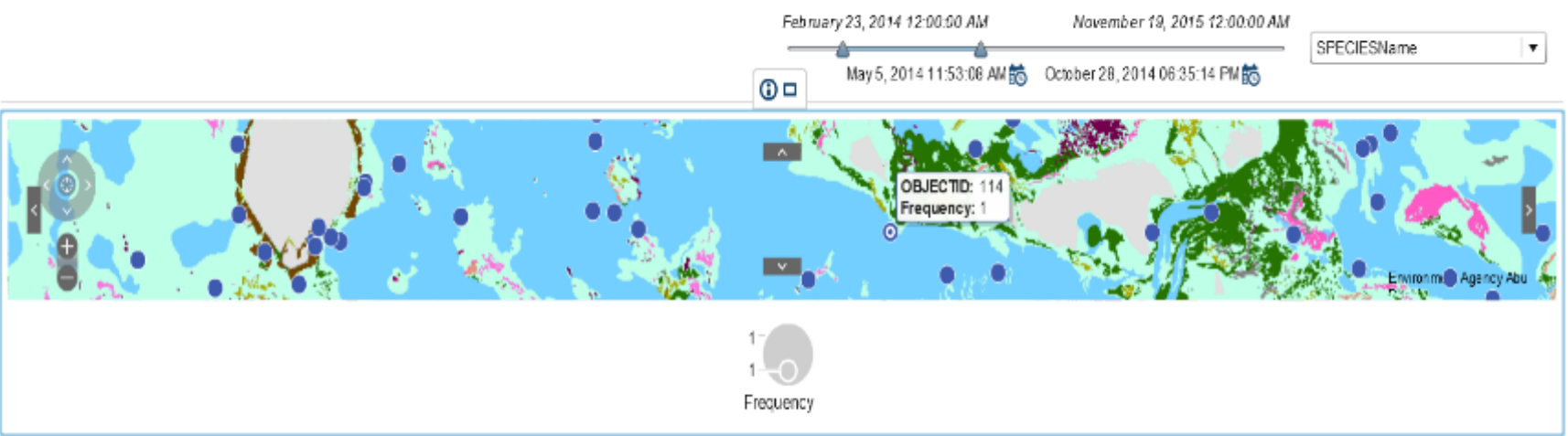


SAS REPORTS - DOLPHINS

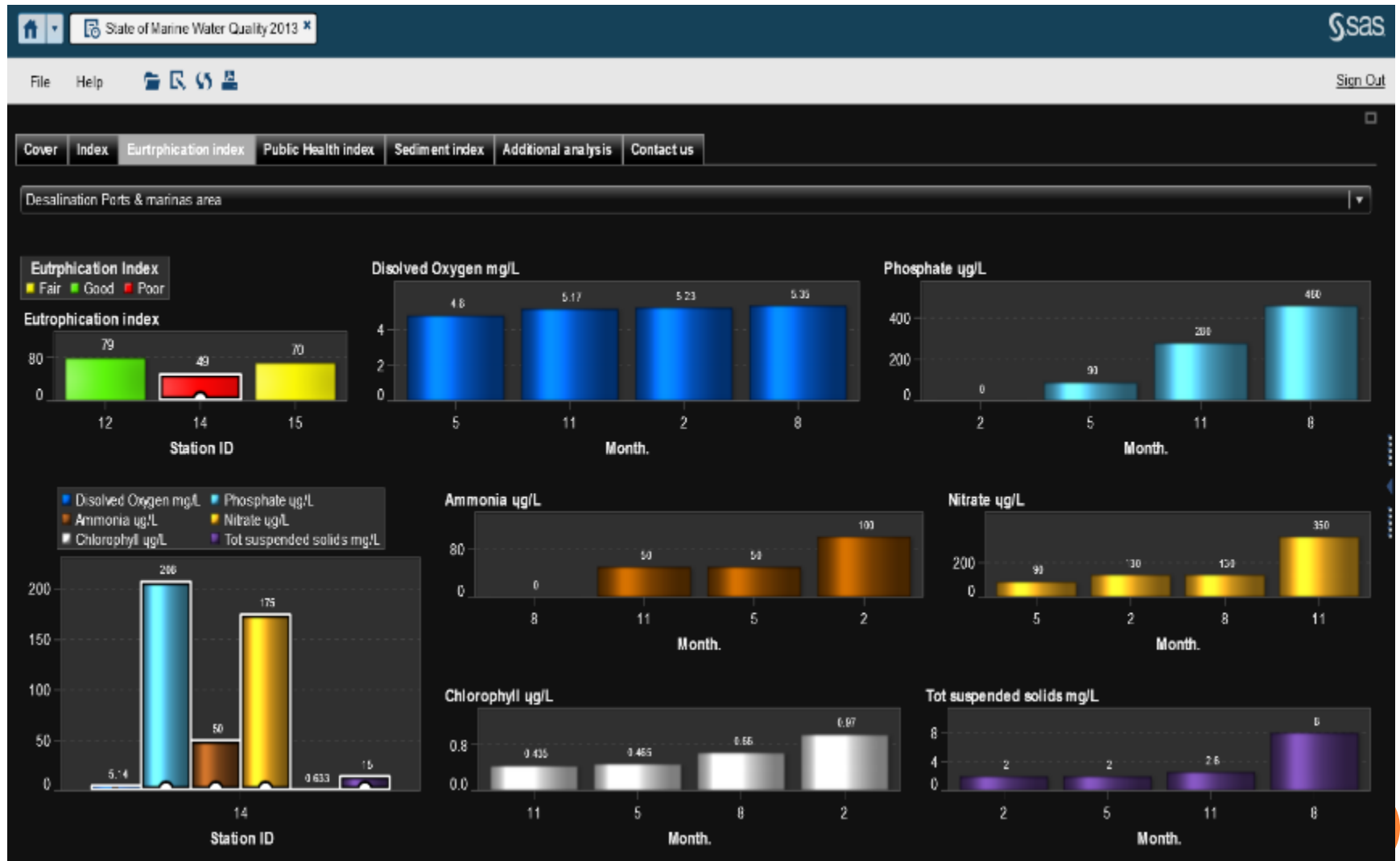
Species Distribution * sas

File Help Sign Out

Reptile Distribution | Dolphin Distribution | **Dolphins**



SAS REPORTS – MWQ INDEX



SAS REPORTS - REPTILES

Definition **Domnani** Distribution Location Rats

What are Reptiles?

Reptiles are vertebrates that have scales on at least some part of their body, leathery or hard-shelled eggs, and share a number of other features. Snakes, lizards, turtles, crocodilians, and birds are reptiles. Like all vertebrates, reptiles have bony skeletons that support their bodies.

Source: Encyclopedia of Life <http://eol.org/info/4441> 30 March 2016, at 09:07

Most Found Reptiles

[Arabian Horned Lizard \(Crotalus gerrardi\)](#) [Sahara's Fringe-toed Lizard \(Acanthodactylus\)](#) [Arabian Sand Gecko \(Stenodactylus arabicus\)](#)
[Desert Monitor Lizard \(Varanus griseus\)](#) [Red Sea Gecko \(Hemidactylus ruber\)](#) [Siwa Agama \(Pseudotrapelus siwa\)](#)

Arabian Ground Gecko (Bunopus tuberculat...)

[Gulf Sand Gecko \(Pezomachus arabicus\)](#) [Schmidt's Fringe-toed Lizard \(Acanthodactylus\)](#)
[Fat-tailed Gecko \(Phrynosoma macleayi\)](#) [Rock Sphenomorpho Gecko \(Phrynosoma macleayi\)](#)
