

WORKSHOP: «PROGETTI LIFE D'ABRUZZO»

Pescara, 10 marzo 2023



Interazioni tra cetacei e pesca: *L'esperienza del progetto Life DELFI*

Alessandro Lucchetti, Daniel Li Veli

CNR-IRBIM, Ancona



Life DELFI Project

Dolphin Experience: Lowering Fishing Interactions



2020 - 2024



<https://lifedelfi.eu/>

Coordinating beneficiary



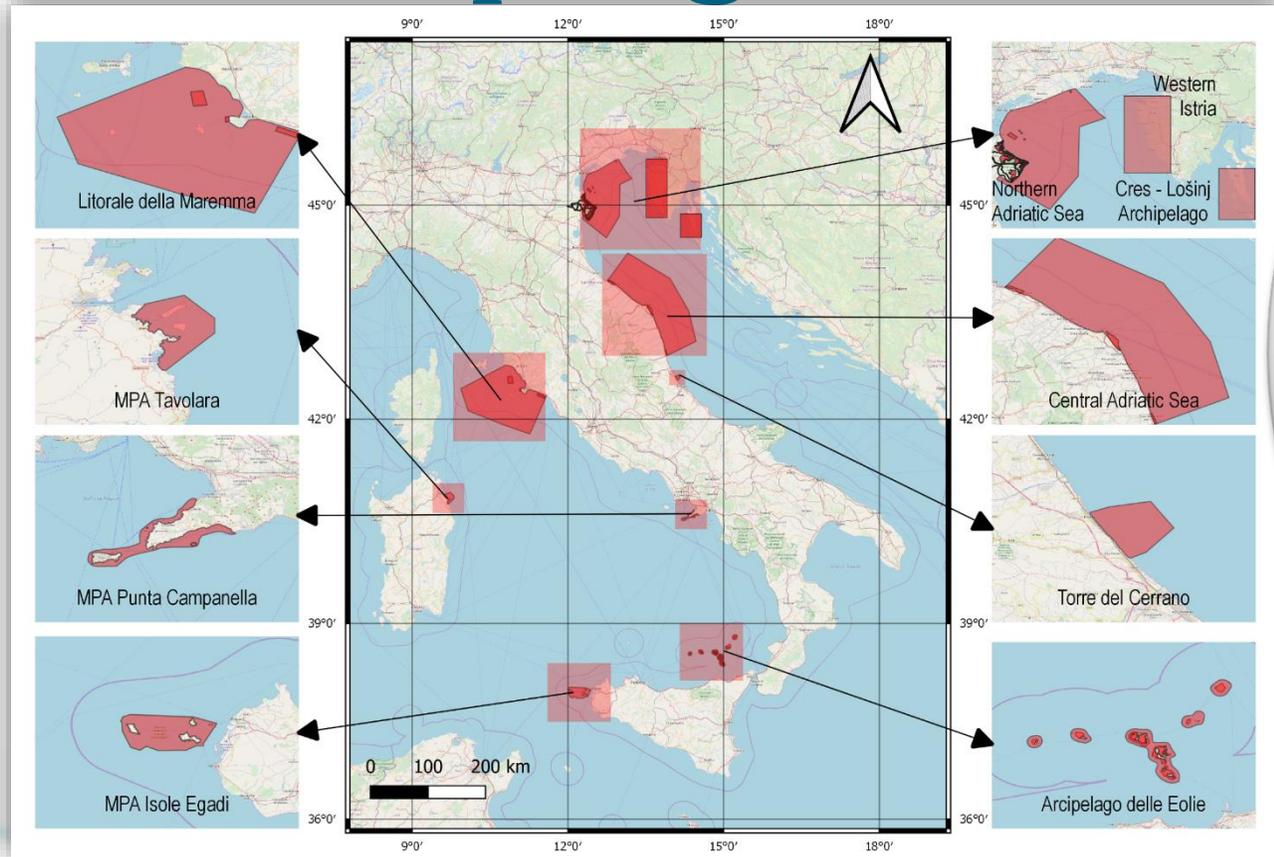
Associated beneficiary



UNIVERSITÀ DEGLI STUDI DI PADOVA



Aree di progetto



8 in Italy (4 MPAs)

