



UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

POLICY BRIEF

UAE National Red List of Birds

2021

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The United Arab Emirates (UAE) National Red List of Birds, produced by BirdLife International and the International Union for Conservation of Nature (IUCN) for the Ministry of Climate Change and Environment (MOCCA) of the UAE, provides the most up-to-date information on the conservation status and distribution of birds in the country. This Red List and the accompanying Red List Index (RLI) provide important information for policy- and priority-setting in fields such as the refinement and expansion of the protected areas network and the protection of marine and terrestrial habitats in line with the UAE's commitments to international environmental agreements.

Key Messages

- This National Red List represents the first comprehensive assessment of the relative extinction risk of birds in the UAE.
- Of the 167 regularly and naturally occurring bird species assessed, 53% are threatened, 14% are Near Threatened, and 33% are Least Concern.
- Despite a paucity of historical data, 45 bird species probably underwent genuine changes in status between 1996 and 2019, with 18 becoming more threatened and 27 less threatened.
- The RLI shows that there has been a small overall improvement in the status of birds in the UAE since 1996.
- Improvements reflect the increased availability of artificial habitats, such as inland wetlands, while deteriorations are consistent with land use change and development, causing habitat loss.
- 28 species are Critically Endangered, including five considered Possibly Extinct in the UAE.
- Among the most highly threatened species in the country are many raptors, including eagles, vultures, falcons, and owls, as well as multiple species of waders, terns, and larks.
- The distribution of threatened bird species in the UAE is concentrated along both coasts, especially in the north and east, and in mountainous areas.
- Residential, commercial, and industrial development is the most prevalent threat to birds in the country, affecting 62% of species. Pollution, especially oil spills, threatens 56% of species.
- More conservation action for threatened species in the UAE is essential to ensure that the abundance, diversity, structure, and ecosystem functions of native bird communities persist.
- More population monitoring and ecological research is needed to inform habitat management.
- Centralising all this information in a national biodiversity data database is recommended.
- Improved monitoring of the implementation and effectiveness of relevant environmental policies would identify gaps and allow deficiencies to be addressed.
- Repeating this exercise in 5 to 10 years' time will show the impact of measures implemented, and reveal whether the recent improvement in the UAE RLI has been sustained.

Overview

There is an urgent need to understand the status of biodiversity in the UAE to inform conservation policy and decision-making. Biodiversity data assists with national-level reporting for multilateral environmental agreements (MEAs). This project was undertaken to bring together the combined knowledge of UAE and international experts in one place, assess the risk of extinction of the birds of the UAE (the UAE Red List), and develop an understanding of the long-term trends in the extinction risk of birds (the RLI) that occur in the country.

Available data on all regularly and naturally occurring wild bird species recorded in the UAE were compiled, and used to produce draft assessments of their conservation (Red List) status and draft maps of their distribution in the country. Following preliminary review by experts in the UAE, and revisions to the draft assessments and maps, a national assessment workshop was held in Dubai in July 2019, during which retrospective (back-cast) assessments were also produced to allow the compilation of the RLI. The draft assessments and maps then underwent a final stage of peer review prior to finalisation and validation by BirdLife International and IUCN.



Background

The land and territorial waters of the UAE contain a diversity of desert, mountain, and marine habitats with 460 species of birds recorded. The country supports populations of variable importance of several regionally endemic or near-endemic species, including the Socotra Cormorant *Phalacrocorax nigrogularis* (globally Vulnerable), Arabian Babbler *Argya squamiceps*, White-spectacled Bulbul *Pycnonotus xanthopygos*, Sand Partridge *Ammoperdix heyi*, Arabian Green Bee-eater *Merops cyanophrys*, and Crab Plover *Dromas ardeola*. In addition, the Kalba subspecies of the Collared Kingfisher (*Todiramphus chloris kalbaensis*) is effectively endemic to the UAE.

Many of these species provide indirect benefits to people, such as through tourism and sustaining ecosystems, and form an important component of the rich natural heritage of the country. However, terrestrial and marine habitats, especially coastal areas, are being impacted by a range of threats, including urban, industrial, and tourism development. Fortunately, the UAE has a well-developed network of protected areas covering key sites for many bird species. Nevertheless, not all bird species are well-covered by protected areas, and the distribution, abundance, trends, and ecology of some species remain poorly understood.

Information on the status and distribution of birds in the UAE can be applied to:

- **Improve** their representation within protected area networks through the expansion of existing protected areas and the designation of new ones.
- **Guide** the management of existing protected areas.
- **Protect** key habitats, such as nesting sites and foraging areas.
- **Inform** environmental impact assessments and strategic development planning.