[Crowned Lizard \(Crotaphytus\)](#) [Sahara's Fringe-toed Lizard \(Acanthodactylus\)](#) [Zanzibar's Horned Lizard \(Gerrhonotus zanzibaricus\)](#) [Yellow-spotted Agama \(Trapelus flaviventris\)](#)
[Yellow-bellied Horned Gecko \(Hemidactylus\)](#) [Eastern Sand Gecko \(Stenodactylus legrasi\)](#) [Short-nosed Sand Lizard \(Mesalina brevirostris\)](#)
[Hooded Mole-cricket \(Molpaua mollensis\)](#) [Spiny-tailed Lizard \(Uromastix aegyptia\)](#) [Dune Sand Gecko \(Stenodactylus dorae\)](#)
[Arabian Horned Lizard \(Crotalus gerrardi\)](#) [Sand Fringe-toed Sand Lizard \(Acanthodactylus\)](#) [Sahara's Fringe-toed Lizard \(Acanthodactylus\)](#) [Siwa Agama \(Pseudotrapelus siwa\)](#)
[Red-tailed Sand Lizard \(Mesalina adramitana\)](#) [Sand Skink \(Scincus mitranus\)](#) [Rough-haired Bowfoot Gecko \(Cyrtopoda\)](#) [Spotted Toad-headed Agama \(Phrynosoma\)](#)
[Sand Skink \(Scincus mitranus\)](#) [Arabian Toad-headed Agama \(Phrynosoma\)](#) [Arabian Toad-headed Agama \(Phrynosoma\)](#)
[Arabian Toad-headed Agama \(Phrynosoma\)](#) [Arabian Toad-headed Agama \(Phrynosoma\)](#) [Arabian Toad-headed Agama \(Phrynosoma\)](#)



THANK YOU ALL FOR LISTENING !!!

OUR SITE LINKS :

[https:// www.ead.ae](https://www.ead.ae)

<http://enviroportal.ead.ae>

[https:// www.uaesis.ae](https://www.uaesis.ae)

[https:// www.adairquality.ae](https://www.adairquality.ae)

[https:// www.scad.ae](https://www.scad.ae)