2 in Croatia



32 SIC/SAC and **8** SPA

Tursiope

Tursiops truncatus



Tursiope

Tursiops truncatus

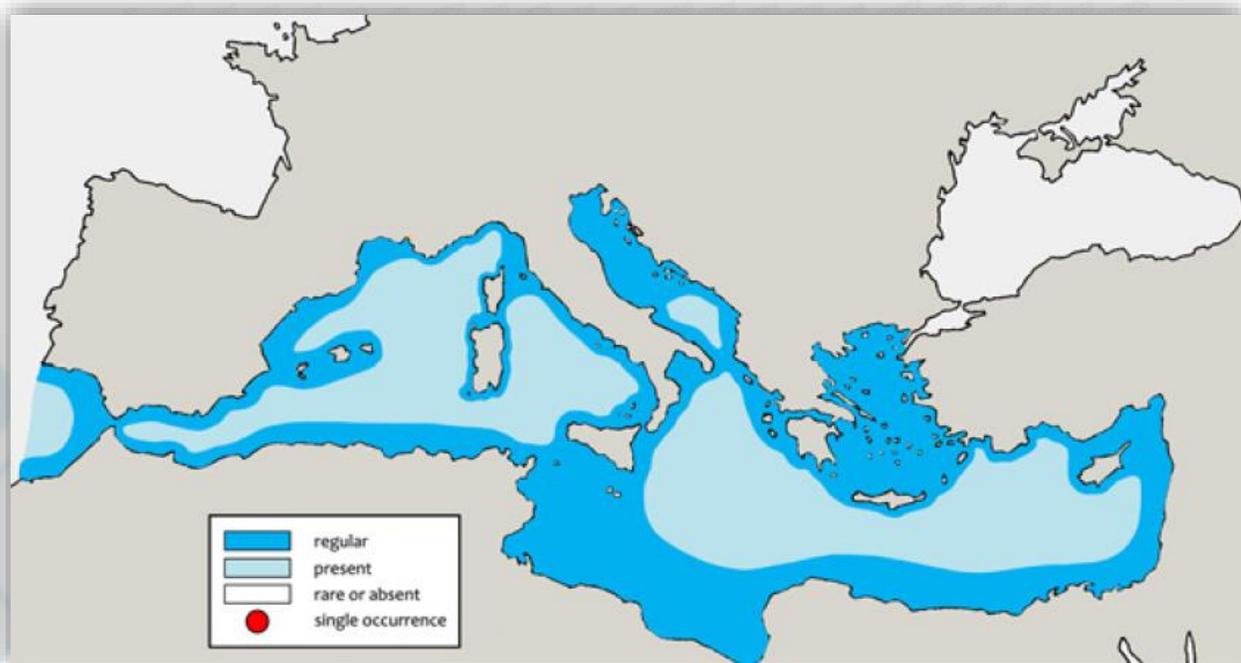


LEAST
CONCERN
LC



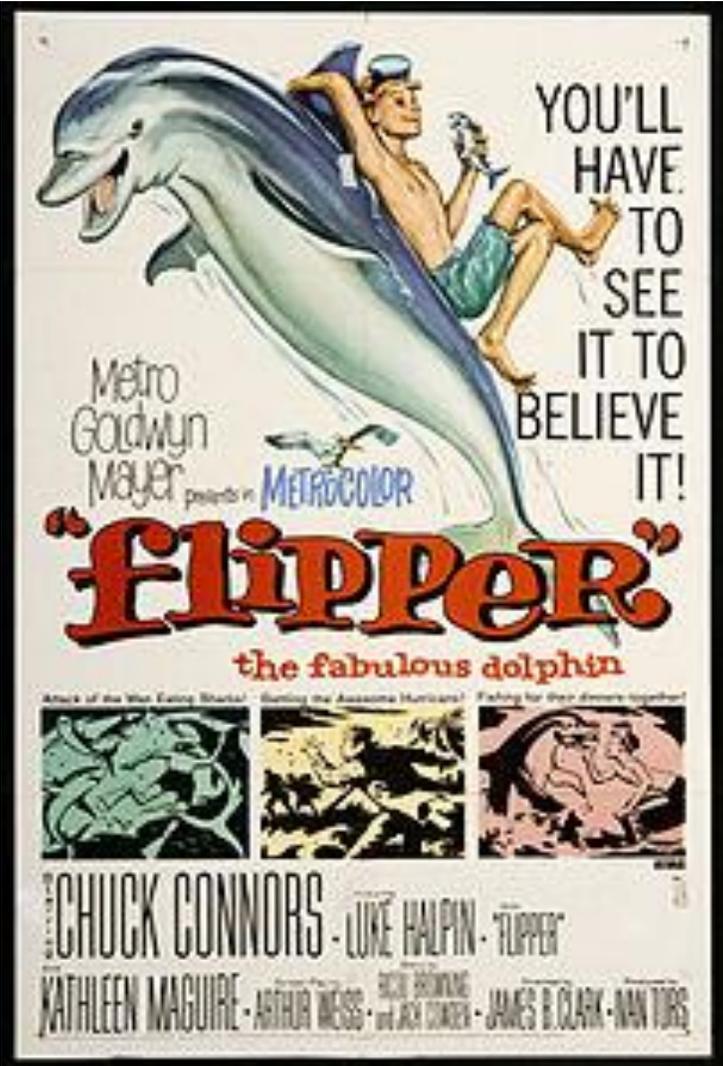
IDENTIKIT

- ✓ Corpo robusto;
- ✓ rostro corto e tozzo;
- ✓ colore grigio con varie sfumature sul dorso e bianco sul ventre;
- ✓ Lunghezza: 2.5 – 3.5 m;
- ✓ Peso: fino a 400 kg.



Tursiope

Tursiops truncatus

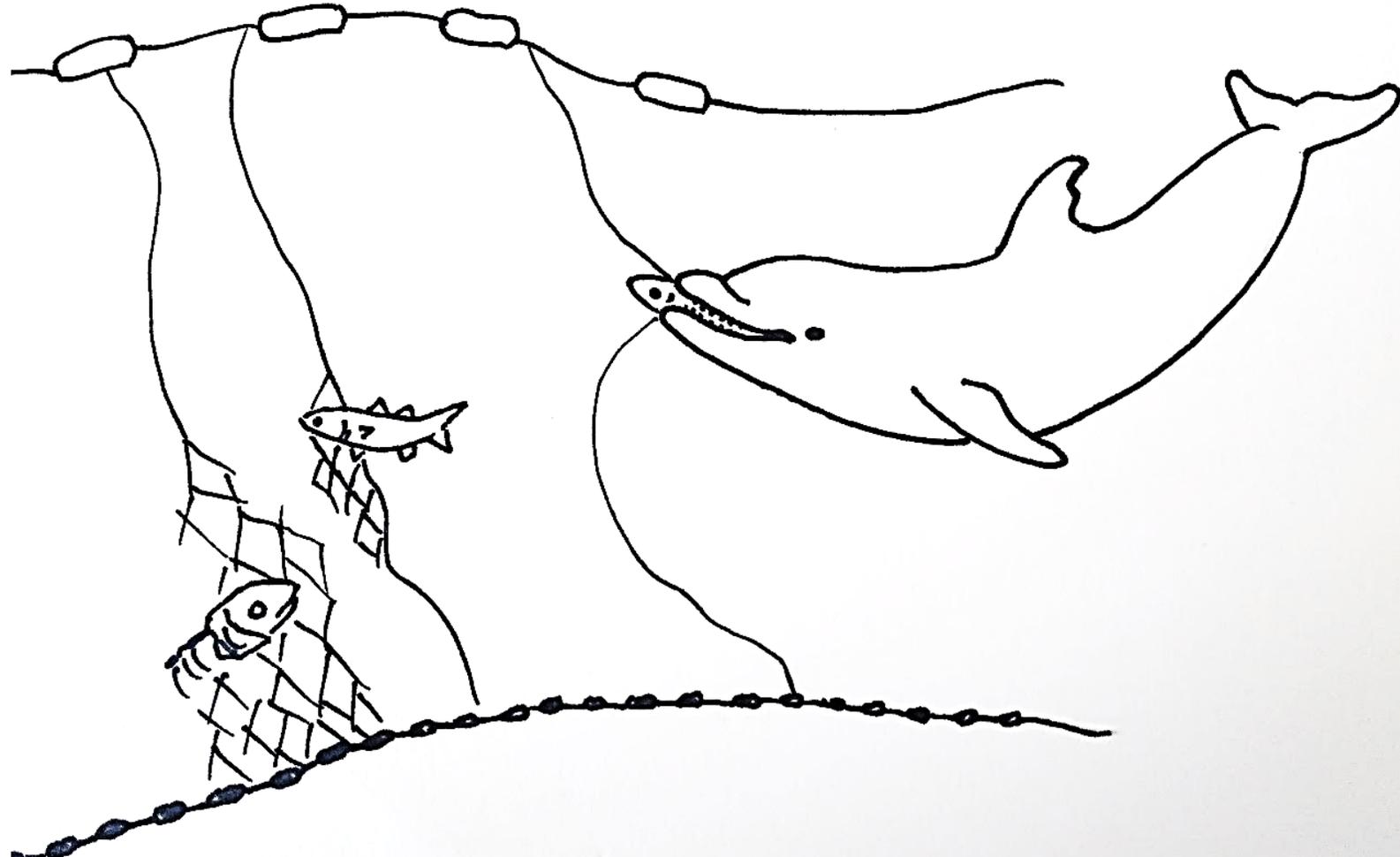
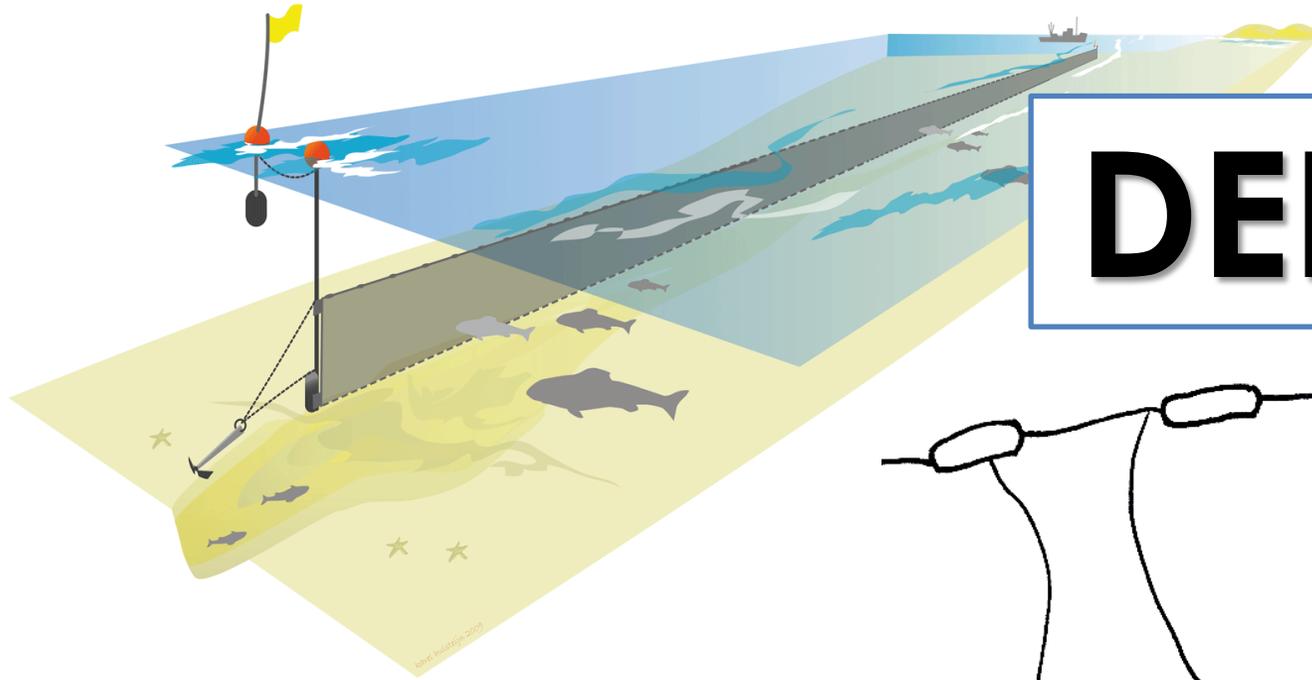