Methodology

At the invitation of MOCCA, BirdLife International (the IUCN Red List Authority for birds) and IUCN produced the National Red List of Birds and the RLI, an indicator of the changing status of birds in the UAE. Data were compiled on their distribution in the country, their population size and trend, habitat needs and ecology, and the threats to species and habitats. National distribution maps for each species were also produced and refined. Using all this information, draft Red List assessments for each species were then prepared by BirdLife.

The draft assessments and maps were initially reviewed by experts in the UAE and revised by BirdLife. Participants in the National Red List Assessment Workshop reviewed them to reach consensus on the classification of each species to the appropriate [IUCN Regional Red List Category](#) (Figure. 1). The RLI was produced by retrospectively assessing the status of each species for the year 1996 in order to identify genuine changes in the conservation status of species over that period. Following a further stage of internal review by BirdLife and IUCN, and peer review by UAE experts, the assessments and distribution maps were published by MOCCA.

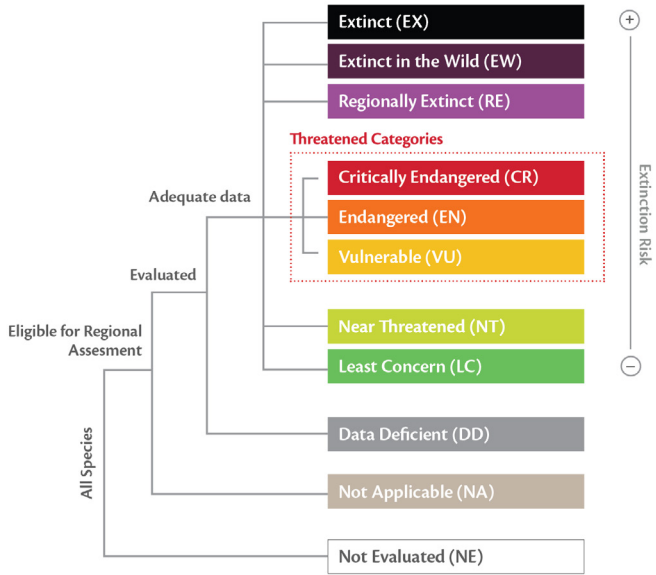


Figure 1: IUCN Red List Categories at the regional scale.



Outcomes

Threatened species – priorities for conservation action

This National Red List has found that of the 167 bird species assessed at the national level in the UAE:

- More than half (53%) are threatened with extinction (Fig. 2).
- Another 14% are Near Threatened.
- Of the 28 Critically Endangered species, five are Possibly Extinct.

These figures are substantially higher than those from the recent assessments of mammals and herpetofauna (Figure 2).

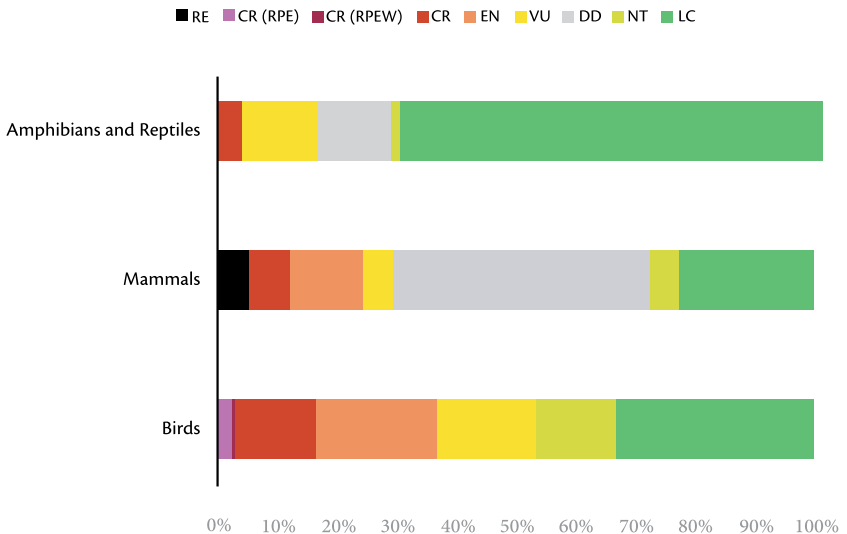


Figure 2. Extinction risk of birds, mammals, and herpetofauna assessed for the UAE National Red List, showing the percentage of taxa within each IUCN Red List Category.

