



ENVIRONMENT AGENCY – ABU DHABI

Current Status of Western Osprey (*Pandion haliaetus*) in Abu Dhabi, United Arab Emirates

28, September 2023

Almaty, Kazakhstan

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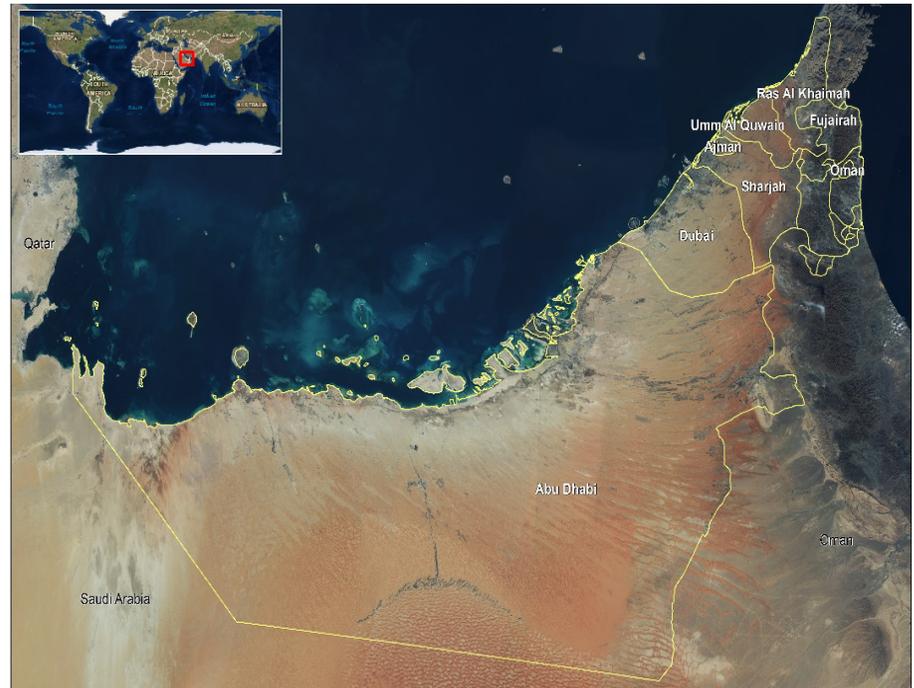
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Introduction

UAE Background

- United Arab Emirates (UAE) a federation of seven Emirates
- Abu Dhabi is the capital of the (UAE)
- Area 83,600 km² and over 200 Islands
- Abu Dhabi is the largest emirate covering 80% of all the land area
- 1,318 km of coastline along the Arabian gulf and Gulf of Oman



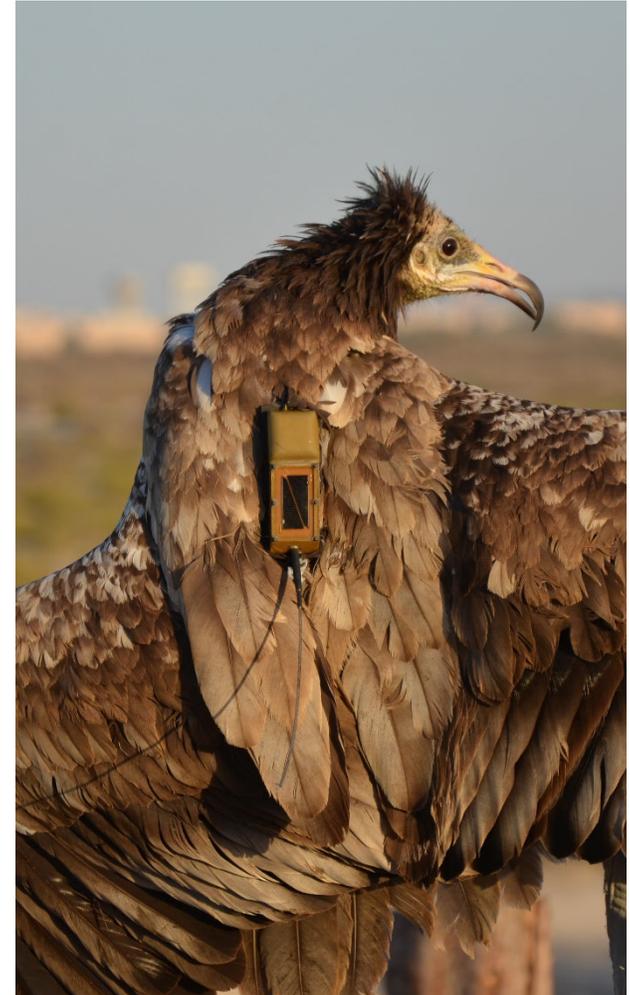
Raptors in UAE

- Out of total 463 species of birds in UAE, 40 are diurnal raptors
- The 40 raptors represent 95% of falconiformes recorded in Arabia
- 84% Raptors are migratory
- Eight species are globally threatened in the UAE