Torre
del Cerrano
Area Marina Protetta



DEPREDAZIONE



Tursiope

Tursiops truncatus



SHOT ON MI 9T PRO
AI TRIPLE CAMERA

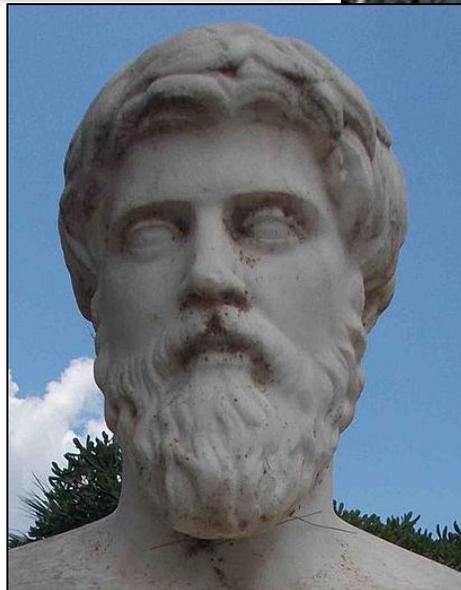
“inbide, calco te”
Ostia - Taberna dei pescivendoli



Anfiteatro Romano - Ancona



Palazzo di Knossos - Creta (Grecia)



„Quando viene catturato, il delfino, non appena si accorge di essere finito nelle maglie della sagena, rimane fermo senza agitarsi; e per giunta è felice, perché si rimpinza senza alcuno sforzo con l'enorme quantità di pesci impigliati nella rete. Quando infine è in prossimità della terraferma, rosicchia la rete e ne sguscia fuori.“

Plutarco - De sollertia animalium - cap. 26



Fishery-dolphin conflict: The fisherman's perspective

Daniel Li Veli

CNR – IRBIM, Ancona (Italy)

IRBIM DAY 2021

RESULTS

3

1 INTRODUCTION

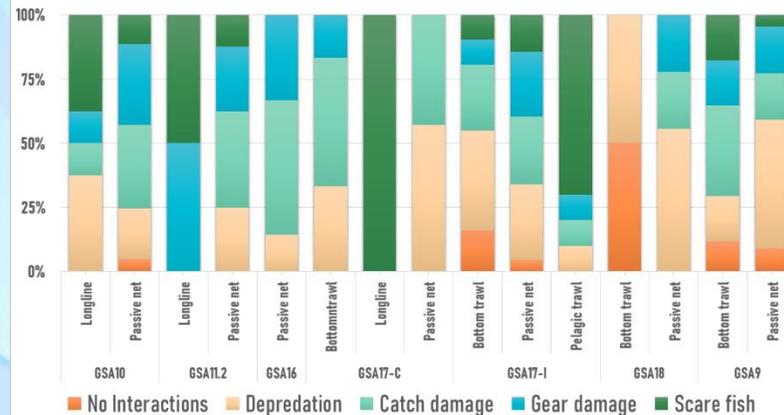
Interactions between cetaceans and fisheries in the Mediterranean Sea are probably date back to man's first attempt to catch a fish using nets.

- ❑ Fisheries may affect dolphins directly through the accidental entanglement and capture (bycatch), or indirectly, as both dolphins and fishermen are competing for similar food resources in the same area.
- ❑ On the other hand, dolphins are impacting fisheries primarily by removing caught fish and thus damaging the fishing gears. This interaction known as depredation is responsible for substantial economic losses and often creates hostility in fishers, fueling the conflict between them and cetaceans.



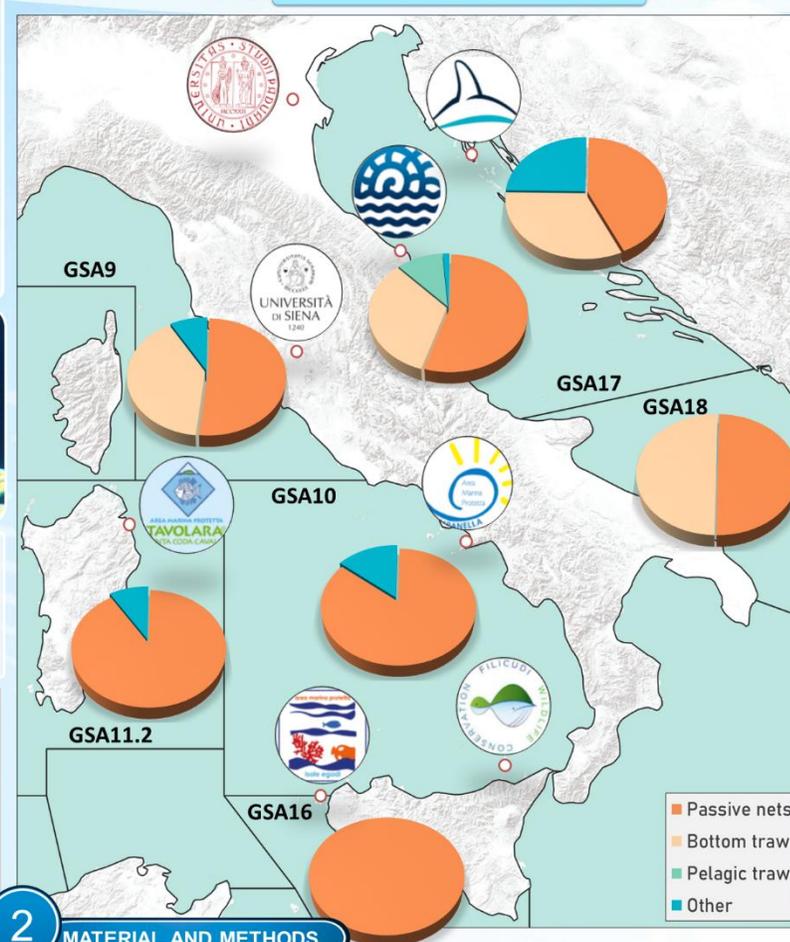
- AIMS
- 1) Characterization of the interactions between fishing activities and bottlenose dolphins (*T. truncatus*) in relation with the geographical distribution;
 - 2) Characterization and evaluation of the economic damage caused by the interactions;
 - 3) Identify any hot-spot areas of fishing-dolphin interaction;
 - 4) Assess the perception of the fishing sector on the presence of dolphins.

