



UNITED ARAB EMIRATES
MINISTRY OF CLIMATE CHANGE
& ENVIRONMENT

POLICY BRIEF

**UAE National Red List of marine and terrestrial
mammals**

2019

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This UAE National Red List of Mammals, produced for the Ministry of Climate Change and Environment (MoCCaE) of the UAE, provides the most up-to-date information on the conservation status and distribution of terrestrial and marine mammals in the UAE. This Red List and the accompanying Red List Index provide information for policy and priority-setting, such as through the refinement and expansion of the protected areas network, and the protection of marine and terrestrial habitats, and the UAEs commitments to international environmental agreements.

KEY MESSAGES

- The **Red List Index (RLI)** shows an overall **improvement in the status of mammals in the UAE since 1996**. The status of UAE mammals is worse than all mammals globally, but has a positive trend as a result of significant conservation efforts in the UAE.
- **24% of mammal species in UAE terrestrial and marine territorial areas are threatened with extinction.**
- **The Arabian Oryx has been successfully reintroduced and two species of gazelle released in several sites.** As a result of these efforts, the national status of Arabian Gazelle *Gazella arabica* and Arabian Sand Gazelle *Gazella marica* is more favourable in the UAE than their global status.
- **Three species of large carnivores are now extinct in the UAE** (Grey Wolf *Canis lupus*, Arabian Leopard *Panthera pardus* and Striped Hyena *Hyaena hyaena*) and reintroduction programmes are needed to restore them.
- **Twenty-five species, most of them bats and cetaceans, are Data Deficient**, meaning that there is too little information about their extinction risk.
- **Ten species underwent genuine changes in status between 1996 and 2018**; six became more threatened (*Vulpes rueppellii*, *Caracal caracal*, *Felis margarita*, *Panthera pardus* and *Hyaena hyaena*) and four became **less threatened** (*Gazella arabica*, *G. marica*, *Oryx leucoryx* and *Dugong dugon*).
- Up to date biodiversity data in UAE is much needed to improve decision-making across sectors. This national Red List represents **the first comprehensive assessment of mammals of the UAE**.



Overview

There is an urgent need to understand the status of biodiversity within the United Arab Emirates, to inform conservation policy and decision-making within the UAE. Biodiversity data assists with national level reporting for multilateral environmental agreements (MEAs).

Until now, there has been a lack of information on the status of biodiversity in the UAE. Where that information does exist, it is scattered and sometimes hard to access. This Red List and Red List Index for mammals was undertaken to bring together in one place the combined knowledge of experts from the UAE and internationally to assess the risk of extinction of the mammals of the UAE (the UAE Red List), and to develop a understanding of the long-term trends in the extinction risk of mammals (the Red List Index, RLI) that occur in the marine and terrestrial territory of the country.

At the request of MoCCaE, IUCN compiled the available data on each species of mammal recorded from the marine and terrestrial territory of the UAE and produced draft maps of the distribution of these species in the UAE. Following preliminary review by experts in the UAE, an assessment workshop was held in Dubai 2018, during which retrospective (“back-cast”) assessments were also produced to allow the production of a Red List Index. The draft assessments then went through a final stage of peer review prior to finalisation by IUCN.



Background

The land and territorial waters of the United Arab Emirates contain a diversity of desert, mountain and marine habitats, with 58 species of native mammals (39 terrestrial, 19 marine) recorded. None of the species is endemic to the UAE, but Arabian Tahr *Arabitragus jayakari* is endemic to the Hajar Mountains of UAE and Oman and five terrestrial species are endemic to the Arabian Peninsula. A further ten terrestrial species have been introduced to the UAE, the occurrence of six more is unconfirmed, and there are four feral species.

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 UAE. However, terrestrial and marine habitats, especially coastal areas, are being impacted by a range of threats, including urban, industrial and tourism development, while in the past, uncontrolled hunting has reduced the numbers of the large ungulate species. Fortunately, the UAE has a well-developed network of protected areas and these protect key sites for the larger species. Not all species are known to occur within protected areas, and the distribution of bats and most marine mammal species is not well understood.

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

- **Improving** their representation within protected area networks through the expansion of existing protected areas and the designation of new ones.
- **Guiding** the management of existing protected areas for mammals.
- **Informing** Environmental Impact Assessments.

