

Monitoring Marine Bird Populations in Libyan Coastal: Insights for Assessing Good Environmental Status in MPAs and high-pressure areas

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INTRODUCTION

The overall objective of this study is to contribute towards the achievement of the Good Environmental Status (GES) in the Mediterranean Sea and coast through the consolidation of the Ecosystem Approach (EcAp) and the implementation of the national IMAP in Libya. The 11 target species listed in the here after table, are divided into six functional group, Coastal top predators, Intertidal benthic feeders Inshore benthic feeders and Inshore surface feeders was observed during breeding season, offshore (surface or pelagic) feeders, offshore surface-feeders had seen during wintering migration season .

Materials and Methods

The work was conducted in the framework of the EU-funded IMAP-MPA project implementation of national birds monitoring, where three Common Indicators are determined IMAP Common Indicators CI3: Species distributional range; and CI4:Population abundance of selected species and CI5: Population demographic characteristics.

The work was divided into two main phases:

The first phase (counting the total number of individuals) cooperation with the Libyan team of wintering water bird census, census of birds during the migration season in with counting the nests of Mediterranean Shag to match its breeding season with the timing of the winter survey.

The second phase (medium Colony census) survey of the targeted sites during the nesting season.

The team using point observations by spot scope and binocular, drone footage technique was used also to cover all area.

Study site

The study areas distributed along the Libyan coast, four sites were selected two of them are under human pressure Tripoli cost and Gulf of Sirte (Gara island) the other two are protected areas Farwah Lagoon in Westering part and Ain Al-Ghazaleh marine protected in eastern part of Libya

Results

Farwa MPA 25 Species were recorded, mostly wintering.

Tripoli coast 15 Species were found, mostly wintering.

Gulf of Sirte (Gara island) 68 nest and 177 shag , 24 nest and 450 Lesser Crested Tern were observed.

Ain Alghazala MPA 25 Species were found, mostly wintering and 66 nest and 170 shag.

Discussion and conclusion

The short study time was reason of missing information, especially during the nesting season.

Al-Qarah Island is still considered one of the most important Libyan islands. It is in good environmental condition and the number of nests is similar to that in previous years.

The Ain El Ghazala Reserve requires further seasonal assessment to determine the nesting potential of bird species.