Among the most highly threatened species in the UAE are a significant number of raptors, including eagles, vultures, falcons, and owls, as well as multiple species of waders, terns, and larks. Some of these species qualify on the basis of their small populations, but others are threatened owing to declines.

The pattern of threatened bird species distribution is very similar to that of the overall bird species richness, being the highest along both coasts of the country, especially in the north and east, as well as in the Hajar Mountains, foothills, and on Jebel Hafeet. This largely reflects the distribution of habitats and vegetation types, and the relatively high number of threatened waterbirds, seabirds, and raptors. Biological productivity also influences the distribution of people and development in the UAE, explaining the high overlap observed.

Red List Index (RLI)

The RLI from 1996 to 2019 shows that the birds of the UAE are more threatened overall than the global average, but given the size of the country, this is possibly a natural phenomenon. This is because the UAE is unlikely to be able to naturally support large population sizes of many bird species, therefore increasing the likelihood of them being listed under a higher threat category. The RLI does show, though, that there has been a small overall improvement since 1996 (Fig. 3). The RLI value for the 2019 assessment of the birds of the UAE is 0.66 (where a score of 1 indicates all species are Least Concern, and 0 indicates that all species are Extinct). This represents a 2% improvement from the back-cast value of 0.64 in 1996, in contrast to the deteriorating trend of the global RLI for birds. The RLI reflects a greater number of species (27) whose status is thought to have genuinely improved in the UAE between 1996 and 2019, compared to those whose status is considered to have deteriorated (18), acknowledging the uncertainty around the back-cast assessments for some species owing to a paucity of historical knowledge.

Considering the species in these two categories, it seems that improvements have been driven primarily by the increased availability of artificial habitats, such as inland wetlands, which has allowed various waterbird species to colonise, spread, and/or increase. The drivers of deteriorations in status are more varied, but some at least are consistent with the main threats reported, including rapid land use change and development, causing habitat loss. More conservation action for threatened species in the UAE is essential to ensure that the abundance, diversity, structure, and ecosystem functions of native bird communities persist.

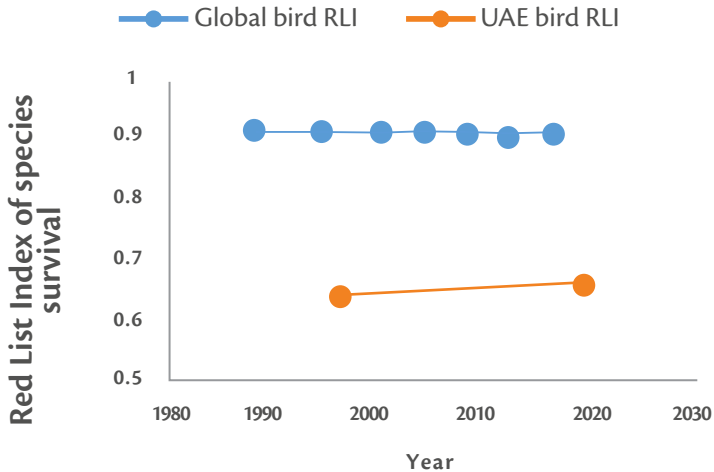


Figure 3. The 1996–2019 UAE National RLI of Birds (orange line) compared with the 1988–2016 global RLI for all species. A lower RLI indicates greater extinction risk, i.e. a value of 1 would indicate that all species are Least Concern, whereas a value of 0 would indicate that all species are extinct (or extinct in the wild) within the geographic scope of the assessment.

Threats to birds in the UAE

The threat affecting the most bird species (62% of those assessed) in the UAE is residential, commercial, and industrial development, and the associated habitat loss, degradation, disturbance, and fragmentation. Pollution, principally in the form of oil spills, poses a threat to 56% of the assessed species, especially waterbirds, shorebirds, and seabirds, although its population-level impact may be lower than other threats causing habitat loss.

Despite being listed here as a threat to 48% of the UAE's threatened bird species, hunting and trapping is regulated by strict laws in the country, which generally appear to be well adhered to. In reality, this coding relates principally to hunting and trapping occurring outside the UAE, which nevertheless affects the populations of migrants that winter in or migrate through the country (Brochet et al. 2016, 2019a,b).



