

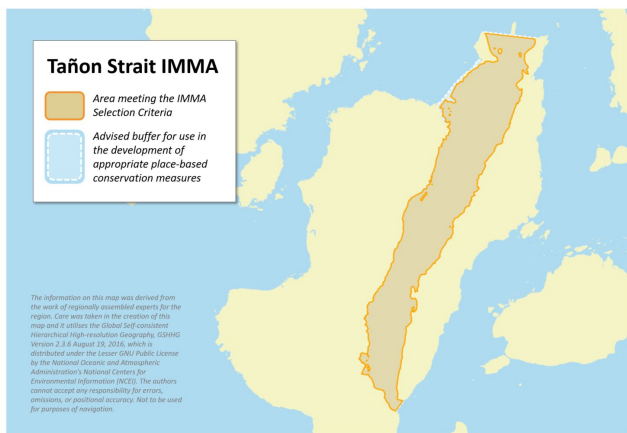
Tañon Strait IMMA

Summary, continued.

groups thereafter. Most recently in 2014 surveys led to the identification of resident populations of Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) and spinner dolphins (*Stenella longirostris*) as well as a high cetacean diversity for the region with 14 species reported in the literature and 9 species confirmed in recent surveys.

Description

Tañon Strait is a narrow passage of water bounded by the islands of Cebu in the east and Negros in the west in the Visayas region of the Philippines. It is about 160 km long extending up to the Visayan Sea in the north and to the Bohol Sea in the South. Its width varies from 5 to 27 km, with the narrowest point in the south between Liloan, Santander, Cebu and Sibulan, Negros Oriental. It has an approximate area of 518,221 hectares and an approximate perimeter of 684 km. In the north-northwest, the Strait is closed off by the Bantayan group of Islands and in the north-northeast by the Visayan Sea (reckoned from the tip of Daanbantayan, Cebu). It is relatively deep with its deepest point at 509 meters. Because of its extraordinary abundance and diverse assemblage of dolphins and whales, and its importance as feeding, breeding, and resting grounds for these marine species, Tañon Strait, pursuant to Proclamation No. 1234, was set aside and declared a protected area under the category of Protected Seascape by then President Fidel V. Ramos in 1998. Spanning three (3) Provinces in two regions – Cebu, Negros Oriental and Negros Occidental – the Tañon Strait Protected Seascape (TSPS) is considered as the largest protected seascape in the country.



Area Size

5 371 km²

Qualifying Species and Criteria

Indo-Pacific bottlenose dolphin –

Tursiops aduncus

Criterion B (1); C (2)

Spinner dolphin – *Stenella longirostris*

Criterion C (2, 3)

Marine Mammal Diversity

Criterion D (2)

Tursiops aduncus, *Stenella longirostris*,

Grampus griseus, *Globicephala macrorhynchus*,

Kogia sima, *Peponocephala electra*,

Pseudorca crassidens, *Stenella attenuata*

Summary

Research by Silliman University Marine

Laboratory funded by the Haribon foundation and dissertation research of Louella Dolar conducted in 1995 led to formal proposals for protection of Tañon Strait. Presidential Proclamation No 1234 subsequently created a 'protected seascape' in 1998. According to this proclamation, the entire Tañon Strait is protected and all cetaceans are accorded full protection by local and national law. The area has been surveyed extensively, in 1995 and by different

The rationale for protection is the high cetacean density and diversity, including discrete feeding and resting areas.

The Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) has only fairly recently been identified to occur in the Philippines (Callanta, 2009). The species seems to be sparsely distributed in coastal waters. Preliminary reports from Karczmarski and Tionson (2016) indicate that photo-identification research across two field seasons, 2014 and 2015 allow the identification of over 120 individuals. Ninety-nine (99) individuals were re-sighted >2 times, providing early indication of site fidelity. Almost 30% of all identified dolphins were seen to have one or more of the following types of abnormal skin conditions: lobomycosis-like disease (LLD), tattoo skin disease (TSD), cutaneous nodular disease (CND), and whitish velvety lesions (WVL). This prevalence of skin disorders is higher than reported for other populations of this species. The emergence of these skin disorders may be indicative of deteriorating quality of the habitat, despite Tañon Strait being a nationally protected seascape.

Criterion B: Distribution and Abundance

Sub-criterion B1: Small and Resident Populations

Data on Indo-Pacific bottlenose dolphins presented in Tionson and Karczmarski (2016) meets the criterion for Criterion B2. In this study, photo-ID data were obtained during 50 encounters between 2014-2015. Individual sighting frequencies ranged from one ($n = 21$) to ten ($n = 1$), with the majority of the 121 catalogued individuals (82 %, $n = 99$) seen more than once. Group sizes ranged from a solitary individual to ~60 dolphins, with a mean of 11 and median of 10 dolphins per group (± 10.5 SD). Groups frequently consisted of all age classes, including calves and neonates, although adult-only groups were also seen. Inter- and intra- annual photographic recaptures of Indo-Pacific bottlenose dolphins are reported in the poster presented by Tionson and Karczmarski at the Society for Marine Mammalogy Conference in 2015. Their data illustrate the site fidelity of this small population.



