INTERNATIONAL WATERBIRD CENSUS

LIBYA · 2019-2023

Libyan Society for Birds
الجمعية الليبية للطيور

Mediterranean Waterbirds
Oiseaux d'eau Méditerranée
الطيور المائية بمنطقة البحر المتوسط

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General report (2009-2018)

Libya report (2009-2018)

Bibliographic reference: K. Etayeb. 2025. *International waterbird census. Libya report (2019-2023).* Medwaterbirds Network, Tour du Valat, 12 p.

Cover image: Gulls in Zliten coast © LSB / **Photo p.2:** A camel and her calf in Al-Heesha wetland © LSB
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MOBILIZED **NATIONAL OBSERVERS**

Libya is a key area in the southern part of the Mediterranean region for migratory birds that avoid the Nile or West Africa flyways. Though fewer birds cross its vast desert, Libya's inland wetlands,valleys, and oases, and its 2,000 km of coastline with marshes, bays, and lagoons provide vital stopover sites for many species.

NUMBER OF VOLUNTEERS:

APPROXIMATELY **47** OBSERVERS INVOLVED IN COUNTS

3 GOs and 5 NGOs involved

NUMBER OF WETLANDS COUNTED:

17 WETLANDS COUNTED REGULARLY (at least 7 times) (2009-2023)

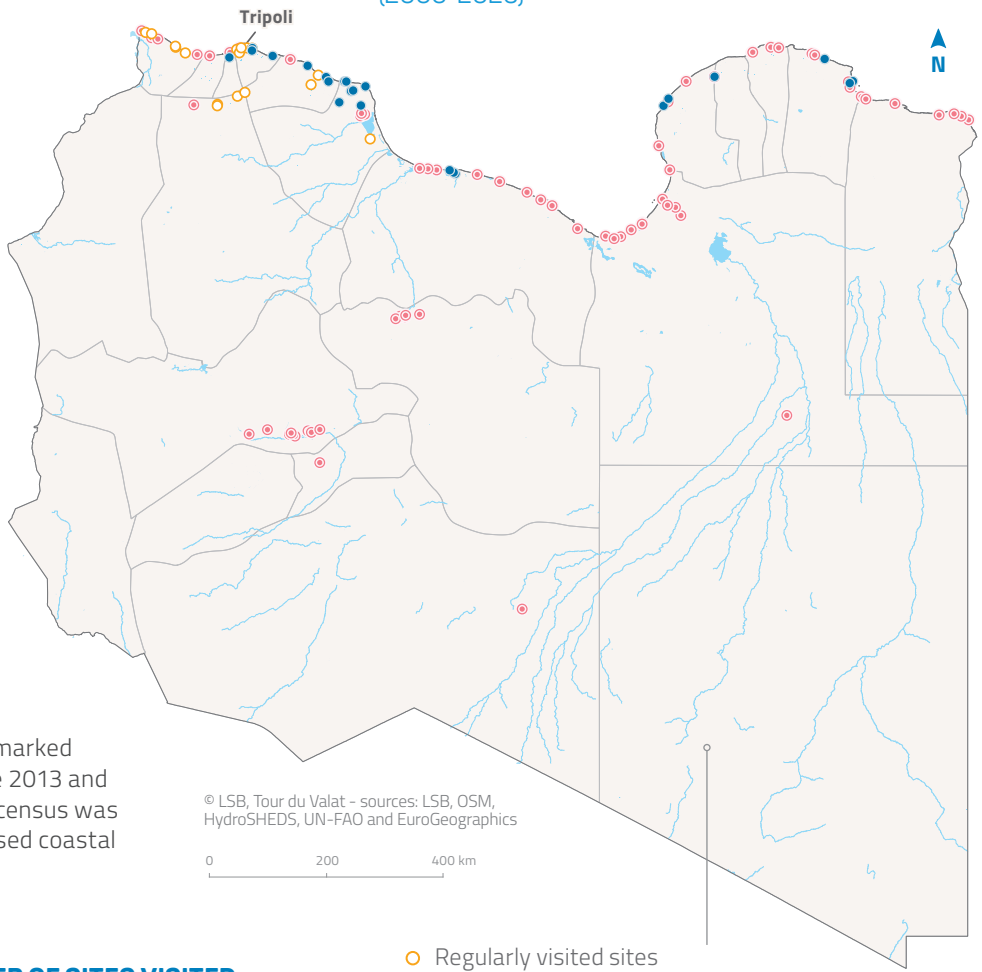
23 NEWLY WETLANDS VISITED (2019-2023)