Methodology

At the invitation of MoCCaE, IUCN (The International Union for Conservation of Nature) produced a national Red List of mammals and a Red List Index (RLI), an indicator of the changing status of mammals in the UAE. Draft distribution maps for each species were compiled, as well as data on their distribution in the UAE, their population size and trend, habitat needs and ecology, and the threats to species and habitats. This information was initially reviewed by experts in the UAE, followed by a National Red List Assessment expert workshop (Dubai, September 2018) to assign each species to one of eleven IUCN Regional Red List categories (Fig. 2). 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 IUCN and peer review by UAE experts, the assessments and distribution maps were published by MoCCaE.

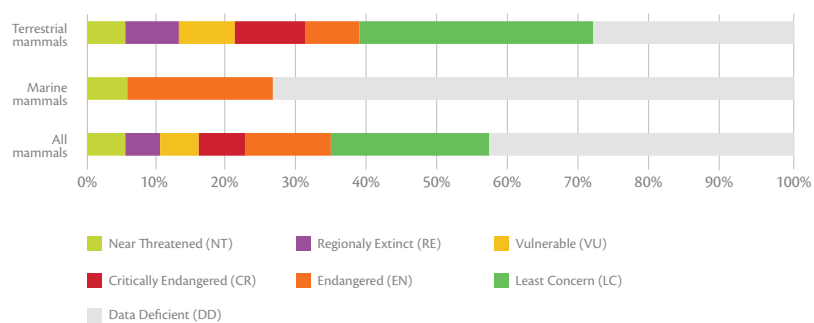


Figure 1. Extinction risk of mammals assessed for the UAE National Red List: percentage of taxa within each IUCN Red List Category.

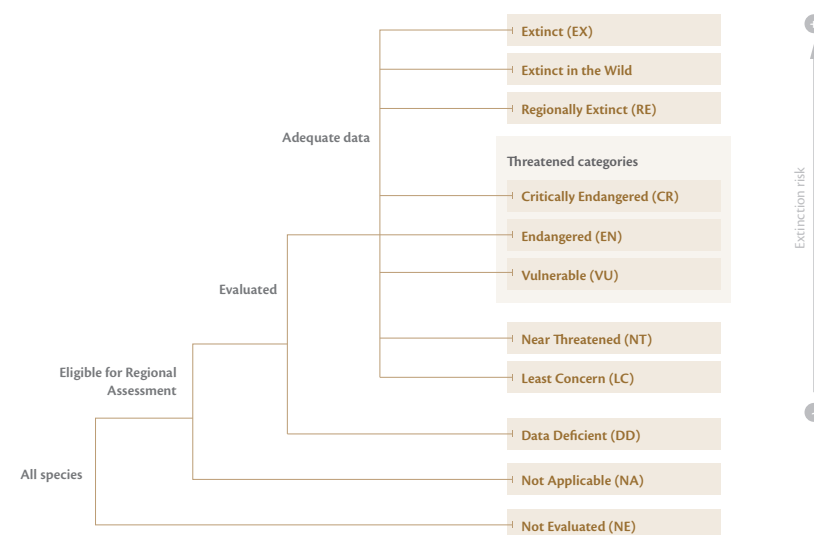


Figure 2. IUCN Red List Categories at the regional scale.



OUTCOMES

Threatened species – priorities for conservation action

This National Red List has found that:

- Nearly one-quarter of the marine and terrestrial mammals of the UAE are threatened with extinction
- 25 species are Data Deficient (28% terrestrial species and 74% marine species, meaning that their status may range from Least Concern to Critically Endangered).

The Red List Index for the UAE a nearly 3% **decrease** in extinction risk since 1996, an improvement that contrasts to the **increasing** risk of the global RLI for mammals and the aggregate for all species.

Terrestrial mammals

38 species of terrestrial mammals were considered native to the UAE. **Three species of terrestrial mammals are extinct in the UAE and more than one-quarter (26%) are threatened with extinction.** However, the precise figure is uncertain, because an unknown proportion of those currently considered Data Deficient (DD) may be shown to be threatened once adequate data are available. As expected because of the range of habitats and ecological niches available, terrestrial species richness is highest in the Hajar Mountains.