TYPE OF INTERACTION

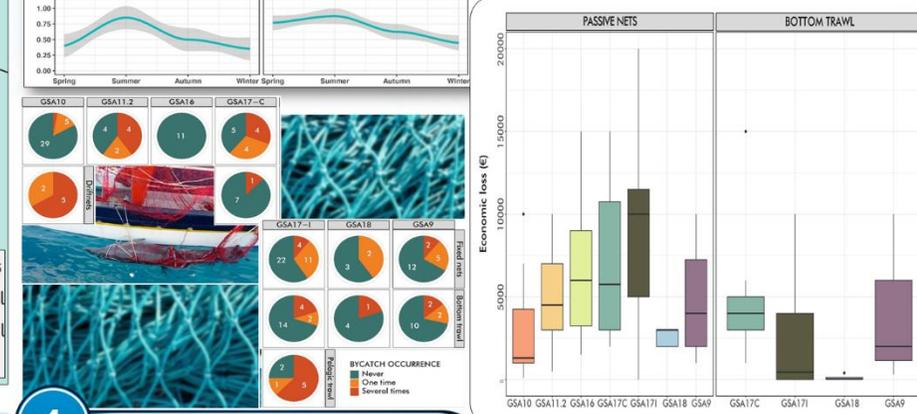
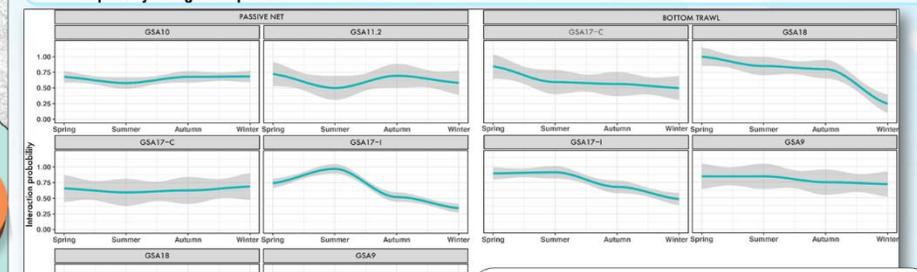


2 MATERIAL AND METHODS

- ❑ Data were collected through face to face interviews with fishermen selected via opportunistic and 'snowball' sampling.
- ❑ A single questionnaire consisted of 3 sections and 20 questions was used for all fisheries and fishing methods.
- ❑ Interaction probability was calculated for each gear and GSAs by seasons.



- ❑ A total of 209 interviews were collected between July and November 2020 in 9 different Italian and Croatian macro-areas, covering 6 Geographical Sub-Areas (GSAs).
- ❑ Eight fishing gears were reported by fishermen of the different areas as the primary gears: passive nets (both fixed and drifting nets), bottom trawls, pelagic trawls, and others (longlines, handlines, pots, purse seines, spearfishin).
- ❑ The fishing gear interacting with dolphin were primarily fixed nets, with economic loss up to 10000 € (on average).
- ❑ Around 35% of the interviewees has caught dolphins at least once in their fishing activity. The survey also confirmed that all fishermen who, in the past, used the large driftnets "spadara" (currently forbidden) frequently caught dolphins.



4 DISCUSSION AND CONCLUSION

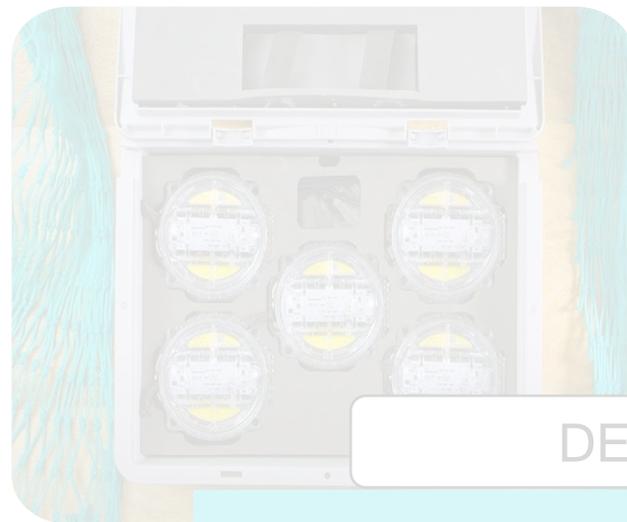
- ❑ Despite the potential bias due to the small sample of fishermen for some areas, the present study revealed that the coastal fisheries using passive nets are those who interact the most with dolphins.
- ❑ These techniques are those with the highest economic loss and bycatch probability.
- ❑ Current legislation (Reg. EU 2019/1241) does not include set nets within the fisheries with compulsory observer schemes to assess the extent, despite they are considered a high-risk fishery for dolphin by-catch.

2. Conservation Actions

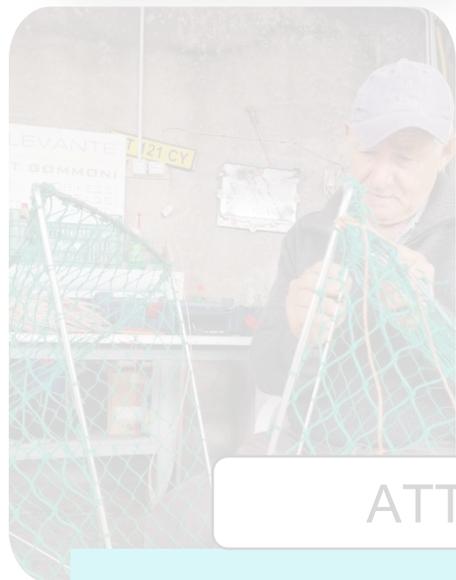


DiD® 01

DETERRENTI ACUSTICI



DETERRENTI VISIVI



ATTREZZI ALTERNATIVI



CORSI DI DOLPHIN WATCHING

ALTRO

2. Conservation Actions

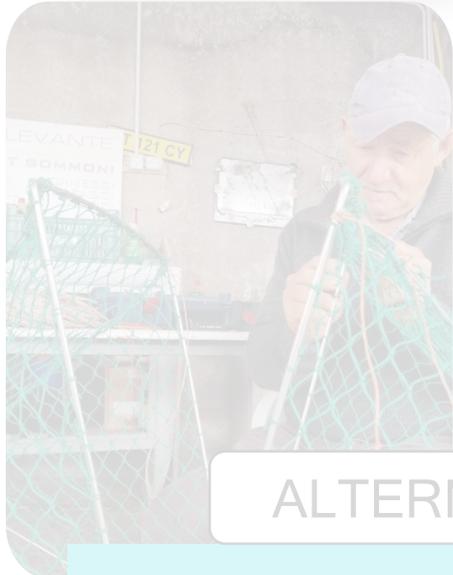


DiD® 01

ACOUSTIC DETERRENT DEVICES



VISUAL DETERRENT DEVICES



ALTERNATIVE FISHING GEARS



RESCUE TEAMS E FORMAZIONE

ALTRO

2. Conservation Actions

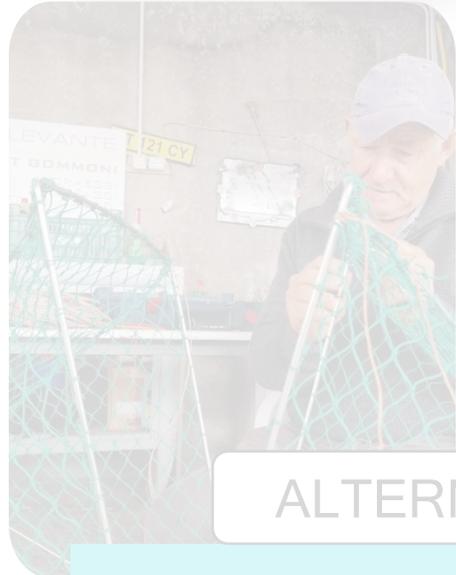


DiD® 01

ACOUSTIC DETERRENT DEVICES



VISUAL DETERRENT DEVICES



ALTERNATIVE FISHING GEARS



ALTRO

CITIZEN SCIENCE

Dissuasore Interattivo per Delfini

DiD-01

Ideato per emettere gli impulsi sonori solo dopo aver riconosciuto la presenza del delfino nell'area