TOTAL NUMBER OF SPECIES OBSERVED:

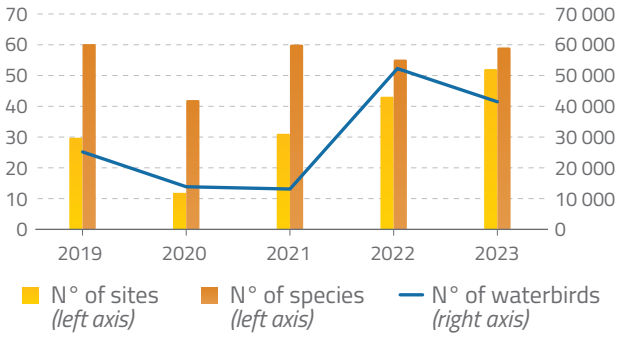
76 SPECIES OBSERVED IN LIBYA (2019-2023)

WETLANDS COUNTED in Libya (2009-2023)

Site coverage dropped sharply in 2013 at the beginning of conflicts in Libya and remained low until 2021. Yellow sites were regularly surveyed and safe for the IWC team; sites marked with red were covered before 2013 and after 2021. In 2022–2023, a census was conducted at formerly censused coastal sites and some new ones.



EVOLUTION IN THE NUMBER OF SITES VISITED, counted species and waterbirds (2019-2023)



Between 2019 and 2023, Libya's winter waterbird census was hindered by conflict, with only 12 sites surveyed in 2020, affecting species and bird counts. In 2022–2023, all coastal areas were surveyed again in coordination with Al-Hayat Organization in Derna, helping restore previous site coverage, species diversity, and bird abundance.

MAIN TRENDS (2019-2023) IN WATERBIRD POPULATIONS

DECLINING SPECIES, DURING THE ASSESSMENT PERIOD (2019-2023)

SPECIES		VALUES			
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**
Northern Gannet	*Morus bassanus*	40	11	-1.93	0.64
Marsh Sandpiper	*Tringa stagnatilis*	4	4	-0.75	0.29
Great Cormorant	*Phalacrocorax carbo*	826	39	-0.47	0.23

* **Magn.:** Magnitude / ** **±SE:** Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

Some bird species have shown declines or fluctuations, but it is difficult to determine whether this trend was influenced by the limited site coverage, especially between 2019 and 2021. In contrast, a large number of sites were surveyed in 2022 and 2023. The decline may be linked to climate change, such as drought and low rainfall, or to disturbances from hunting. While other species also declined, the decrease was less significant than for those listed in the table.

HIGHLIGHTS

To address the decline in bird species, a comprehensive study is needed to identify the root causes. Regular monitoring and follow-up should be conducted at sites with decreasing bird numbers to determine whether the drivers are natural or human induced. Updating and enforcing hunting laws is also crucial, particularly banning the hunting of endangered species particularly in protected areas. Cooperation with hunters should be encouraged through the promotion of hunting clubs and awareness campaigns to educate them about the impacts of declining bird populations.

FOCUS

The decline in bird species and numbers results from several interconnected factors. Natural causes like climate change and recurring droughts due to low rainfall play a significant role. Human impacts, especially habitat destruction and overhunting, are major contributors. Hunting in Libya is particularly important; a previous study estimated that approximately half a million birds are killed annually (Brochet *et al.*, 2016). The country also faces droughts from consecutive seasons of low rainfall, which directly impact waterbirds by reducing wetland area and water quality.

Great Cormorant (*Phalacrocarax carbo*) in Farwa lagoon © LSB

Flock of Cormorants and gulls in Alqsebaia © LSB

INCREASING SPECIES,
DURING THE ASSESSMENT PERIOD (2019-2023)

SPECIES		VALUES			
English name	Scientific name	Average nb. of birds	Nb. sites	Magn.*	±ES**
Pallas's Gull	*Larus ichthyaetus*	11	3	1.34	0.50
Little Stint	*Calidris minuta*	210	18	0.71	0.28

* **Magn.:** Magnitude / ** **±SE:** Standard error. The trends shown in the tables are at least significant at an alpha risk of 5%.

