

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

BONCUK BAY ISRA

Mediterranean and Black Seas Region

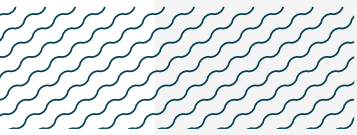
SUMMARY

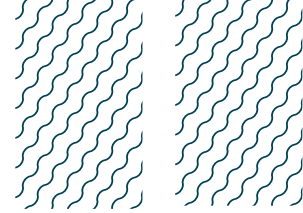
Boncuk Bay is a sheltered bay in Gökova Gulf, Türkiye, in the Aegean Sea. This area is characterised by shallow sandy and rocky substrates, and seagrass meadows. It overlaps with a marine protected area (Gökova Bay Special Environmental Protection Area) and with the Central Aegean Sea Ecologically or Biologically Significant Marine Area. Within this area there are: **threatened species** and **reproductive areas** (Sandbar Shark *Carcharhinus plumbeus*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas

— —
TÜRKIYE
 — —
0-60 metres
 — —
1.29 km²
 — —





DESCRIPTION OF HABITAT

Boncuk Bay is located in Türkiye between Bodrum and Datça peninsulas. It is a small and sheltered bay in Gökova Gulf, a long and narrow gulf of the southeastern Aegean Sea. The bay has a pebble beach at its centre and a narrow entrance facing west to the sea. Fresh water flows out of the rocks creating, when the sea is calm, a freshwater film at the surface. A rocky ledge parallel to the coast at 5–6 m depth, slopes to a drop-off reaching the centre of the bay, covered in muddy substrates at 60 m. Its relatively shallow waters have an average depth of 15 m, and the sandy substrate is interspersed with rocky areas. Water temperature varies seasonally ranging, at the surface, from ~16°C in the boreal winter to 29°C in summer (Clò et al. 2002; Öztürk 2006; Bileçenoğlu 2008; Ardar et al. 2016; Filiz 2019; Ünal & Kizilkaya 2019).

Boncuk Bay falls within the Gökova Bay Special Environmental Protection Area, established in 1988. It is a designated Marine Protected Area under both national and international legislation and has been a no-take zone since 2010. The area also overlaps with the Central Aegean Sea Ecologically or Biologically Significant Marine Area (CBD 2023), and is within the Datça and Bozburun Peninsula Key Biodiversity Area (KBA 2023).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 60 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

The one Qualifying Species occurring in the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. Sandbar Shark is assessed as Endangered (Rigby et al. 2021).

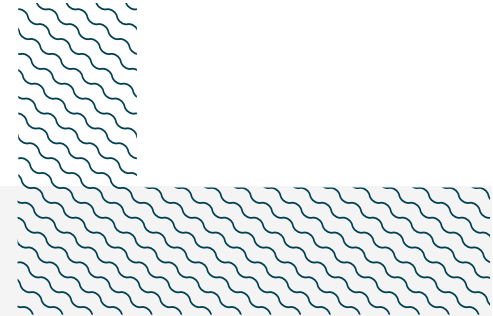
SUB-CRITERION C₁ – REPRODUCTIVE AREAS

Boncuk Bay is an important reproductive area for one shark species.

Sandbar Sharks have been reported to aggregate in this area since the 1990s and have been studied from 2001–2021 (Clò et al. 2002; Clò & de Sabata 2004; Öztürk 2006; Bileçenoğlu 2008; Filiz & Gulsahin 2015). Aggregations peak between May and June, when groups of up to 7 individuals are sighted at temperatures >20°C (Clò et al. 2002, 2003; Bileçenoğlu 2008; Akça 2010; Filiz & Gulsahin 2015; Filiz 2019). Aggregations are mainly composed of mature individuals with most of them being females. Some of these individuals have been resighted over five consecutive years (Clò & de Sabata 2004; de Sabata et al. 2006; de Sabata & Clò 2007). Many are in advanced stages of pregnancy based on their distended abdomens, and the presence of mating scars has been reported in multiple years (in 2002–2008 and 2013–2017), which indicates that mating is occurring in the area and that these reproductive processes occur regularly (Clò & de Sabata 2004; Öztürk 2006; Bileçenoğlu 2008; Filiz & Gulsahin 2015).

Due to the filming of a Sandbar Shark birth (Clò & de Sabata 2004), and the presence of a few neonates in catches over multiple years, it has also been suggested that this may be a pupping area for the species (Filiz & Gulsahin 2015; Bengil 2020).