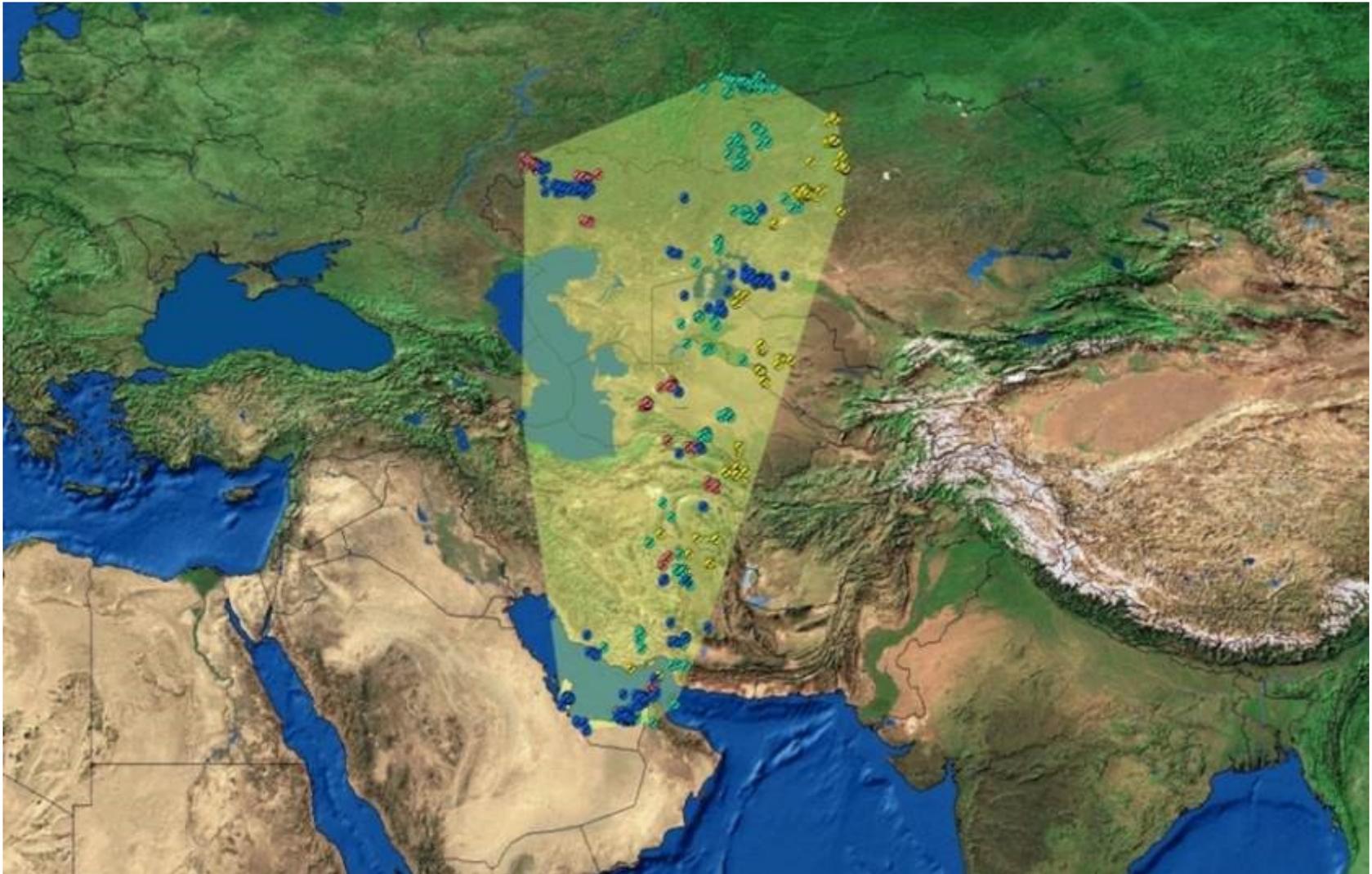
Globally Threatened Species in Abu Dhabi

- **Saker Falcon** (*Falco cherrug*)
- **Egyptian Vulture** (*Neophron percnopterus*)
- **Greater Spotted Eagle** (*Clanga clanga*)
- **Sooty Falcon** (*Falco concolor*)
- **Pallid Harrier** (*Circus macrourus*)
- **Eastern Imperial Eagle** (*Aquila heliaca*)
- **Steppe Eagle** (*Aquila nipalensis*)



Kazakhstan is Breeding Ground For Migratory Raptors

Iran – Turkmenistan – Uzbekistan - Aral sea in Kazakhstan (Four individuals of Marsh Harrier tracked between 2011 – 2014)



Western Osprey (*Pandion haliaetus*)

- Home range 10km for fish hunt
- Construct large stick nests
- Predominantly a Ground nesting raptor
- Clutch size consists of 2 to 3 eggs
- Listed (LC) globally
- Endangered (EN) locally



Osprey in Middle East

- Common breeding species in the Red sea, the Arabian Gulf and the Gulf of Oman
- A regional priority species for conservation
- Most breeding population restricted to isolated islands.
- 15% of breeding population of Arabia Peninsula in UAE