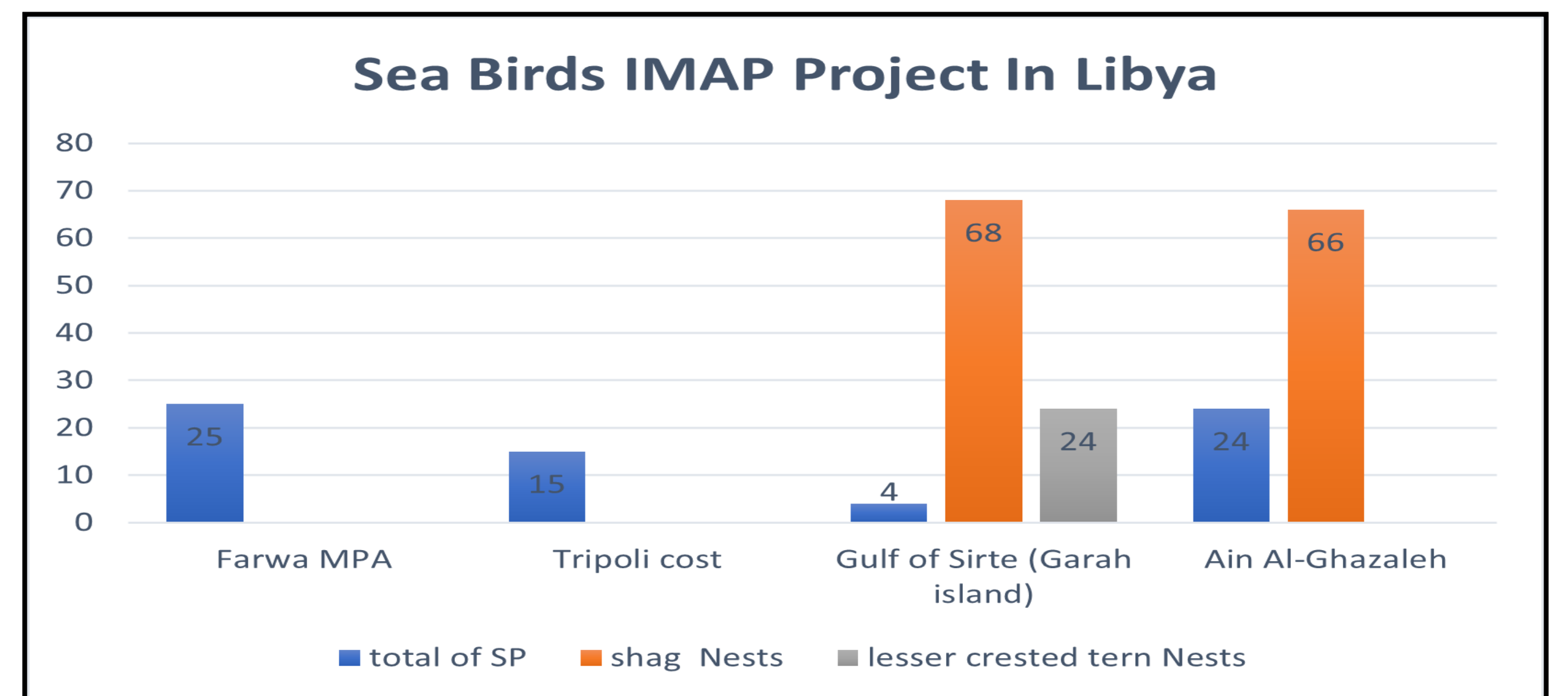
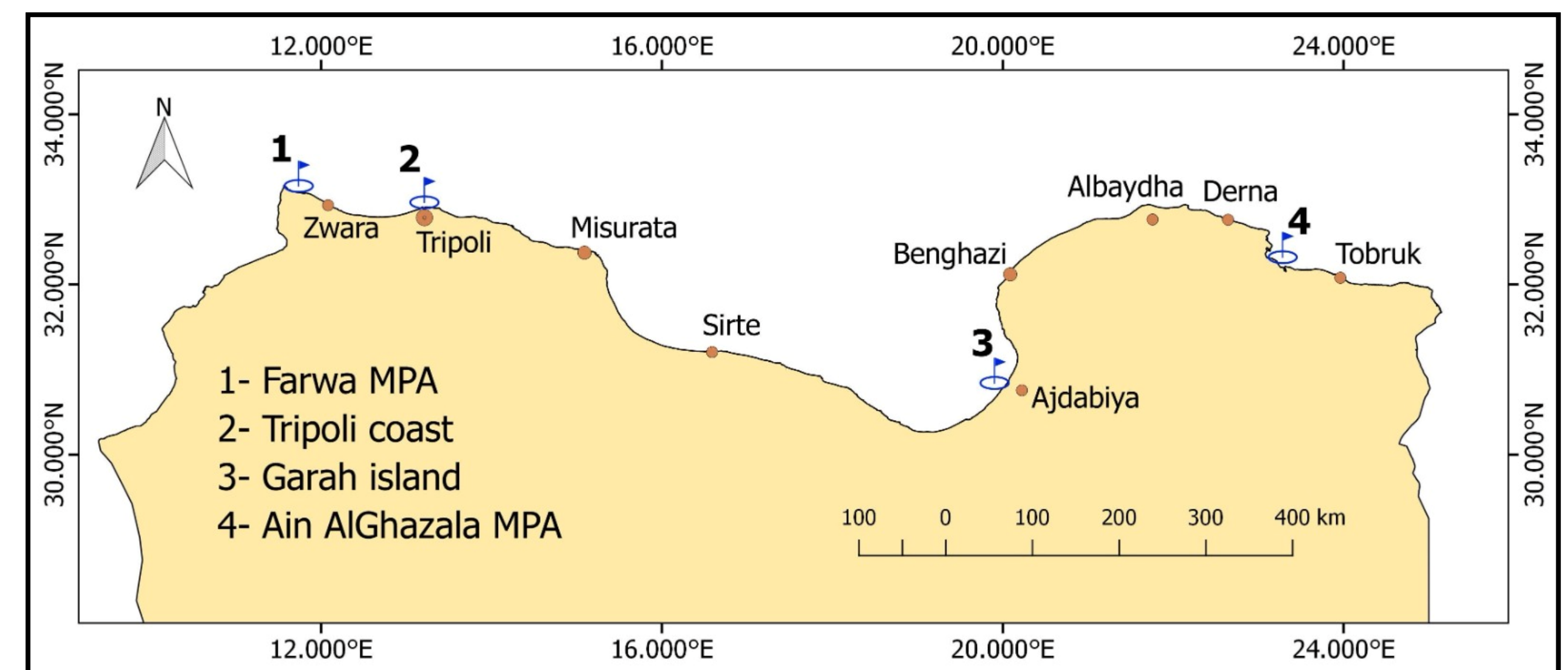
Predation emerged as the primary threat to avian populations within the study sites.

Team Member

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Functional group	Scientific name	Species observed In Libya
Coastal top predators	<i>Pandion haliaetus</i>	non-breeding visitor
Intertidal benthic feeders	<i>Charadrius alexandrinus</i>	breeding
Inshore benthic feeders	<i>Phalacrocorax aristotelis ssp. desmarestii</i>	breeding
Offshore surface-feeders	<i>Larus audouinii</i>	non-breeding visitor
Inshore surface feeders	<i>Larus genei</i>	non-breeding visitor
	<i>Thalasseus (= Sterna) bengalensis</i>	breeding
	<i>Thalasseus (= Sterna) sandvicensis</i>	non-breeding visitor
Offshore (surface or pelagic) feeders	<i>Hydrobates pelagicus</i>	non-breeding visitor
	<i>Calonectris diomedea</i>	non-breeding visitor
	<i>Puffinus yelkouan</i>	non-breeding visitor
	<i>Puffinus mauretanicus</i>	non-breeding visitor



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