## Citizen science and social media posts: the recent sightings of the common dolphin (*Delphinus delphis*, Linnaeus 1758) in the Gulf of Trieste (North Adriatic Sea, Italy).



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WHO IS DELTA? DelTa comes from "Delfini e Tartarughe nel Golfo di Trieste" (Dolphins and Turtles in the Gulf of Trieste) and is a non-profit NGO founded in 2016. Our watchword is "Conservation through Knowledge", meaning that our objectives are the research and science dissemination aimed to the promotion of the culture for the respect for natural ecosystems and the conservation of marine and coastal ones, in collaboration and networking with local entities pursuing similar purposes. The monitoring activities are performed on opportunity platforms such as ferry and pleasure boats. In order to endorse citizen science outline, crew members and passengers are involved in the surveys too, enriching data gain even from social networks contents.



Figure 1: Sightings sources from 2016 to 2021

CITIZEN SCIENCE AND SOCIAL MEDIA POSTS: THE RECENT SIGHTINGS OF THE COMMON DOLPHIN IN THE GULF OF TRIESTE. After 10 years, in which there have been no reports or sightings except of individuals belonging to the species Tursiops truncatus (Montagu, 1821) and occasionally of Stenella coeruleoalba (Meyen, 1833), from May 2022 two individuals of common dolphin were repeatedly reported along the coasts of the Gulf of Trieste (Tab.1 and Fig. 2). Although they have not been the object of direct sightings during the usual monitoring activities in which DelTa Association has been engaged since 2016, it has nonetheless been possible to trace the movements of the pair through the observations that citizens, pleasure boats crews and operators have made directly to the competent authorities and through information gathered from social media. Citizen Science proves to be a useful tool for gathering information: awareness-raising activities and the setting up of specific channels for reporting data on the presence of the species directly to researchers can be a valuable tool to support knowledge.

STUDY AREA. The Gulf of Trieste (Kralj et al., 2019).

## Mediterranean Sea

ID	Date	Coordinate*		~
		Latitude	Longitude	Source
	13/5/2022	45.5547778	13.71361667	
	21/8/2022	45.6113611	13.74289722	
3	11/9/2022	45.6860611	13.74294722	
4	22/9/2022	45.6521944	13.76029167	
	15/10/2022	45.6498694	13.7232	
6	19/10/2022	45.6352861	13.74208333	
	20/10/2022	45.685625	13.7434	
	24/10/2022	45.6507611	13.74813889	
	25/10/2022	45.6367222	13.74813889	
10	26/10/2022	45.6536694	13.76188333	
	10/11/2022	45.6536694	13.76188333	
	20/12/2022	45.6531556	13.75933611	
13	09/01/2023	45.6326667	13.74293056	
	30/1/2023	45.6107861	13.78216389	
15	31/01/2023	45.6107861	13.78216389	
	13/02/2022	45.6245111	13.74633333	
	04/03/2023	45.6245111	13.74633333	
	06/03/2023	45.6245111	13.74633333	

Table 1: Sightings information

All sightings are Delphinus delphis species

Coordinates are approximated based on the sighting area indicated The number of indivials is always two. HISTORY OF COMMON DOLPHIN IN THE GULF OF TRIESTE. Since 1980, information on the presence of cetaceans in the northern Adriatic Sea has mostly come from sightings and occasional reports; surveys at sea only began at the end of 1980, and from these we know that there has been a major decline of one species, considered regular until the 1970s: *Delphinus delphis* (hereafter common dolphin). The literature suggests that anthropogenic impact may be one of the main causes of the reduction in the presence of cetaceans in this area, to the extent that between 1980 and 1990 the common dolphin is considered to have geographically disappeared from this region (Bearzi et al., 2004). The Mediterranean subpopulation of *Delphinus delphis* has been listed as Endangered in the Internation Union for Conservation of Nature (IUCN) Red List of Threatened Animals (Bearzi et al., 2021).

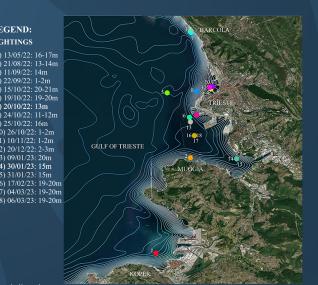


Figure 2: Sightings points

REFERENCES:

Bearzi, G., Genov, T., Natoli, A., Gonzalvo, J. & Pierce, G.J. 2021. Delphinus delphis (Inner Mediterranean subpopulation). The IUCN Red List of Threatened Species 2021: c.T189865869A189865884. https://dx.doi.org/10.2305/IUCN.UK.2021-3.RLTS.T189865869A189865884.en. Bearzi G., Holcer D., Notarbarolo di Seiara G. 2004. The role of historical dolphins takes and habitat degradation in shaping the present status of northern Adriatic cetacans. Acquatic conservation: marine and freshwater conservatio