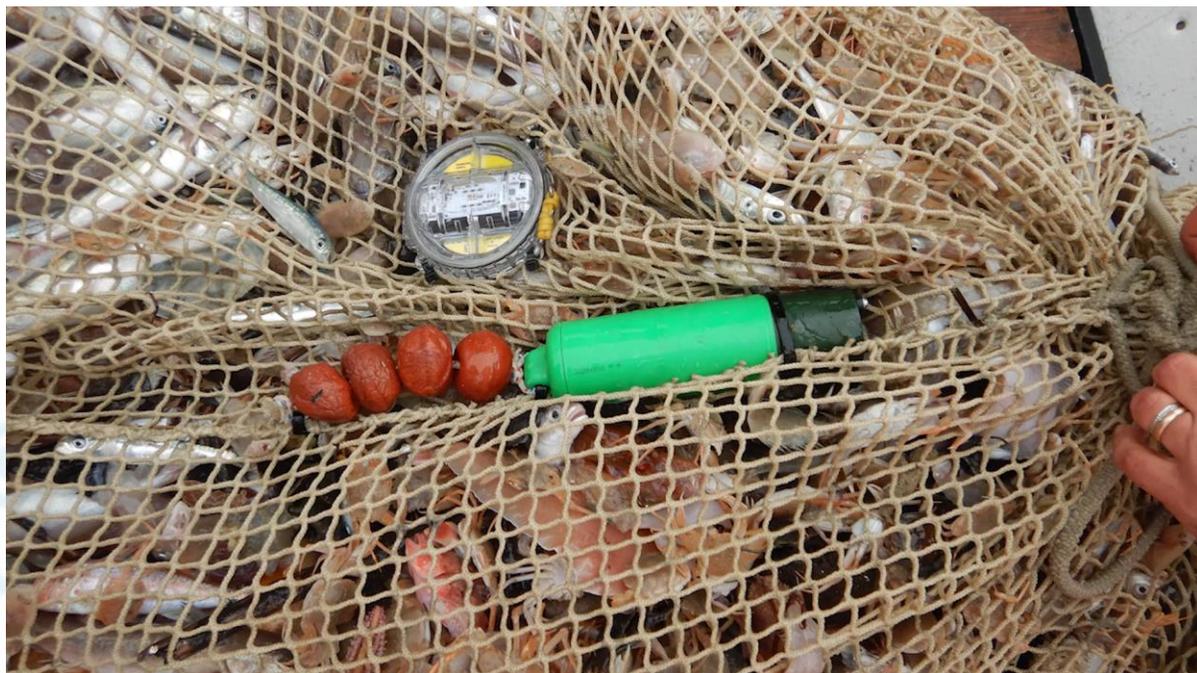


- ✓ Ridurre al minimo l'effetto «dinner bell»
- ✓ Ridurre l'inquinamento acustico
- ✓ Migliorare la durata del dispositivo

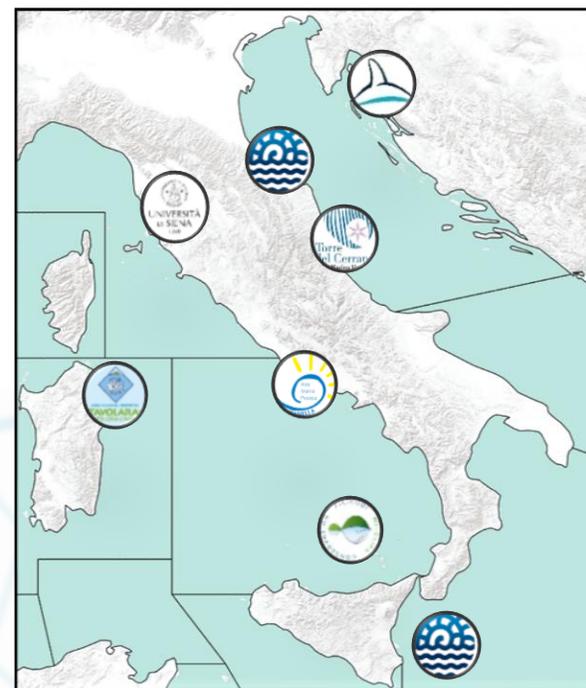


DiD® 01

RETI DA POSTA



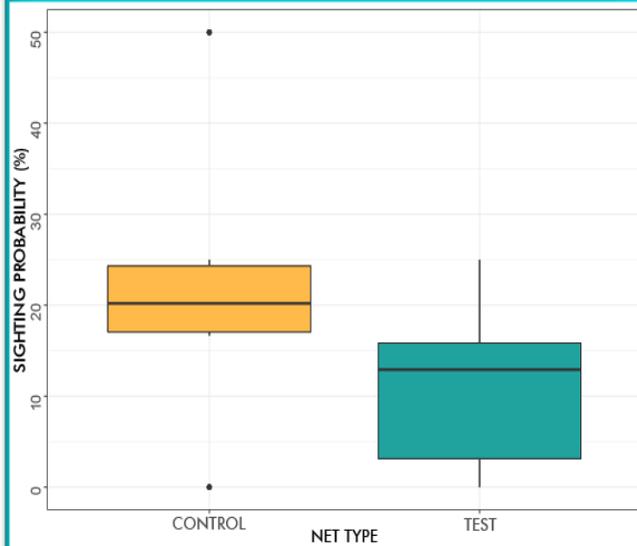
RETI A STRASCICO



Dal 2021 ad oggi:

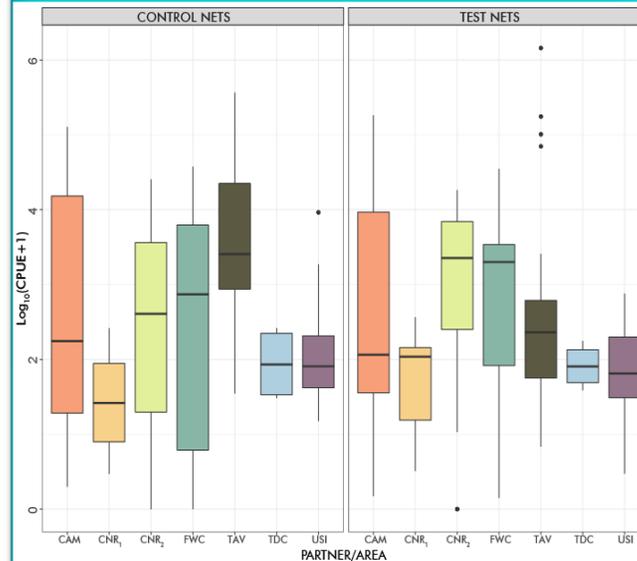
- > 600 uscite in mare
- ~ 100 pescatori coinvolti
- 9 macro-aree tra Italia e Croazia