Osprey in UAE

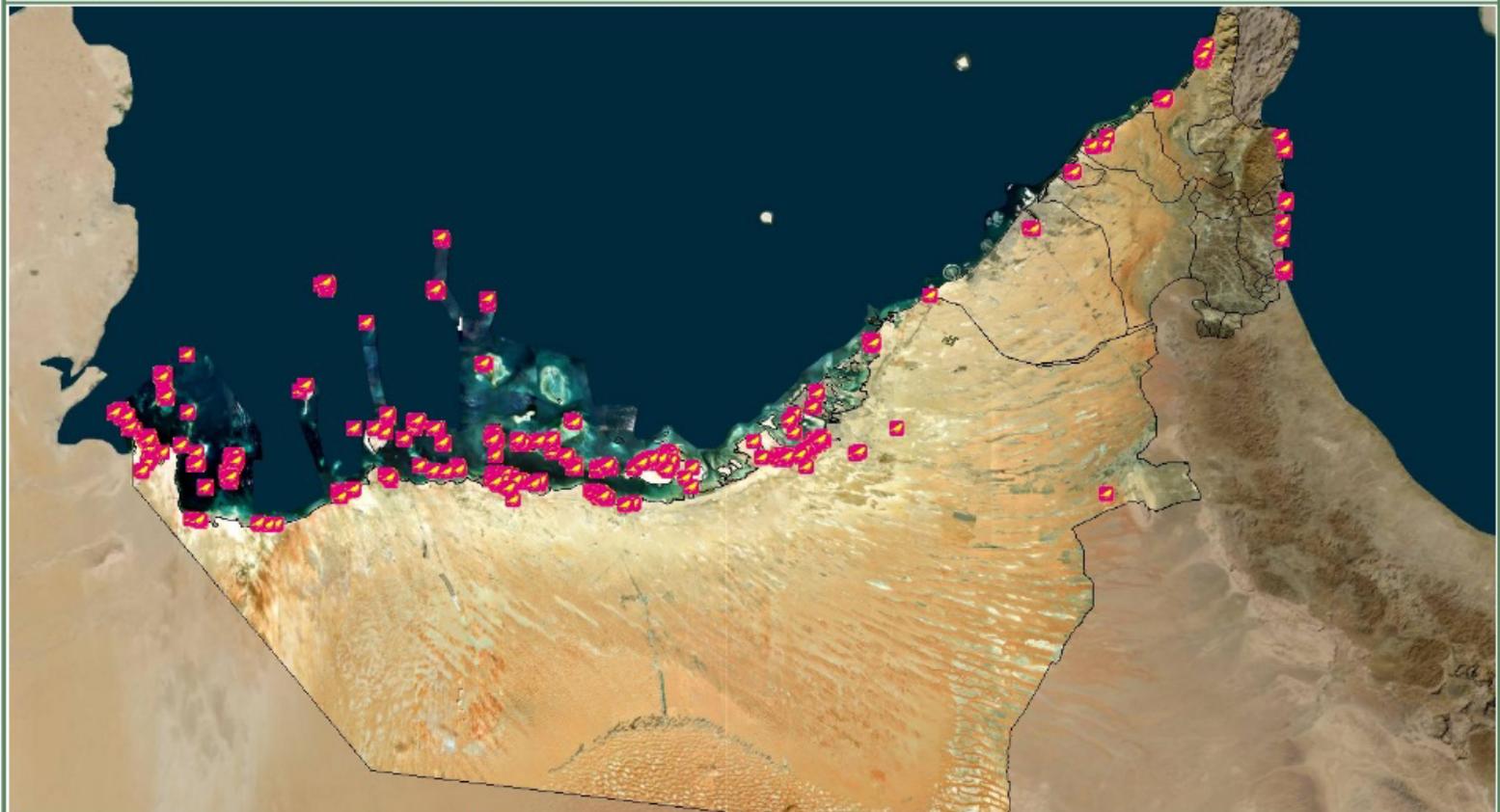
- Breeds in UAE (Dec-Mar)
- Listed Vulnerable (VU) at National level
- Endangered (EN) in Abu Dhabi Emirate
- Sedentary/Resident population
- Young birds disperse in neighboring countries
- Do not migrate over long distances.
- Build large nests of sticks on ground, poles elevated structures and powerlines.
- 90% of the UAE population comes from Abu Dhabi



Osprey Sightings Across The Country

Breeding and non-breeding population (EAD Bird Monitoring Surveys)

Osprey Sightings across the United Arab Emirate



| | | |
|---|---|--|
|   <p>هيئة البيئة - أبوظبي Environment Agency - ABU DHABI</p> | <p>Created by: EIM/EISOM Date: 13/10/2015 Coordinate system: Geographical System: UTM, Datum: WGS 1984, Units: Degree</p> | <p>LEGEND</p> <ul style="list-style-type: none"> OSPREY Sightings Emirates |
|---|---|--|