Marine mammals

The 19 marine mammal species in UAE consist of 18 cetaceans and one sirenian, the Dugong *Dugong dugon*. Four species (21%) are assessed in a threatened category, however many species are known from very few records or even single strandings, and 14 (74%) are Data Deficient, meaning there was insufficient knowledge to assess their extinction risk. This highlights the need for further research and monitoring to understand their distributions, population size and population trend. The Dugong is Near Threatened in the UAE, compared to Vulnerable globally, due to effective conservation action including designation of protected areas in key sites and controls on fishing.

Threats to mammals in the UAE

The threats impacting most terrestrial mammal populations are **overgrazing by domestic livestock** and **hunting and persecution**. Uncontrolled hunting is considered to have been the main cause of the extinction of the Arabian Oryx and a severe reduction in the numbers of Arabian Gazelle and Arabian Sand Gazelle. Revisions to hunting laws and more stringent enforcement have, however, reversed this trend and allowed these three species to increase and expand their ranges. Generalised persecution of carnivores has been a major factor in the extirpation from UAE of three large carnivores and the deterioration in status of smaller species.

For marine mammals, the primary threats are **bycatch in fishing nets** and **abandoned fishing gear, boat strikes, marine pollution** and **oil and gas activities**.

Red List Index

The Red List Index (RLI) for the 2018 assessment of the mammals of the UAE is 0.63 – where a score of 1 indicates all species are Least Concern and 0 indicates that all species are Extinct. This represents a nearly 3% decrease in aggregate extinction risk since 1996, i.e., an improvement. This is in contrast to the deteriorating trend of the global RLI for mammals and the aggregate for all species shown in Figure 3. The national RLI indicates that active conservation measures leading to improvements in the status of Arabian Gazelle, Arabian Sand Gazelle, Arabian Oryx and the Dugong have driven the positive national RLI. Containing action to improve the status of the threatened species is necessary to maintain this positive trend in the national UAE RLI.

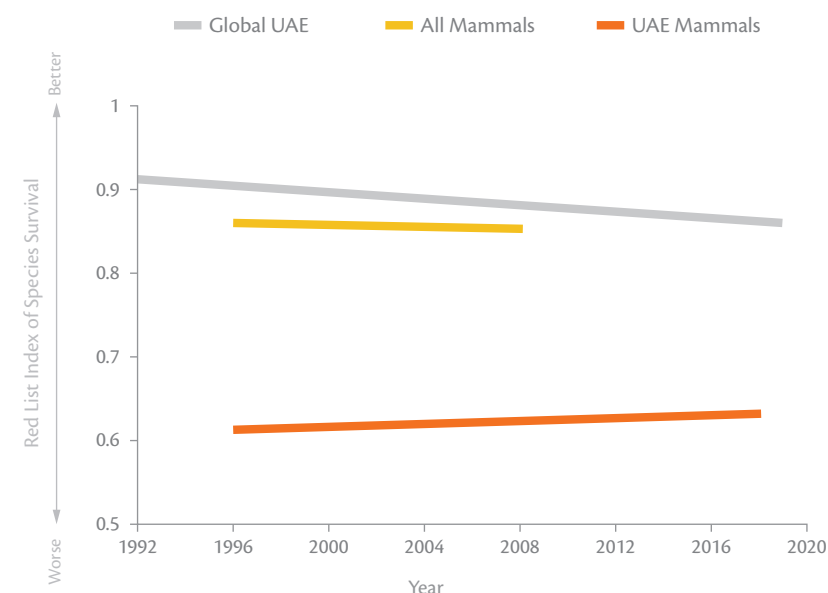


Figure 3. Red List Index (RLI) of mammal species survival in the UAE. The 1996–2018 regional UAE RLI for mammals (orange line) is plotted alongside the 1996–2008 global RLI for all mammals (blue line) and the UAE cut of the 1980–2019 global aggregate RLI (using amphibians, birds, mammals and corals) weighted by the fraction of each species' distribution occurring within the UAE (grey line). An RLI value of 1 equates to all species are Least Concern (LC) and none are expected to go Extinct in the near future, while a 0 value indicates that all species are Extinct.



MANAGEMENT AND CONSERVATION RECOMMENDATIONS

Terrestrial mammals

The establishment of protected areas and the reintroduction of Arabian Oryx and the two gazelle species have made a significant improvement in the status of these three species.