INTERAZIONE



In termini di evidenze di depredazione

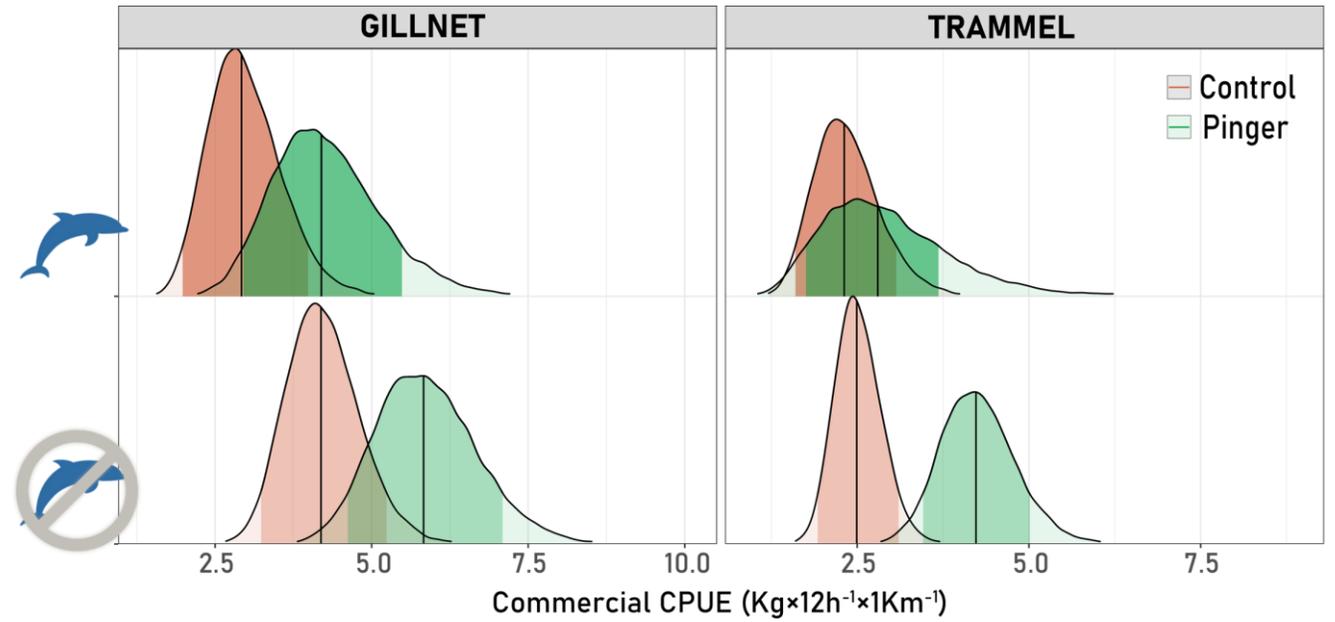
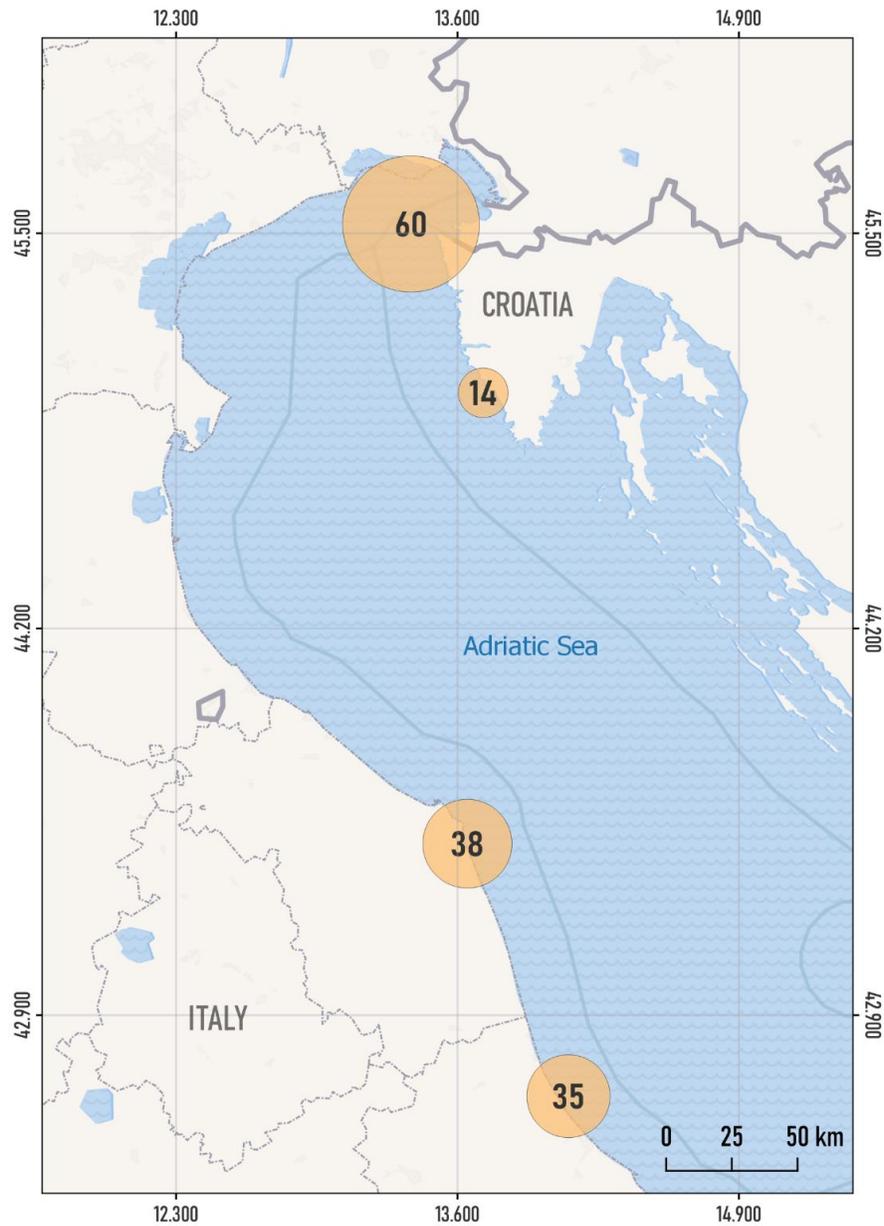
CATTURE



Confronto tra reti con e senza pinger

Risultati Preliminari

- Efficacia variabile in funzione dell'area
- Valori di catture confrontabili tra reti con e senza pinger