Methods

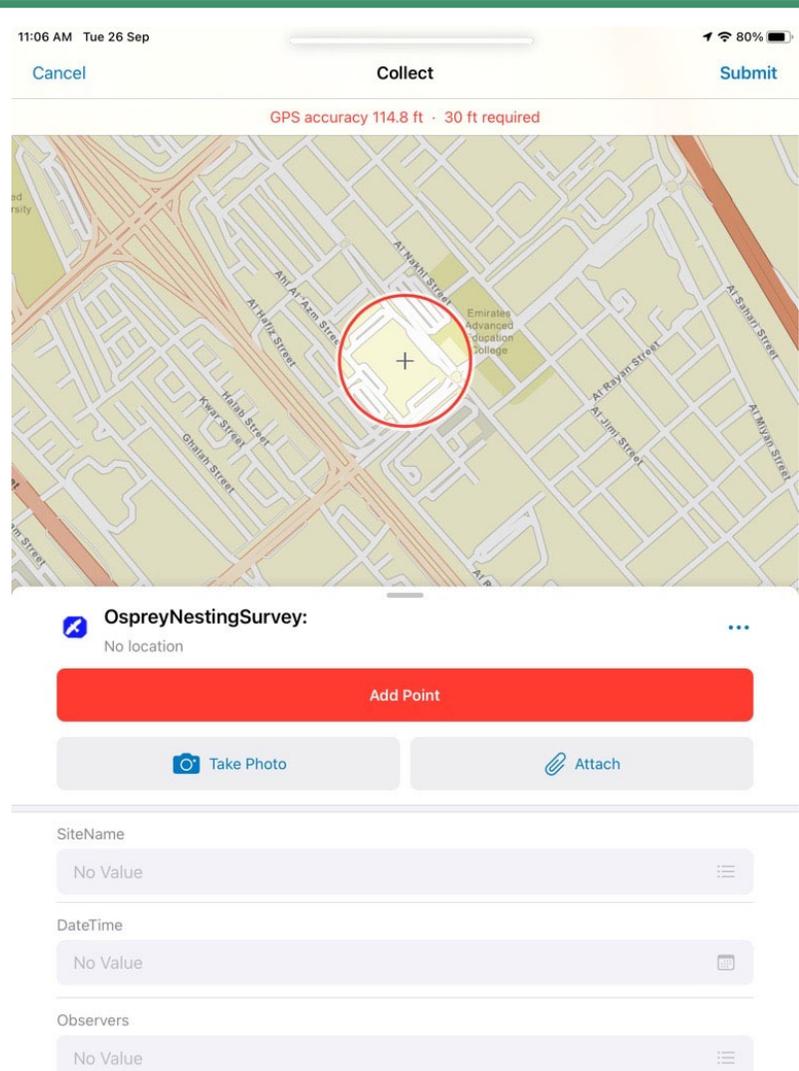
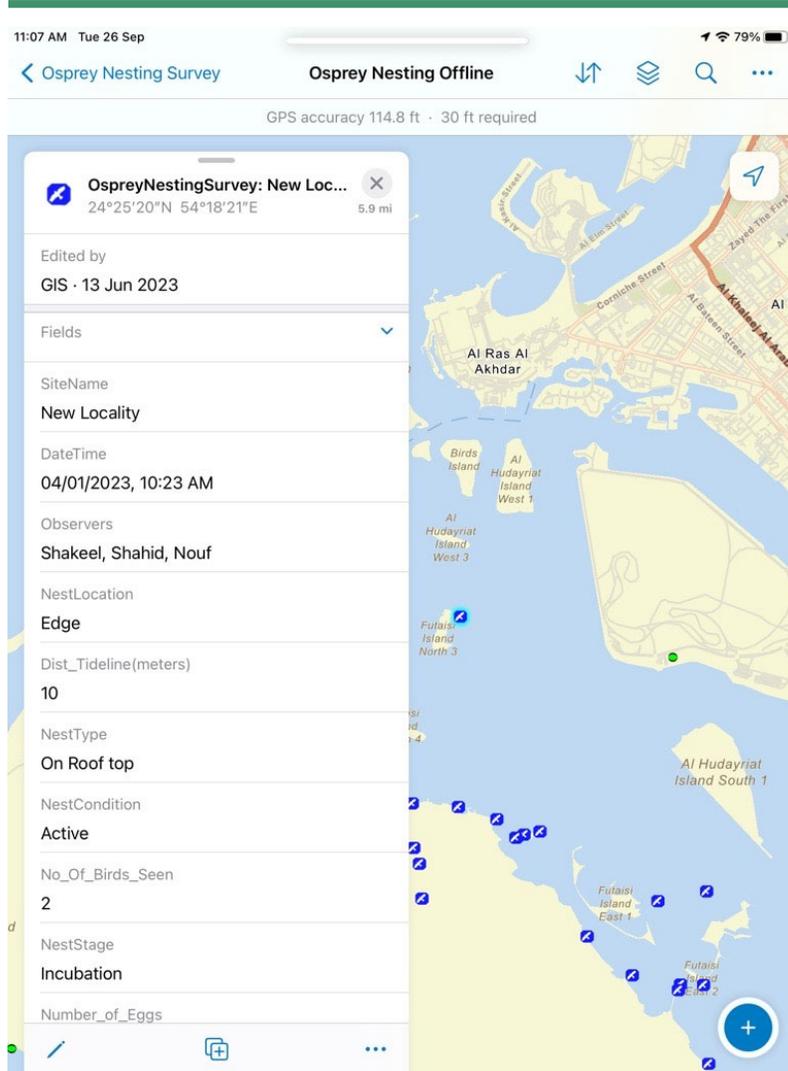
2022-2023 Breeding Season

- Islands were approached by boat and coastal sites by vehicles
- Data Collection App (Mobil Application)
- All nests of previous surveys were tracked
- Wherever possible (data)
 - Location (GPS)
 - Habitat
 - Status of the nest
 - Clutch Size
 - Nest Dimensions
 - Disturbances
- Bulk of osprey population breed in privately owned islands.