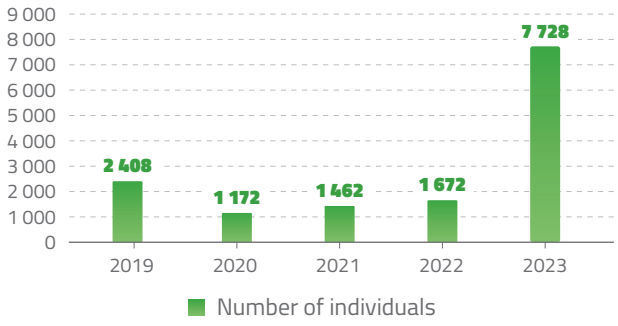
Despite the overall decline in bird populations caused by climate change, overhunting, habitat destruction, and many other factors, some species show annual increases in numbers. For example, the two species highlighted in Table 2 experienced significant growth. The Pallas's Gull was recorded in the Sabkhas in the country's interior, where it found safety from hunting pressure. The Little Stint, commonly found in various aquatic environments, especially very shallow marshes, may avoid hunting because, due to its small size, it is neither a preferred nor targeted species by hunters.

SLENDER-BILLED GULL
(*Chroicocephalus genei*)

During the 2019 to 2023 winter waterbird surveys, the number of **Slender-billed Gulls** (*Larus genei*) remained relatively stable, ranging from 1,172 to 2,408 individuals, until a notable increase to 7,728 was recorded in 2023. This species was observed in 39 wetlands along the Libyan coast, including bays, coastal lagoons, salt marshes, and some water dams. While the IUCN Red List classifies the Slender-billed Gull as Least Concern, it is listed as threatened in the Mediterranean region under Annex II of the Regional Activity Centre for Specially Protected Areas (RAC/SPA).

Slender-billed gull © LSB

ABUNDANCE OF THE SLENDER-BILLED GULL
in Libya (IWC 2019-2023)



HIGHLIGHTS

Based on IWC results indicating the **Slender-billed Gull's** presence across diverse habitats and its classification as a threatened species in the Mediterranean, these important sites urgently require formal protection and conservation measures. Ongoing bird monitoring is essential to provide accurate data on population trends and to identify key environmental factors affecting the species, such as habitat degradation, climate change, human disturbance, and hunting pressure. Conservation actions, including habitat restoration, law enforcement, and community engagement, should be prioritized to safeguard this species and support regional biodiversity and ecosystem health.

One of the main canals in Ain Tawergha © LSB

DISTRIBUTION OF ABUNDANCE ACROSS SITES (2019-2023)

Libya has designated two wetlands as Ramsar Sites of International Importance: Ain Azzargha and Ain Alshaghigha. Both are located along the Mediterranean coast in the eastern region, within or near El Kouf National Park in Jabal al Akhdar. These wetlands were recognized under the Ramsar Convention on 5 April 2000 for their ecological significance, particularly for migratory waterbirds. Recent assessments reveal a significant decline in bird populations, highlighting the urgent need to preserve and ensure the quality of these habitats to maintain the values that justify their Ramsar status. The 2022 International Waterbird Census (IWC) reported notably low bird counts.

SEVERAL FACTORS CONTRIBUTE TO THIS DECLINE:

(i) **Habitat degradation** from unsustainable hunting and vegetation loss, especially during the summer;

(ii) **Environmental changes** including persistent drought and increased salinity, which reduce suitable habitats;

(iii) **Human disturbance** such as recreational activities, land clearing, and overgrazing, causing habitat fragmentation.

Libya has other wetlands meeting Ramsar criteria that merit protection. **Farwa** Lagoon and Island, in western Libya near Tunisia, is a rare Mediterranean tidal wetland and vital stopover for migratory birds between Africa and Europe, supporting diverse species and loggerhead sea turtles. Designated a Marine Protected Area in 2009, efforts continue to develop participatory management with local communities.

Sabkhat Julyanah near central Benghazi, a former saltpan transformed into a permanent wetland. It hosts a rich diversity of waterbirds (over 3,000 birds and 40 species), including a significant colony of **Lesser Crested Terns** (*Thalasseus bengalensis*). Despite such biodiversity value, many coastal protected areas declared by the Libyan Ministry of Environment in 2021 have not yet been effectively managed due to lack of infrastructure and enforcement.