Figure 1: Spinner dolphins in the Tañon Strait Protected Seascape. Photo: Angelico Tionson

Criterion C: Key Life Cycle Activities

Sub-Criterion C2: Feeding Areas

The IMMA is likely to be a foraging ground for spinner dolphins because it is an important and highly productive area (Tañon Strait - Commission report). Although direct evidence of feeding areas of spinner dolphins are difficult to quantify, indirect evidence from interviews of fisherfolk and uncommon direct observations of daytime foraging activity suggest a likely probability that spinner dolphin foraging areas lie within the strait and perhaps in deeper locations where the mesopelagic layer is likely to occur. Foraging areas of Indo-Pacific bottlenose dolphins have also been identified using kernel density estimation and local convex hull analysis of observed foraging behaviour (Tiongson and Karczmarski, 2017).

Sub-Criterion C3: Migration Areas

The Tañon Strait has been assessed as an important area for the resting of spinner dolphins (*Stenella longirostris*) described in Tiongson and Karczmarski (2017). Resting represented the predominant daytime behaviour for spinner dolphins. Nearly half (48%) of their overall core area functions as the core resting area. Dolphins need to move safely between their resting and foraging areas in regularly daily movements. A population of approx. 3500 spinner dolphins was estimated in the Strait (Dolar et al., 2006).



Figure 3: Dwarf sperm whale mother and calf pair surfacing near Pescador Island in Tañon Strait. Photo: Angelico Tiongson

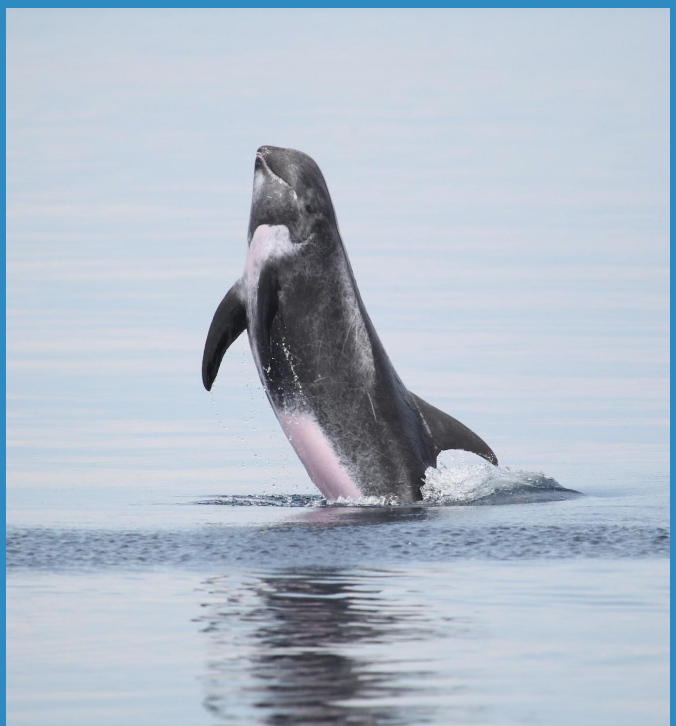


Figure 4: An adult Risso's dolphin breaching in the Tañon Strait Protected Seascape. Photo: Angelico Tiongson



Figure 2: Indo-Pacific bottlenose dolphins porpoising off Bais Bay in Tañon Strait. Photo: Teghan Shore



Figure 5: Spinner dolphin mother and calf pair leaping near Moalboal, Cebu Island. Photo: Katrina Perandos



Figure 6: An immature Pantropical spotted dolphin leaps near a fishing boat in Tañon Strait. Photo: Angelico Tiongson

Criterion D: Special Attributes

Sub-criterion D2: Diversity

The Tañon strait hosts a high diversity of odontocetes, with 8 species reported in the latest work from Karczmarski and Tiongson (2016). This included Indo-Pacific bottlenose dolphin (*Tursiops aduncus*), spinner dolphins (*Stenella longirostris longirostris*), Risso's dolphin (*Grampus griseus*), short-finned pilot whale (*Globicephala macrorhynchus*), dwarf sperm whale (*Kogia sima*), melon-headed whale (*Peponocephala electra*), False killer whale (*Pseudorca crassidens*) and pantropical spotted dolphin (*Stenella attenuata*). From previous studies (Leatherwood et al., 1992; Dolar and Wood, 1993; Bautista et al., 2003; Aragones et al., 2010) four additional species were reported, *Tursiops truncatus*, *Lagenodelphis hosei*, *Feresa attenuata*, and *Mesoplodon* sp. but these have not been sighted during the recent surveys. Surveys by Dolar et al. (2006) in the Tañon Strait reported a high abundance of dwarf sperm whale (*Kogia sima*), the second most abundant species encountered during their study with 27 encounters and an estimated density of 48 schools 1000 km⁻¹. The most common species was the spinner dolphin with 52 encounters and an estimated density of 117.5 schools per 1000 km surveyed.

Supporting Information

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**MARINE MAMMAL
PROTECTED AREAS
TASK FORCE**

IUCN SSC WCPA IMMA

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