Methods

Data Collection - Offline Mobile Application



Methods

Typical Osprey Breeding Habitat



Methods

Osprey Nests on Abandon Structures



Methods

Osprey Nests Dimensions



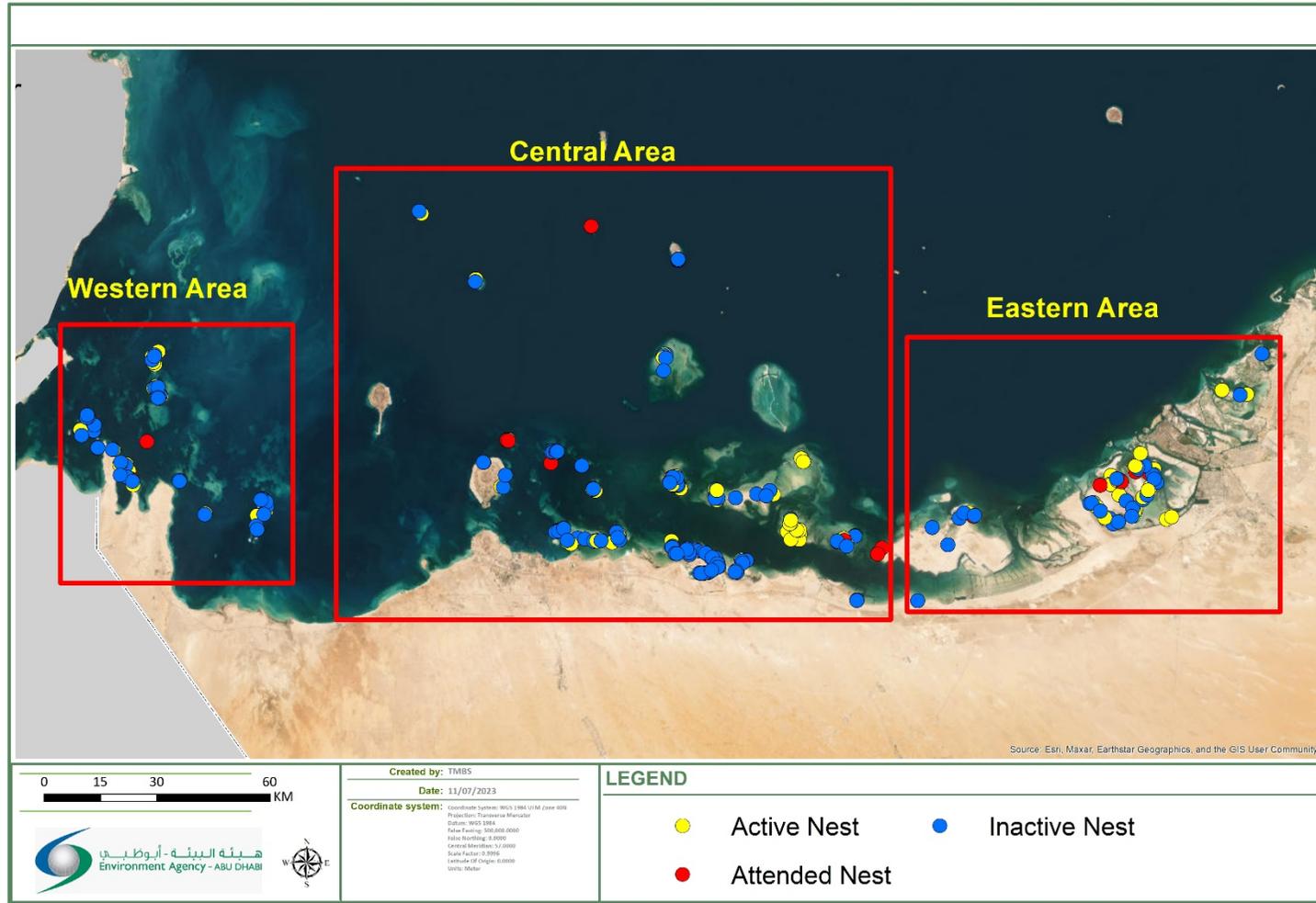
Methods

Natural Nest Height upto 170 cm



Methods

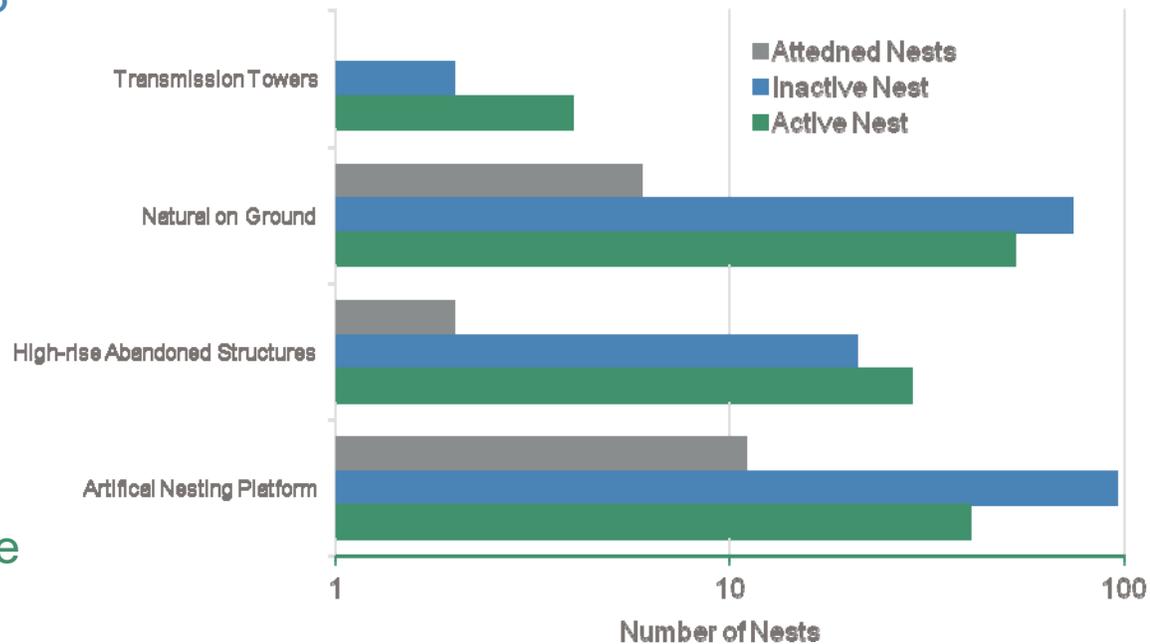
Surveys Were Undertaken From EAST to WEST in Abu Dhabi