TO PROTECT LIBYA'S WETLANDS AND ALIGN WITH GLOBAL CONSERVATION GOALS, THE FOLLOWING ACTIONS ARE ESSENTIAL:

1. **Formal Ramsar Designation**
2. **Integrated Management Plans:** comprehensive, community-inclusive management strategies that address habitat restoration, pollution control, and sustainable land use.
3. **Enhanced Monitoring** programs to track changes, evaluate conservation success, and guide adaptive management.
4. **Public Awareness and Education** targeting local communities, stakeholders, and visitors to foster stewardship and reduce harmful activities.

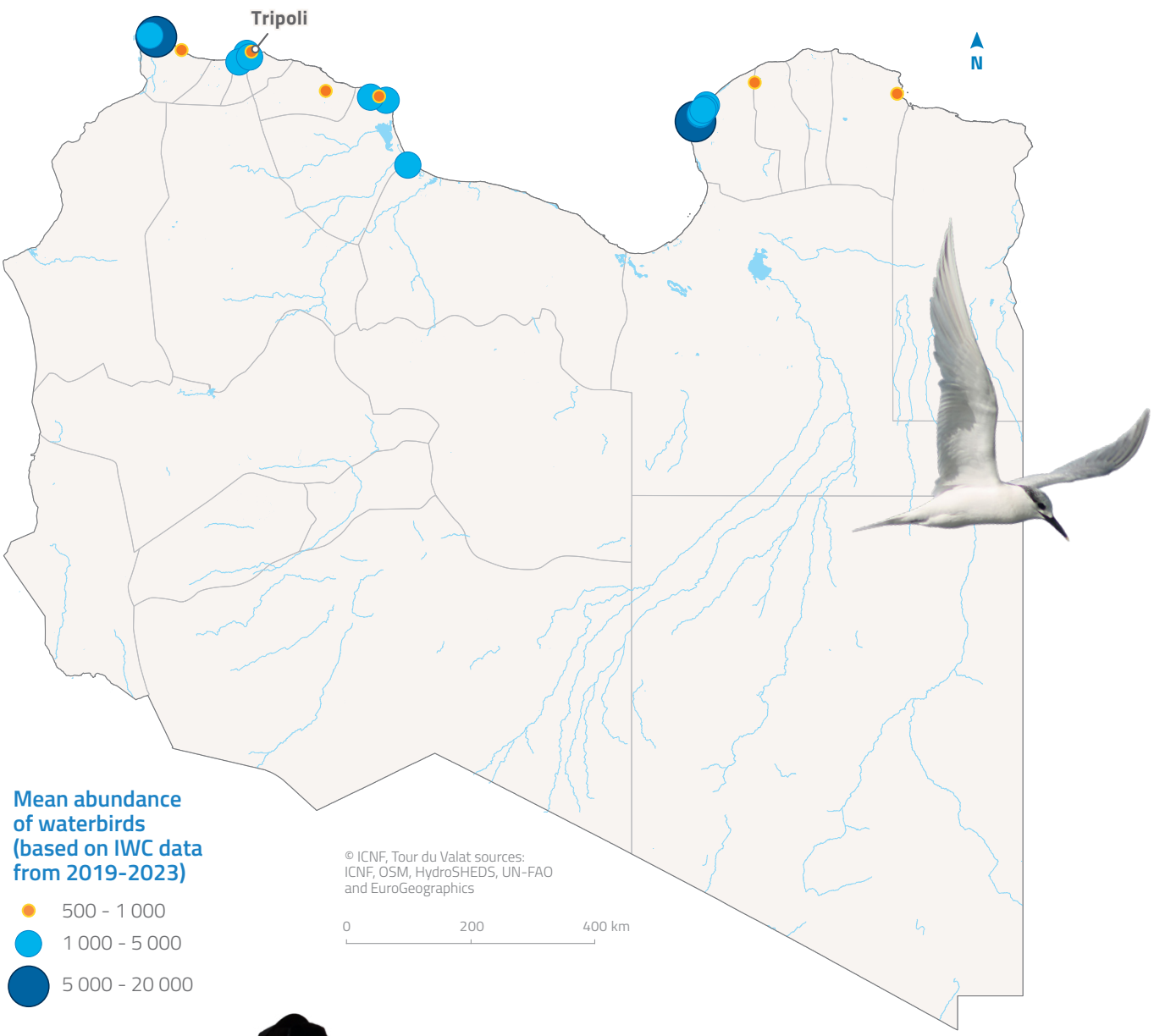
These measures should support the protection of Libya's wetlands, conserve biodiversity, and help to meet international commitments.