145 trips

46 fishers

Deterrenti **Visivi**

Green LEDs

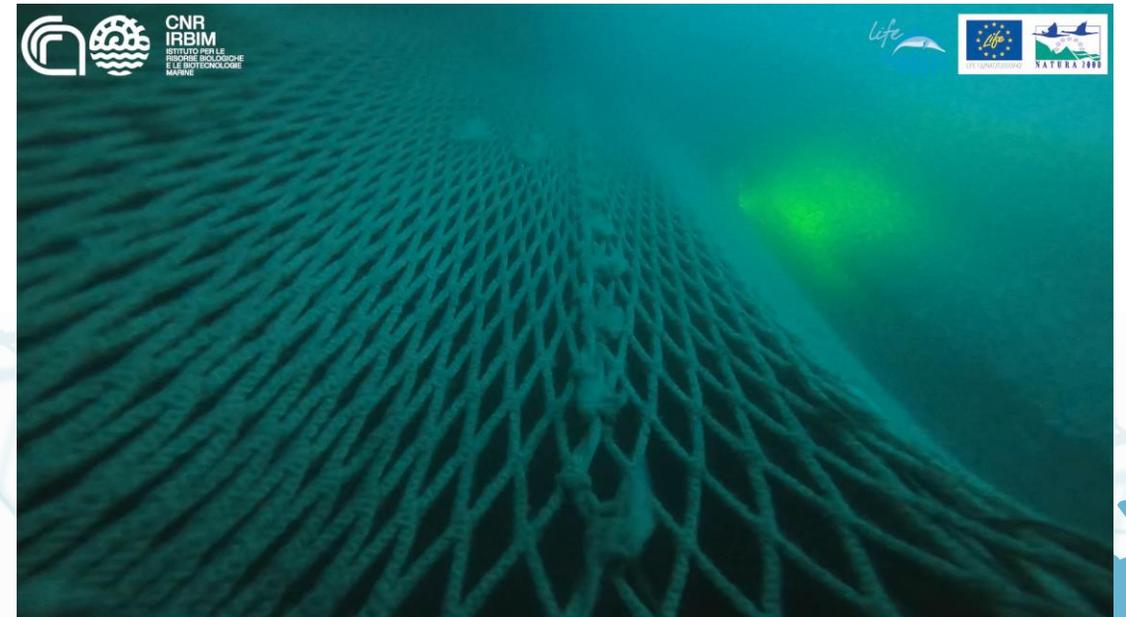
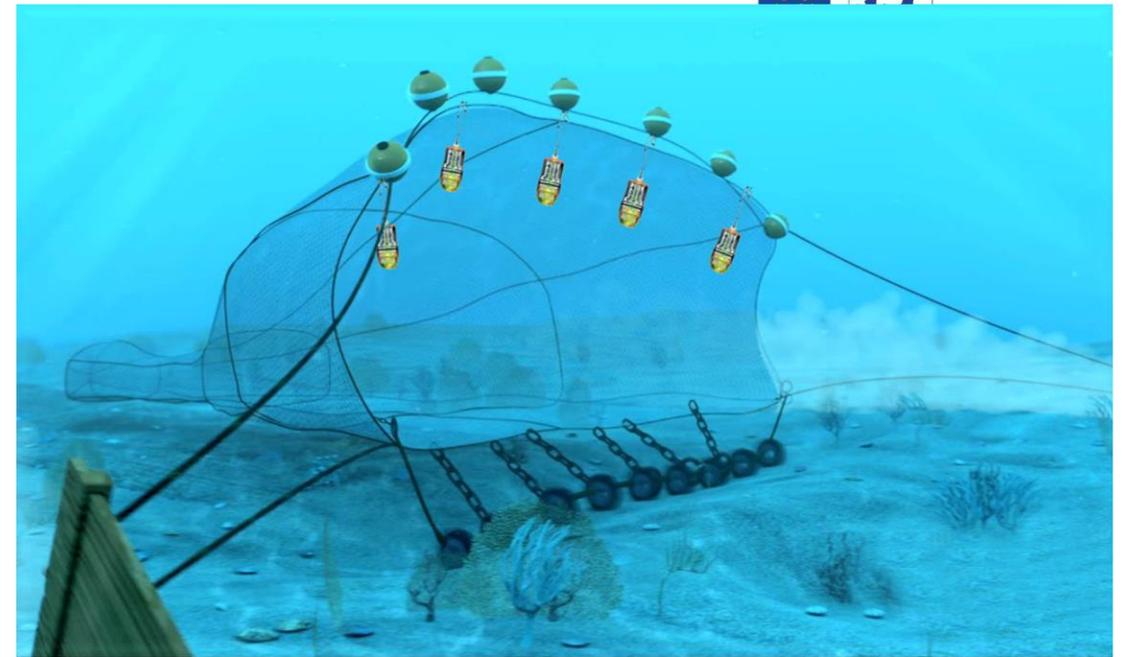
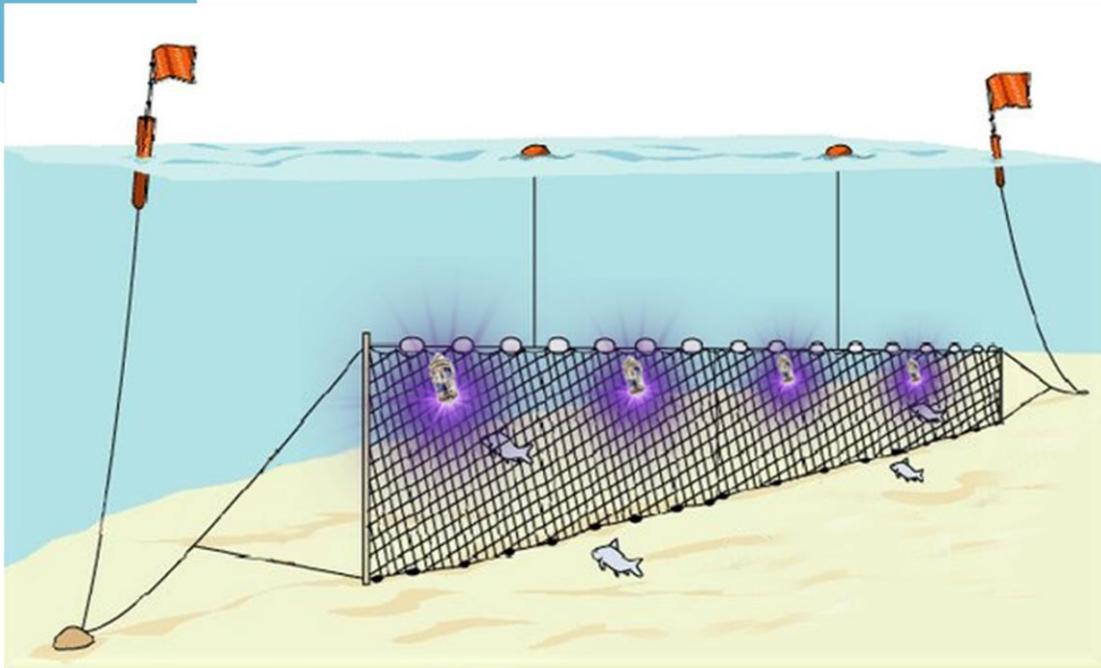


UV-LEDs



PISCES





Attrezzi **alternativi**



VS



**Nasse come attrezzo alternativo,
perché?**

- Attrezzi LIFE – Low Impact and Fuel Efficient
- Elevata selettività e sostenibilità
- Maggiore qualità delle catture



Gli obiettivi

- ✓ **Limitare l'uso delle reti da posta**
Almeno nei periodi ed aree di maggior presenza di delfini
- ✓ **Introdurre l'uso di nuove tecniche**
Poco conosciute a livello locale e maggiormente sostenibili

Gli attrezzi **alternativi**

Nasse collassabili

Alternative a tramagli già testate con successo in altri progetti



Nasse per canocchie

Alternative a reti ad imbrocco nel periodo estivo



Nasse collassabili



Nasse per canocchie



Gli attrezzi **alternativi**



Nasse per canocchie



Nasse collassabili

DIAMO I NUMERI!