Results

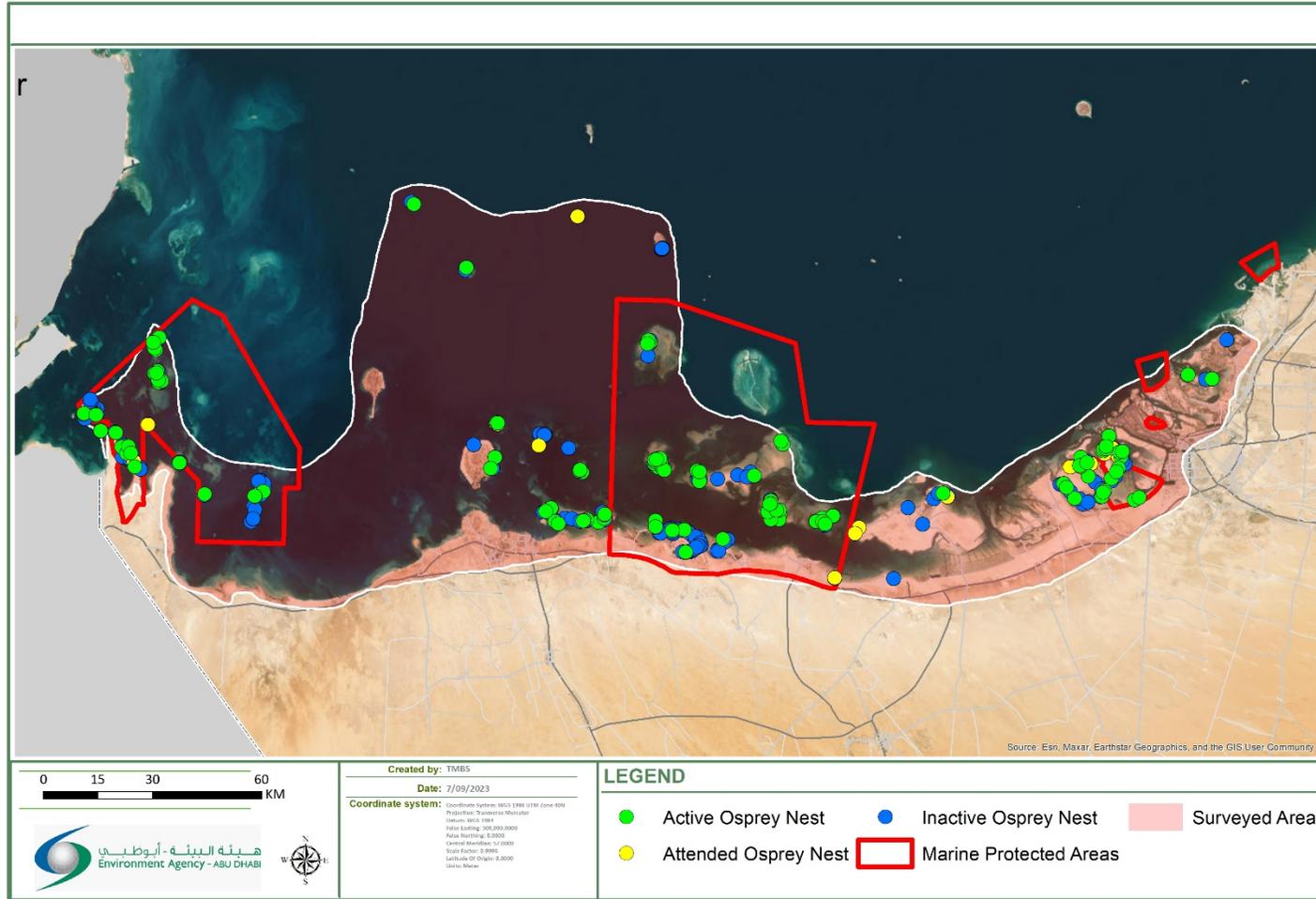
2022-2023

- Total 62 sites were surveyed in Abu Dhabi
- Total nests 339
127 active, 19 attended, 193 inactive
- Makes it the largest breeding population in Arabian Gulf
- 39% on ground, 44% on artificial nesting platforms, 15% abandoned structures
- 42% of all active nests were found on ground
- 56% of the total breeding population were found in Marine Protected Areas