Wadi Alhamsa, east of Derna city

THIS MAP HIGHLIGHTS BIRD POPULATION DENSITIES

IN RELATION TO WATER BODIES AND WETLAND HABITATS, BETWEEN 2019 AND 2023.

These habitats are essential for both migratory and resident waterbird species. During this period, **83 sites** were surveyed. The Farwa region and Sabkhat Qanfudhah recorded the highest bird numbers, while eight additional sites hosted populations between 1,000 and 5,000 individuals. Other sites showed lower diversity and abundances, typically numbering in the hundreds or less. The greatest concentrations were found in coastal wetlands, lagoons, and sabkhas, indicating these habitats provide crucial resources such as food, shelter, and breeding grounds. This map identifies key wetland sites that may be qualified as Important Bird and Biodiversity Areas (IBAs), providing scientific foundations to prioritize wetland conservation and habitat restoration initiatives.



Libyan IWC team in Abumariem coast, west to Sirt city.
© LSB

FOCUS ON A COUNTRY'S FLAGSHIP SPECIES: KENTISH PLOVER (*ANARHYNCHUS ALEXANDRINUS*)

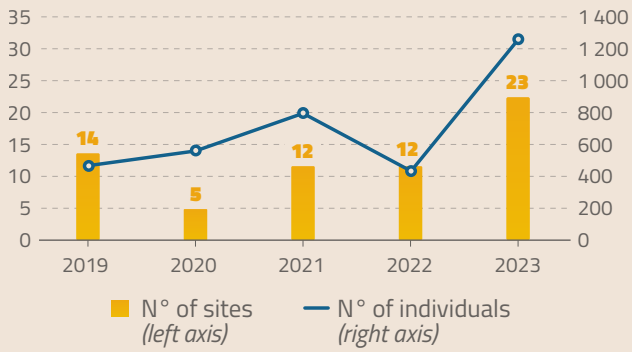
The Kentish Plover (*Anarhynchus alexandrinus*) is a resident breeder in several Libyan wetlands, with additional large numbers observed during migration periods. Although listed as a threatened species in the Mediterranean region under Annex II of the RAC/SPA, its population in Libya appears to be slightly increasing. Breeding has been recorded in the western, central, and eastern parts of the country. While there is no clear evidence that the Kentish Plover is directly targeted by hunters, it is occasionally caught incidentally alongside larger wader species.

Waders in Ayn Zayanah east to Benghazi city © LSB

The **Kentish Plover** (*Charadrius alexandrinus*) is a small shorebird commonly found in Libya's coastal wetlands. It is notable for its presence during both the migratory and breeding seasons, making use of a range of wetland habitats across the country. Although overall counts of wintering waterbirds in Libya were impacted by a sharp reduction in the number of sites surveyed, especially in 2020, the Kentish Plover showed fluctuating numbers between 2019 and 2022, with a marked increase recorded in 2023. It is among the most abundant waterbird species in Libya, and its absence from certain sites is often noticeable and raises concern. Between 2019 and 2023, it was recorded at five to twenty-three sites annually.

While the species is listed as of Least Concern on the IUCN Red List due to a stable global population, it is considered threatened in the Mediterranean region according to Annex II of the RAC/SPA. In Libya, specific population data remain limited, though the species is known to breed in multiple regions of the country. It also migrates seasonally, with some populations wintering further south in Africa.

EVOLUTION OF KENTISH PLOVER
in Libya (2019-2023)



Sunset in the salt marsh of Qasr Ahmed
© LSB

HISTORY OF ORNITHOLOGY IN LIBYA

Libya, characterized by its arid climate, is often perceived as having relatively few wetlands and limited waterbird diversity. Ornithologically, it remains the least studied country in the Mediterranean region (Smart *et al.*, 2006). Early descriptions of Libyan birdlife were based on a small number of expeditions that provided limited information from the country's eastern, western, and southern regions. In general, few recent publications focus on Libyan ornithology, and studies specifically addressing waterbirds are particularly scarce.