Management and conservation recommendations

Site protection and management

- The main types of management interventions identified as necessary to improve the conservation status of UAE bird species involve the establishment of legally protected areas and the implementation of effective management, both on land and at sea.
- An extensive network of 30 Important Bird & Biodiversity Areas (IBAs) in the UAE has already been identified, covering 4,204 km² (5% of the land area of the country). IBAs are sites of international importance for the conservation of birds and wider biodiversity.
- However, the level of formal protection that these areas receive varies. While positive progress is being made in terms of conservation response in wholly or mostly protected IBAs, 37% of IBAs (11 out of 30) remain unprotected and may be under threat of development, including key sites such as Khor al-Beida and Siniyah Island in Umm al-Quwain, and Al Jazirah Khor in Ras Al Khaimah.

Integrated land use planning

- Residential, commercial, and industrial development (causing habitat loss and degradation) is the principal threat facing both birds and IBAs in the UAE.
- The loss and degradation of natural wetlands may have been partly offset by the recent development of anthropogenic sites, such as dams, water retention barrages, irrigated landscape plantings, and artificial wetlands. If these artificial sites are lost owing to future economic pressures or declines in water availability, then the consequences for the status of some species and the RLI could be significant.
- It is therefore very important that protected areas, IBAs, and other high-priority locations are mapped as part of a system of integrated land use planning, enabling developers to better avoid sensitive areas.

Monitoring and Research

- Although there is some monitoring of bird populations in parts of the UAE, especially of wintering waterbirds and breeding seabirds, expansion of these schemes would be welcome. To increase transparency, it would be helpful if the methodologies and results of these schemes were made publicly available and shared more widely, both for national and international purposes.
- Terrestrial bird species are very poorly surveyed, and require an appropriate well-designed nationwide monitoring scheme. As well as detecting declines, this would allow the impacts of conservation to be assessed, and provide data for repeating this assessment, and updating the National Red List and RLI.
- More research is needed into the life history and ecology of bird species in the UAE to identify potential threats, diagnose causes of decline, and help improve habitat management. This is particularly important for threatened species to increase the understanding of their ecological needs (especially diet and food availability) and life history parameters.



Key Policy Recommendations

- The UAE National Red List of Birds exercise should be repeated on a regular basis, ideally every 5 to 10 years.
- Regularly reassessing species can provide an accurate indication of long-term trends through the RLI for the UAE and help ensure the enduring survival of these species in the country.
- This information can and should be used for national reporting on the UAE's commitments to the MEAs, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Wetlands of International Importance (Ramsar), Convention on the Conservation of Migratory Species of Wild Animals (CMS), and, notably, Convention on Biological Diversity (CBD), where several opportunities exist:
 - National implementation of Aichi Biodiversity Target 12 (Species extinction and recovery).
 - The UAE's National Reports under the CBD.
 - Reporting on relevant targets of the National Biodiversity Strategy and Action Plan.
 - Targets for the Sustainable Development Goals (SDGs), notably under Goals 14 and 15.

Capacity Building

Relevant agencies in each of the seven emirates comprising the UAE play a vital role in the conservation, management, and monitoring of bird populations. Capacity must be increased to ensure that government bodies (national to local) are able to capitalise on this new information on birds through training in the application of biodiversity datasets to species and site-based management and enforcement activities. Processes for the exchange and publication of biodiversity information curated by federal and emirate governments and by civil society organisations should be developed, such as a centralised national biodiversity database, transparent and accessible to all stakeholders. Civil society can play a key role in research, monitoring, conservation planning and action, and in educating local communities and user groups.

Environmental Safeguards

The data made available through the UAE National Red List of Birds should inform the performance standards, environmental safeguard policies, and environmental impact assessments of the private sector to help avoid or minimise the impacts of their operations in and around areas with threatened species.

Harmonisation of Environmental Policies

At both federal and emirate levels, environmental policies need to be better integrated and coordinated across policies governing individual sectors, such as the extractive industries, urban planning, energy, and agriculture, to avoid contradictory regulatory objectives and inconsistent financial initiatives. Without such coordination, bird species and ecosystems will continue to decline. Improved monitoring of the implementation and effectiveness of relevant environmental policies would identify gaps and deficiencies to be addressed.

This policy brief was prepared by BirdLife International and IUCN as a deliverable of the National Red List for the United Arab Emirates project (2018-2020), funded by the Ministry of Climate Change and Environment (MOCCAЕ) of the United Arab Emirates.

Read the full report

Ralph et al. (2021) UAE National Red List of Birds
(<https://www.moccae.gov.ae/en/home.aspx>)

Visit the UAE National Red List portal
(<https://gis.moccae.gov.ae/>)

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