Results

56% of the total Osprey nests were found within MPAs Boundary



Results

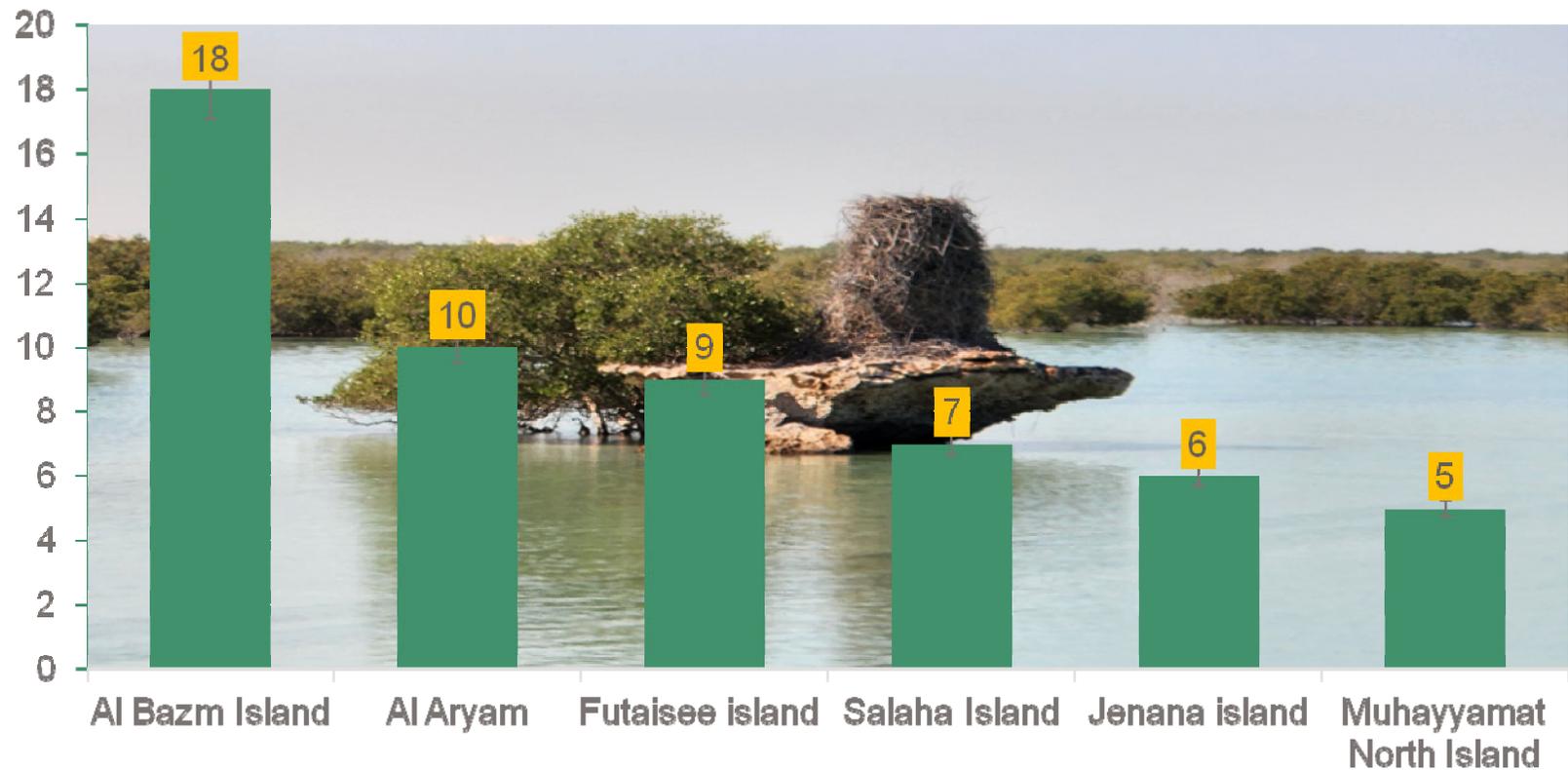
Clutch Size

- The surveys was undertaken at peak breeding season Jan-March 2023
- 71%of the eggs were found hatched during the survey
- In all Active nests 67% were Hatchings, 24 % Fledglings. Only 9% Nestlings
- **Clutch Size**
 - 65% 3 eggs 35% 2 eggs



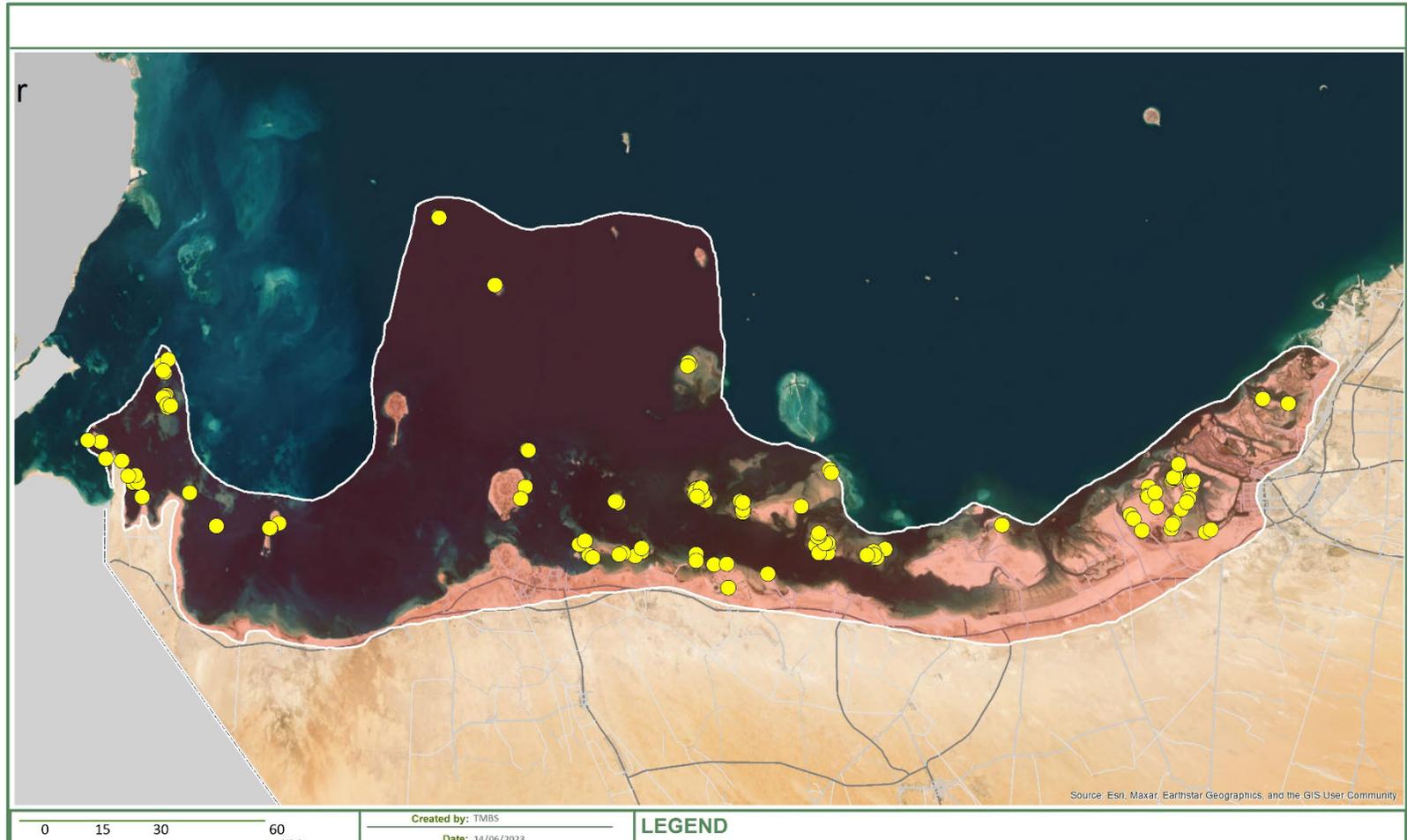
Results

Sites for Breeding Ospreys in Abu Dhabi (2022-2023)