The first known list of Libyan birds was compiled in 1844 by Frazer, an Italian scientist. Later, in 1867, Chambers recorded bird observations during his stay in Tripoli, publishing his findings the same year. In 1882, Hyman reported on birds observed in the Green Mountain region. A more comprehensive work came much later when Tucci published *Introduzione alla ornitologia della Libia* in 1969, which was translated into Arabic in 1981 by Al-Awami.

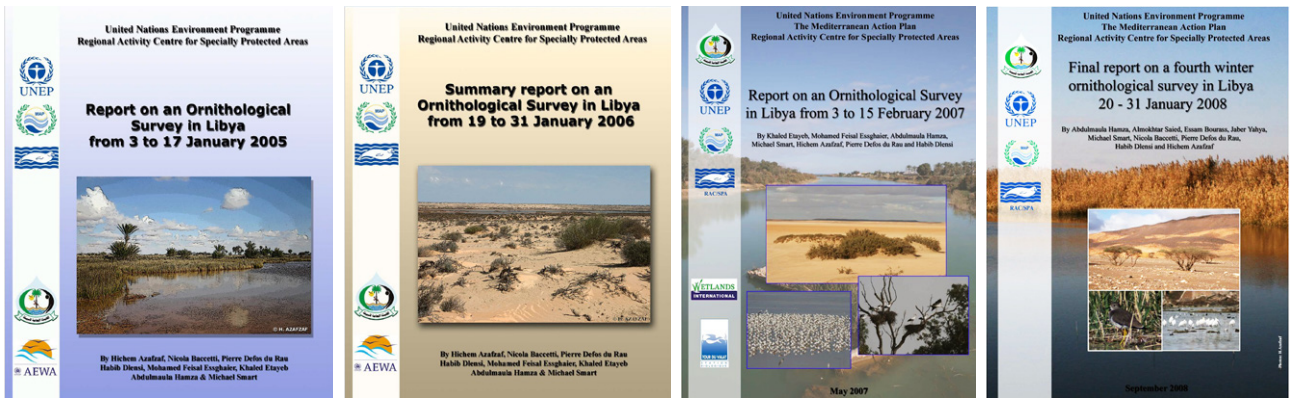
Following World War II, ornithological studies in Libya increased, particularly from French and British researchers, who documented several new bird species. In 1976, Bundy published a checklist of Libyan birds, listing 317 species. Later, Meininger *et al.* (1994a, b) contributed two significant publications: one on the rediscovery of Lesser Crested Tern nesting and another on an ornithological survey of Libya's coast.

Etayeb (2002) completed a master's thesis on marine migratory and resident birds in Ras Attalgha and the western part of Farwa Island. In 2001, a preliminary coastal wetland survey was conducted under a Memorandum of Understanding (MoU) between Libya's Environment General Authority (EGA) and the French "Office National de la Chasse et de la Faune Sauvage" (ONCFS, now part of the French Office for Biodiversity – OFB), later documented by Defos du Rau *et al.* (2003). This effort led to the development of Libya's National Action Plan for Birds (UNEP-MAP-RAC/SPA, 2003).

Gaskell (2005) added further information on the distribution and status of several Libyan bird species. The International Waterbird Census (IWC) began in Libya in 2005 under a MoU between EGA and the RAC/SPA. Reports from 2005–2006 were summarized in a publication by Smart *et al.* (2006). Annual reports continued until 2010, culminating in the *Atlas of Wintering Waterbirds in Libya* (EGA & RAC/SPA, 2012), which covered six years of data. Follow-up results from 2011 and 2012 were later published (Bourass *et al.*, 2013; Etayeb *et al.*, 2015).

With the formation of the Mediterranean Waterbirds Network and collaboration between North African countries and Tour du Valat (France), the IWC in Libya continued with renewed logistical support, leading to the publication of several regional studies. In 2016, Isenmann *et al.* published *Birds of Libya*, a key reference for Libyan ornithology.

In recent years, more than seven master's theses on Libyan birds have been completed, some of which have been published. Most recently, the results of the 2022 winter census were published (Etayeb *et al.*, 2023).



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Libyan IWC team
in Tawergha, 2019
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Wadi Ghan dam, south to Tripoli © LSB

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