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Arabian Dugongs of Qatar: Updates from a Renewed Research Initiative

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Dugongs (“bugarah al bahr” or “cow of the sea”) in Qatar and the wider Arabian Gulf, are animals of both historic and cultural significance to the people in the region. Historically hunted in Qatar, today they are seen as a symbol for conservation in a country that is trying to balance rapid modernization and coastal development with protection of marine biodiversity, as outlined in the Qatar National Vision 2030.

Qatar and the Arabian Gulf are home to the largest population of dugongs outside of Australia and is the most important region for dugongs in the western portion of their range. As long-lived large mammals with low reproductive output dugongs are vulnerable to exploitation and are listed as Vulnerable to Extinction by the IUCN (International Union for the Conservation of Nature). Currently, dugongs in Qatar face many threats including incidental fisheries bycatch and habitat degradation. The extreme marine and physical environment of the Arabian Gulf, as well as the northern limit of dugong distribution, likely means that their life-history differs from populations in Australia. However, there are virtually no life history data for Qatari dugongs and the species remains mostly unstudied.

A solid understanding of dugong natural history is necessary to develop a successful management and conservation program. Our knowledge of dugong natural history in Qatar and the Arabian Gulf is poor compared to our knowledge of dugongs in Australia (where the largest population exists). Although approximately 6000 dugongs were estimated to live in the Arabian Gulf including Qatar, this number has not been verified. Sporadic research has been conducted on the Qatari population, including work in 1986 which recorded the largest single dugong group of 577 individuals in the waters between Qatar and Bahrain. More recently, in 2008, the Qatar Ministry of Environment conducted surveys that expanded the area around Qatar where dugongs were observed.

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Our current study applies similar techniques from the past (boat-based and beach surveys) with newer techniques (aerial surveys using Unmanned Aerial Vehicles [UAVs], histological analyses) to provide an updated understanding of when, where, and how many dugongs are present in Qatari waters, along with preliminary information on their population demographics. From our 2014–2015 surveys, we have enumerated individuals in a large herd, consistently spotted in the winter months in similar areas to the 1986 and 2008 surveys. A total of 508 individuals (including 51 cow-calf pairs) were counted using images taken from a UAV. Underwater surveys verified that the major activity was foraging upon a mixed stand of seagrasses, *Halodule univernis* and *Halophila ovalis*, in clear, shallow water (