RESULTS

Distribution Map of 127 Active Nests Recorded 2022-2023



Results

Abu Dhabi Hosts The Largest Breeding Population of Western Osprey in The Arabian Gulf Region

| Country | Status | Total Number of Nests | Active Nest/pairs | Reference/Confirmation 2023 |
|---------|------------------|---|-------------------|---|
| Iraq | Non-Breeding | N/A | N/A | Iraqi Ministry of Environment Iraq |
| Kuwait | Non-Breeding | N/A | N/A | Environment Public Authority (EPA) |
| KSA | Breeding | 2 | 2 | Fareed <i>et al.</i> , 2007 |
| Bahrain | Breeding | 28 | No Data | CMS |
| Qatar | Breeding | 10 | 4 | Ministry of Environment and Climate Qatar |
| UAE | Breeding | 339 | 127 | EAD |
| Iran | Breeding in Gulf | No Data (annotated information from 2016) | No Data | Department of Environment Iran |
| Oman | Breeding | A few birds near Musandum islands | No Data | Environmental Society Oman |

Results

Some Interesting Facts



Threats and Conservation

Installation of Specifically Designed Artificial Nest Platforms

- Human disturbance
- Habitat modification on coastal and island sites
- Anthropogenic debris found in nest structures
 - **Plastic Pieces, ropes, plastic sheets,**
 - **Dead birds, wings**
 - **Ground predators (Foxes, Cats)**
- Climate change?



OSPREY CONSERVATION ACTION PLAN

2011-2012

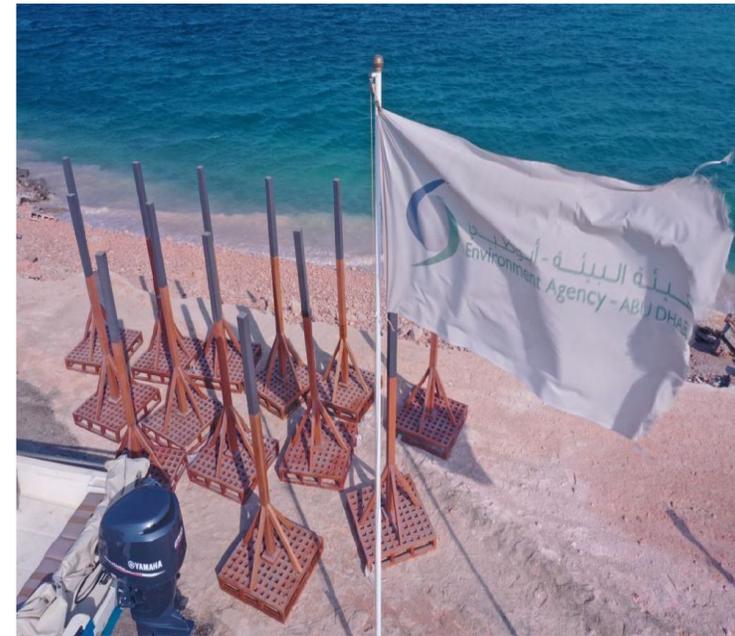
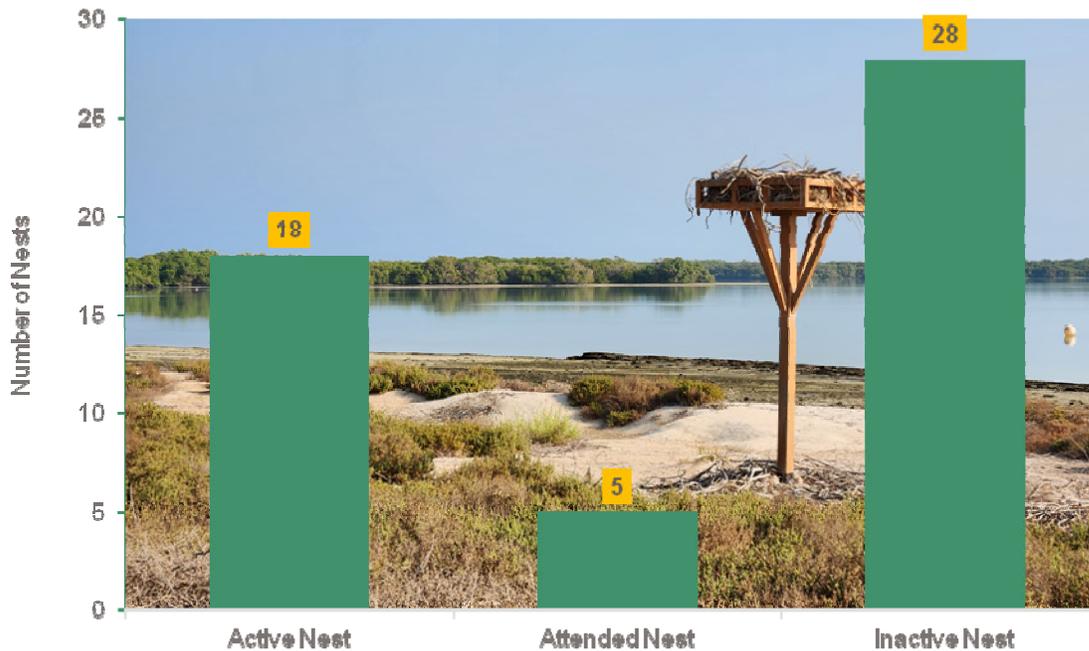
Action Plan for the Conservation of Osprey in the United Arab Emirates



CONSERVATION EFFORTS

Installation of Nesting Platforms

- 30 Nesting platforms were installed at 10 breeding sites 2012
- Total 131 wooden nesting platformed installed in 2020
- 18 active, 28 inactive and five attended nests 2023



Monitoring and Conservation Efforts

- Continue to periodically monitoring breeding population Abu Dhabi
- Maintenance and protection of existing nesting platforms.
- Installation of new breeding platforms
- Keep doing satellite telemetry studies
 - Migration
 - Identify habitat protection
 - Conservation planning
 - Local movements



THANK YOU