- The realization of similar reintroduction and habitat protection programmes for the Arabian Tahr will restore this species to its original habitats in the Hajar Mountains.
- The long tradition of persecuting large carnivores has contributed to the extinction in UAE of three of the larger species, the Arabian Leopard, Grey Wolf and Striped Hyena.
- The absence, or very low numbers, of these species in neighbouring countries means that the only way to restore these species to the UAE would be through a reintroduction programme.
- Action should be taken to ensure that the smaller species, particularly Caracal *Caracal caracal*, Sand Cat *Felis margarita*, Rueppell's Fox *Vulpes rueppellii* and Blanford's Fox *Vulpes cana* are adequately represented in the protected area network through the designation of new protected areas or the expansion and the appropriate management of existing ones.
- Effective protection of known bat roost sites in the Hajar Mountains is essential.
- A systematic programme of research to establish the status of small mammals and bats is essential.
- While some terrestrial mammals require no direct conservation measures, further research is needed into their life history and to monitor threats.

Oryx and Leopard are CITES I, in which international trade is prohibited, whilst the Wolf, Blanford's Fox and all other felids (Caracal, Sand Cat, Wildcat) are CITES Appendix II, under which international trade is controlled.

Marine mammals

The important population of Dugongs in UAE is concentrated in the Marawah Marine Biosphere Reserve and in the Al Yasat Marine Protected Area, which were designated to protect key sites for Dugong and marine turtles. Regulations imposed on fishing have reduced mortality. Because of these conservation actions, the status of Dugong in UAE has improved, and these two marine protected areas also benefit some inshore cetaceans, notably the Indo-Pacific Humpback Dolphin *Sousa plumbea* and the Indo-Pacific Finless Porpoise *Neophocaena phocaenoides*.

- Further research is needed on most of the other species to understand their distributions, population trends and threats in UAE waters. This applies in particular to the deep-water species occurring in the Gulf and off the east coast. There are three current projects working to improve knowledge and conduct monitoring.

Blue Whale, Omura's Whale, Bryde's Whale, Humpback Whale, Sperm Whale, the Indo-Pacific Finless Porpoise and the Dugong are listed under CITES Appendix I, whilst all other cetaceans listed under CITES Appendix II.

- Ongoing surveillance for the occurrence of trade in these species is essential.

KEY POLICY RECOMMENDATIONS

This report finds that:

- The UAE National Red List of Mammals should be repeated on a regular basis, ideally every ten years.
- Regularly reassessing species can provide an accurate assessment of long-term trends through the Red List Index for the UAE. Such national-level information can help to ensure the enduring survival of these species in the UAE.
- This information can and should be used for national reporting for the UAE's commitments to the MEAs, including CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), Ramsar (Convention on Wetlands of International Importance), CMS (Convention on the Conservation of Migratory Species of Wild Animals), and notably, the Convention on

Biological Diversity (CBD), where several opportunities exist:

- Progress of national implementation of Aichi Biodiversity Target 12 (*Species extinction and recovery*).
- In the 6th National Report for the UAE.
- Reporting on relevant targets of the *UAE National Biodiversity Strategy and Action Plan* (2014).
- Targets for the Sustainable Development Goals, notably: Target 14.1 to prevent and significantly reduce marine pollution of all kinds;
- Target 14.2 to sustainably managing and protecting marine and coastal ecosystems;
- Target 14.4 to regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices;
- Target 14.5 to conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information;
- Target 15.1 for the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, and;
- Target 15.5 for urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

Capacity Building

Capacity must be increased to ensure that government bodies (national to local) are able to capitalise upon this new information on mammal biodiversity through training in the application of biodiversity data sets to species and site-based management and enforcement activities. Civil society can play a key role in research, monitoring, conservation planning and action, and in educating fishers and local communities.

Environmental Safeguards

The data made available through the *UAE National Red List of Mammals* should inform the Performance Standards, Environmental Safeguard policies and Environmental Impact Assessments of the UAE private sector to help avoid or minimise impacts of their operations in and around areas containing threatened species.

Harmonisation of Environmental Policies

Environmental policy needs to be better integrated and coordinated across sectorial policies such as the extractive industries, urban planning, energy and agriculture to avoid contradictory regulatory objectives and inconsistent financial initiatives. Without such coordination, mammal species and ecosystems will continue to decline.

Where can I get more information?

Read the full report: *UAE National Red List of mammals* <https://bit.ly/2RdZCQR>

Visit the *UAE National Red List* portal: gis.moccae.gov.ae

Contact MoCCaE: biodiversity@moccae.gov.ae

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