Acknowledgments

Simona Clò (MedSharks), Eleonora de Sabata (MedSharks), Vahit Alan (Mediterranean Conservation Society), M. Tunca Olguner (Mediterranean Conservation Society), Funda Kök (Mediterranean Conservation Society), Zafer A. Kızılkaya (Mediterranean Conservation Society), and Emiliano García-Rodríguez (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2023 ISRA Region 3 - Mediterranean and Black Seas workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

Suggested citation

IUCN SSC Shark Specialist Group. 2023. Boncuk Bay ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

QUALIFYING SPECIES

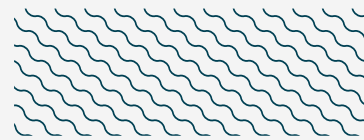
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met							
				A	B	C1	C2	C3	C4	C5	D1
SHARKS											
<i>Carcharhinus plumbeus</i>	Sandbar Shark	EN	0-280 m	X		X					

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
RAYS		
<i>Dasyatis pastinaca</i>	Common Stingray	VU
<i>Gymnura altavela</i>	Spiny Butterfly Ray	EN
<i>Raja clavata</i>	Thornback Skate	NT
<i>Rostroraja alba</i>	White Skate	EN

IUCN Red List of Threatened Species Categories are available by searching species names at www.iucnredlist.org. Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.





REFERENCES

- Akça N. 2010.** Underwater observations on the bioecology of *Carcharhinus plumbeus* (Nardo, 1827) inhabiting Boncuk Bay (Gökova Gulf). Unpublished Master Thesis, Adnan Menderes University, Aydin.
- Ardar M, Saydam E, Aytar SM, Uyan U. 2016.** Conservation of Sandbar Shark (*Carcharhinus plumbeus*) and breeding habitat in Boncuk Cove, Gokova Bay, Turkey. Final report Conservation Leadership Programme. <https://doi.org/10.13140/RG.2.2.34207.15527>
- Bengil GET. 2020.** Can opportunistic methodologies provide information on elasmobranchs? A case study from seas around Turkey. *Journal of Wildlife and Biodiversity* 4(Special issue): 68-77. <https://doi.org/10.22120/jwb.2020.136094.1185>
- Bileçenoglu M. 2008.** Conservation and monitoring project of sandbar sharks (*Carcharhinus plumbeus*) in Boncuk Bay, Gökova Special Environmental Protection Area. Ankara: Environmental Protection Agency for Special Areas, Ministry of Environment and Forestry, Republic of Turkey.
- Convention on Biological Diversity (CBD). 2023.** Central Aegean Sea. Available at: <https://chm.cbd.int> Accessed May 2023.
- Clò S, de Sabata E. 2004.** In the sharks' cradle. London: 8th European Elasmobranch Association Conference.
- Clò S, Modena M, de Sabata E, Aggio L, Vacchi M. 2002.** The sandbar shark *Carcharhinus plumbeus* (Nardo, 1827) in Turkish waters. Cardiff: 6th Annual European Elasmobranch Association Conference.
- Clò S, de Sabata E, Modena M, Aggio L, Vacchi M. 2003.** Photoidentification of Mediterranean sandbar sharks (*Carcharhinus plumbeus*). San Marino: 7th European Elasmobranch Association Conference.
- de Sabata E, Clò S. 2007.** A six-year photo-identification study of a population of sandbar sharks (*Carcharhinus plumbeus*) in the Mediterranean Sea provide evidence of their strong philopatry on an annual cycle and over multiple years. St. Louis: 23rd annual meeting of the American Elasmobranch Society.
- de Sabata E, Filieri F, Clò S. 2006.** Field study of a sandbar shark group in the Mediterranean Sea 2001-2006 photo-ID preliminary results: evidence of strong female philopatry. Hamburg: 10th European Elasmobranch Association Conference.
- Filiz H. 2019.** Year-round aggregation of sandbar shark, *Carcharhinus plumbeus* (Nardo, 1827), in Boncuk Cove in the southern Aegean Sea, Turkey (Carcharhiniformes: Carcharhinidae). *Zoology in the Middle East* 65(1): 35-39. <https://doi.org/10.1080/09397140.2018.1540148>
- Filiz H, Gulsahin A. 2015.** First 12 months of sandbar shark monitoring in Turkey. Lesvos island: 11th Panhellenic Symposium on Oceanography and Fisheries.
- Key Biodiversity Areas (KBA). 2023.** Key Biodiversity Areas factsheet: Datça and Bozburun Peninsula. Available at: <http://www.keybiodiversityareas.org/> Accessed May 2023.
- Öztürk B. 2006.** Save the sandbar sharks of Boncuk Bay, Turkey. In: Başusta N, Keskin Ç, Serena F, Seret B, eds. *Proceedings of the International Workshop on Mediterranean Cartilaginous Fish with Emphasis on Southern and Eastern Mediterranean*. Istanbul: Turkish Marine Research Foundation, 42-47.
- Rigby CL, Derrick D, Dicken M, Harry AV, Pacoureaux N, Simpfendorfer C. 2021.** *Carcharhinus plumbeus*. *The IUCN Red List of Threatened Species* 2021: e.T3853A2874370. <https://dx.doi.org/10.2305/IUCN.UK.2021-2.RLTS.T3853A2874370.en>
- Ünal V, Kızılkaya Z. 2019.** A long and participatory process towards successful fishery management of Gökova Bay, Turkey. In: Krueger CC, Taylor WW, Youn SO, eds. *Catastrophe to recovery: Stories of fishery management success*. Maryland: American Fisheries Society, 509-532. <https://doi.org/10.47886/9781934874554.ch21>