530

NASSE COLLASSABILI

330

NASSE PER CANOCCHIA

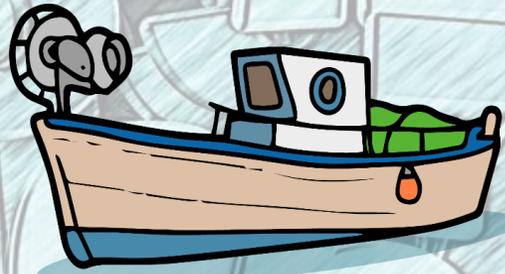
150

PINGER INTERATTIVI

110

DETERRENTI VISIVI





84 IMBARCAZIONI



152 PESCATORI







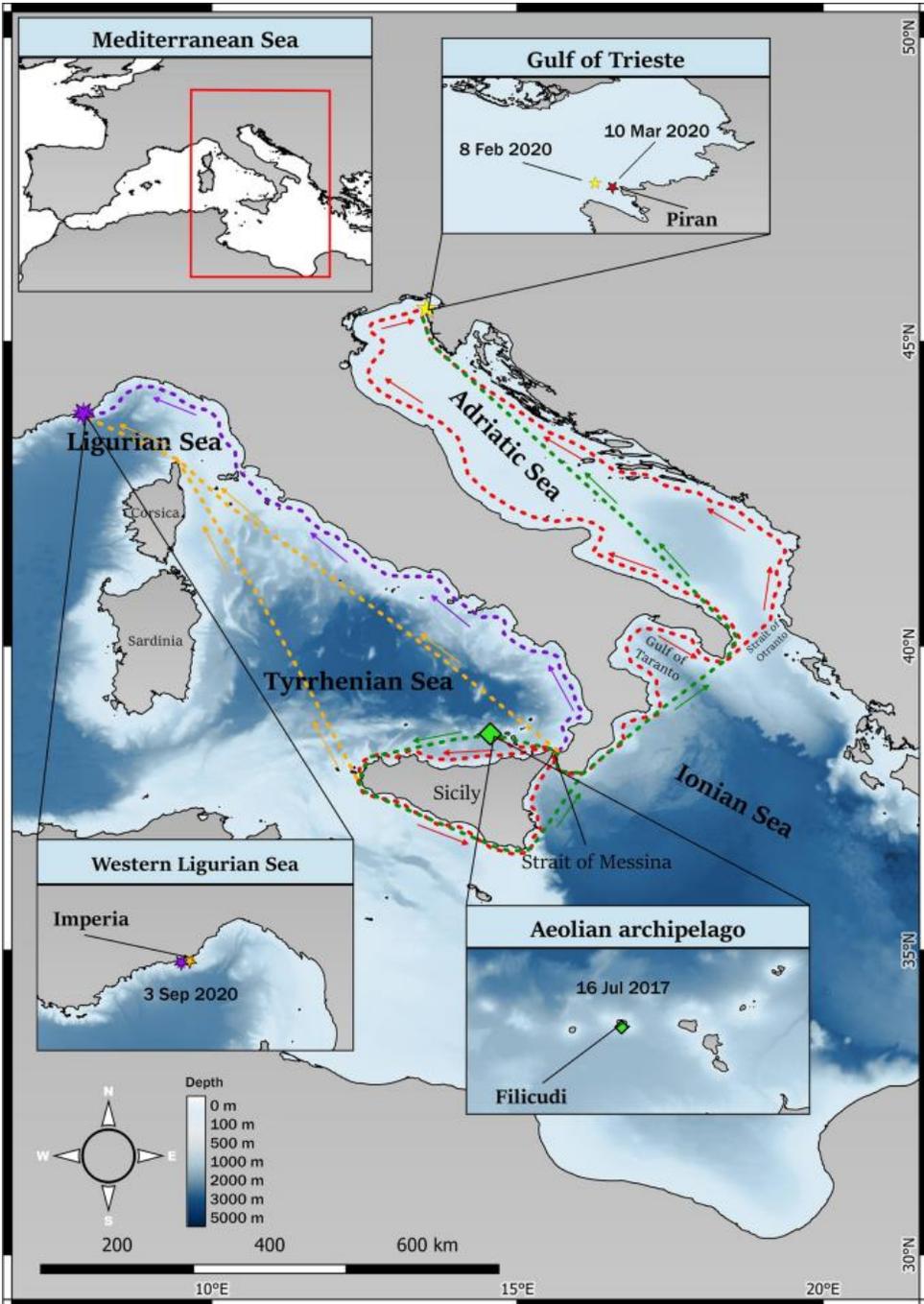


**CNR
IRBIM**
ISTITUTO PER LE
RISORSE BIOLOGICHE
E LE BIOTECNOLOGIE
MARINE



LOWERING FISHING INTERACTIONS





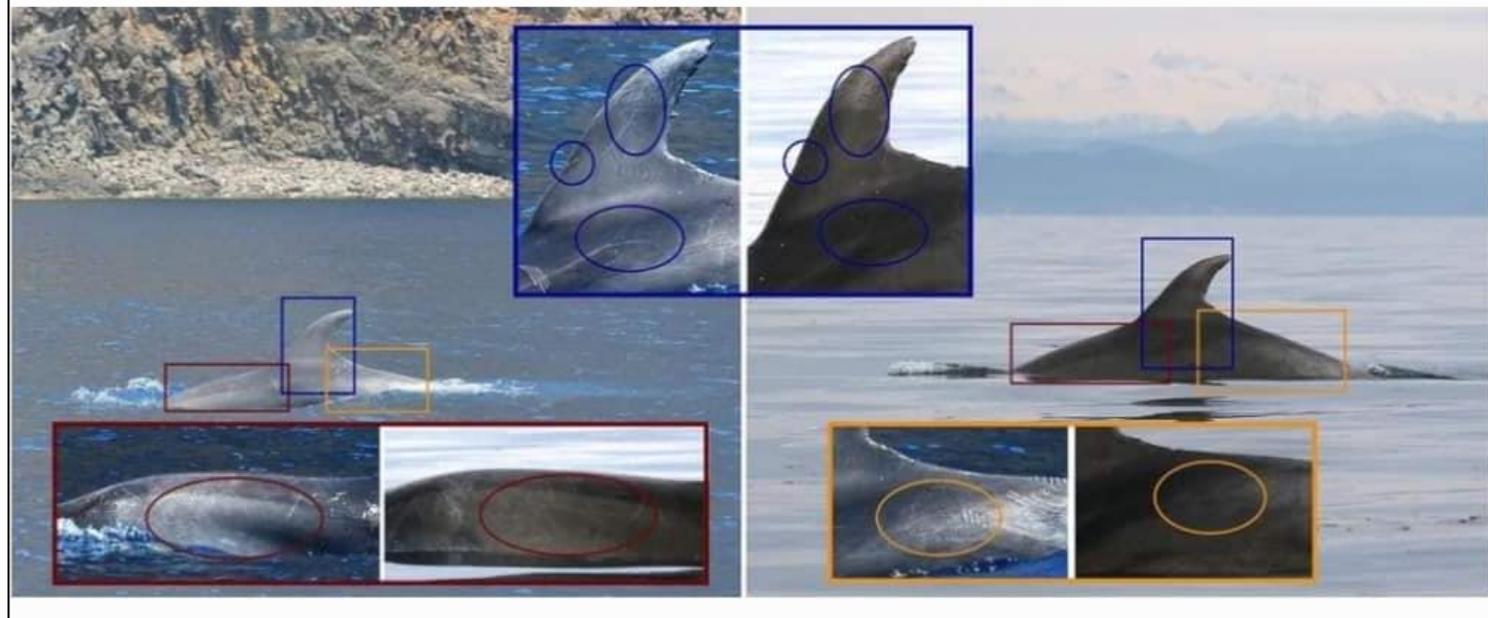
Short Communication | [Open Access](#) | [Published: 13 December 2022](#)

The longest recorded movement of an inshore common bottlenose dolphin (*Tursiops truncatus*)

[Tilen Genov](#) , [Jure Železnik](#), [Chiara Bruno](#), [Davide Ascheri](#), [Elena Fontanesi](#) & [Monica Francesca Blasi](#)

[Mammalian Biology](#) (2022) | [Cite this article](#)

925 Accesses | 13 Altmetric | [Metrics](#)



Dolphin **Watching**

Obiettivo

Lo scopo di questi corsi è quello di “trasformare” i pescatori in operatori qualificati in grado di promuovere e gestire le attività di osservazione dei delfini.



Rescue Teams

Obiettivo



Formare squadre di pronto intervento in supporto alla rete nazionale spiaggiamenti e diffondere buone prassi tra i pescatori.



29 maggio 2022

Area Marina Protetta Torre del Cerrano



■ Campagne di foto-identificazione





rilascio della tartaruga marina con "La Goletta dei Delfini"

nell'ambito del progetto LIFE Delfi



03 agosto 2022 dalle 16:30 presso l'Infopoint*
- *spiaggia antistante il sottopassaggio di accesso alla Torre -



LIFE 18/NAT/IT000942

Presso lo stand potrai conoscere il progetto LIFE Delfi e la tartaruga "Sidonia", curata e riabilitata dal Centro Studi Cetacei nel CRTM "Luigi Cagnolaro" (PE)

In collaborazione con la

Capitaneria di Porto di Pescara





marine RANGER



<https://marine-ranger.org/>

marine RANGER



~ 500 avvistamenti

5 bioblitz

PRIMO BIOBLITZ NELL'AMP TORRE DEL CERRANO

INIZIATO
12.08.2022

FINISCE
26.08.2022



GIORNI
RESIDUO

0

AVVISTAMENTI
ACQUISITI

6

RANGER CHI
SONO

57



**STAI PARTECIPANDO
IN QUESTA MISSIONE**

● **INFORMAZIONI SULLA MISSIONE**



Contribuisci direttamente al progetto LIFE Delfi

DIVULGAZIONE



A photograph of a dolphin smiling and looking out from a large, light-colored fishing net. The dolphin's mouth is open, showing its teeth, and it has a happy expression. The background is a deep blue, suggesting an underwater environment. A thought bubble is positioned to the right of the dolphin, containing the text 'Grazie per l'attenzione!'.

Grazie per
l'attenzione!