

Houtman Abrolhos to Rottneest Shelf Waters IMMA

Summary cont....

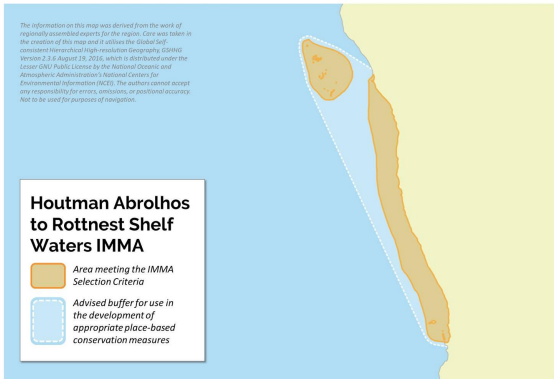
recovered. Although the breeding islands of the west coast of Western Australia account for only around 6% of total pup production, the high natal site fidelity of female Australian sea lions, the genetic isolation and that these islands are at the northernmost extent of the range, makes this subpopulation important. This IMMA covers the breeding colonies of Australian Sea Lions on islands on the west coast of Western Australia, including the Houtman Abrolhos Islands and the islands in and around Jurien Bay, and Beagle Island, Fisherman's Island and Buller Island. It also includes a number of key haul-out sites along this coast. The Australian sea lion is Red Listed as Endangered (EN) (Goldsworthy 2015). This area is known for being important for breeding Australian sea lions, these islands and the surrounding area (out to around 24 km radius) are important for sea lion foraging.

Criterion A: Species or Population Vulnerability

The Australian sea lion has been formally assessed and Red Listed by IUCN as Endangered (EN). The metapopulation was exploited by commercial sealing and has not successfully recovered (Gales et al. 1994, Goldsworthy 2015).



Figure 1 : Resting Australian sea lions.
Photo: Chandra Salgado Kent



Area Size

19,297km²

Qualifying Species and Criteria

Australian sea lion– *Neophoca cinerea*

Criterion A, C1 & C2

Marine Mammal Diversity (D2)

Balaenoptera musculus brevicauda, *Megaptera novaeangliae*, *Tursiops aduncus*

Summary

The Australian sea lion is endemic to Australia, it is the world's rarest sea lion with the number of mature individuals in the population at around 6500 animals.

It inhabits the offshore islands of the southwestern and southern coasts of Australia from the Houtman Abrolhos Islands in Western Australia to the Pages Islands, South Australia. They are exceptional among pinnipeds by having an asynchronous breeding cycle making them difficult to monitor and manage. In addition, the metapopulation consists of small, genetically isolated subpopulations and was exploited by commercial sealing and has not



Figure 2 : Female Australian Sea Lion.
Photo: Chandra Salgado Kent

The west coast population of Western Australia supports a small, genetically and geographically isolated population of approximately 700 to 800 (Gales et al., 1994) which accounts for ca 6% of pup production (Goldsworthy et al., 2009) and the Abrolhos Islands and other islands in the IMMA host the northern most population of Australian sea lions. Being at the northern limit of the species range may make this sub-population unviable in the future due to reduced ocean productivity from warming oceans and potential increase in pup mortality on land due to heat stress and dehydration from a warming climate (Goldsworthy et al. 2009).

Criterion C: Key Life Cycle Activities Sub-Criterion C1: Reproductive Areas

The IMMA is made up of 4 breeding colonies of the Australian sea lion and a number of key haul-out 'non-breeding' sites along this coast. The species mate, give birth, and care for young until weaning at these sites. Female Australian sea lions display an extremely high level of natal site fidelity, such that recruitment of females is almost exclusively from within each breeding colony (Campbell et al., 2008b, Lowther et al., 2012). This has important implications for the conservation management of this species, as virtually every breeding colony becomes a management unit (Campbell et al., 2008a).

Sub-Criterion C2: Feeding Areas

Australian sea lion satellite transmitter deployments, and the location of sea lion bycatch in rock lobster fishing gear show that sea lion foraging is predominantly located within 30 km of the breeding colonies/haul-out sites (Campbell et al., 2008a, Campbell, 2005). Adult males may range further; in the order of 100 km from their colony or haul out area (Goldsworthy et al., 2014) and spatial models predict foraging to occur within the continental shelf (within the 200 m contour). The tracking data and spatial modelling of the data underpins the Biologically Important Area for foraging Australian sea lions designated by the Australian Government (Australian Government Department of the Environment and Energy, 2016).

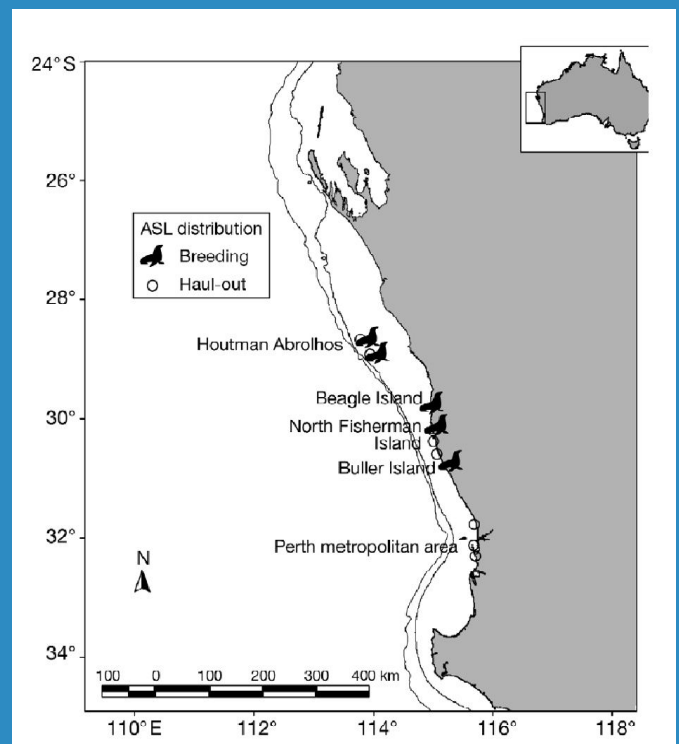


Figure 3– Distribution of breeding colonies and major haul-out areas of the Australian sea lion with the continental shelf edge (100 to 200 m), indicated by the black lines. Source Campbell et al. 2008a.

Supporting Information

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