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**RESTORE OUR OCEAN AND WATERS**

2<sup>nd</sup> EU Blue Parks Community Workshop

7 March 2024



# LIFE Delfi and LIFE TartaLife: On the coexistence between professional fishing and protected species within MPAs

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<https://lifedelfi.eu/>





LOWERING FISHING INTERACTION  
*Life*



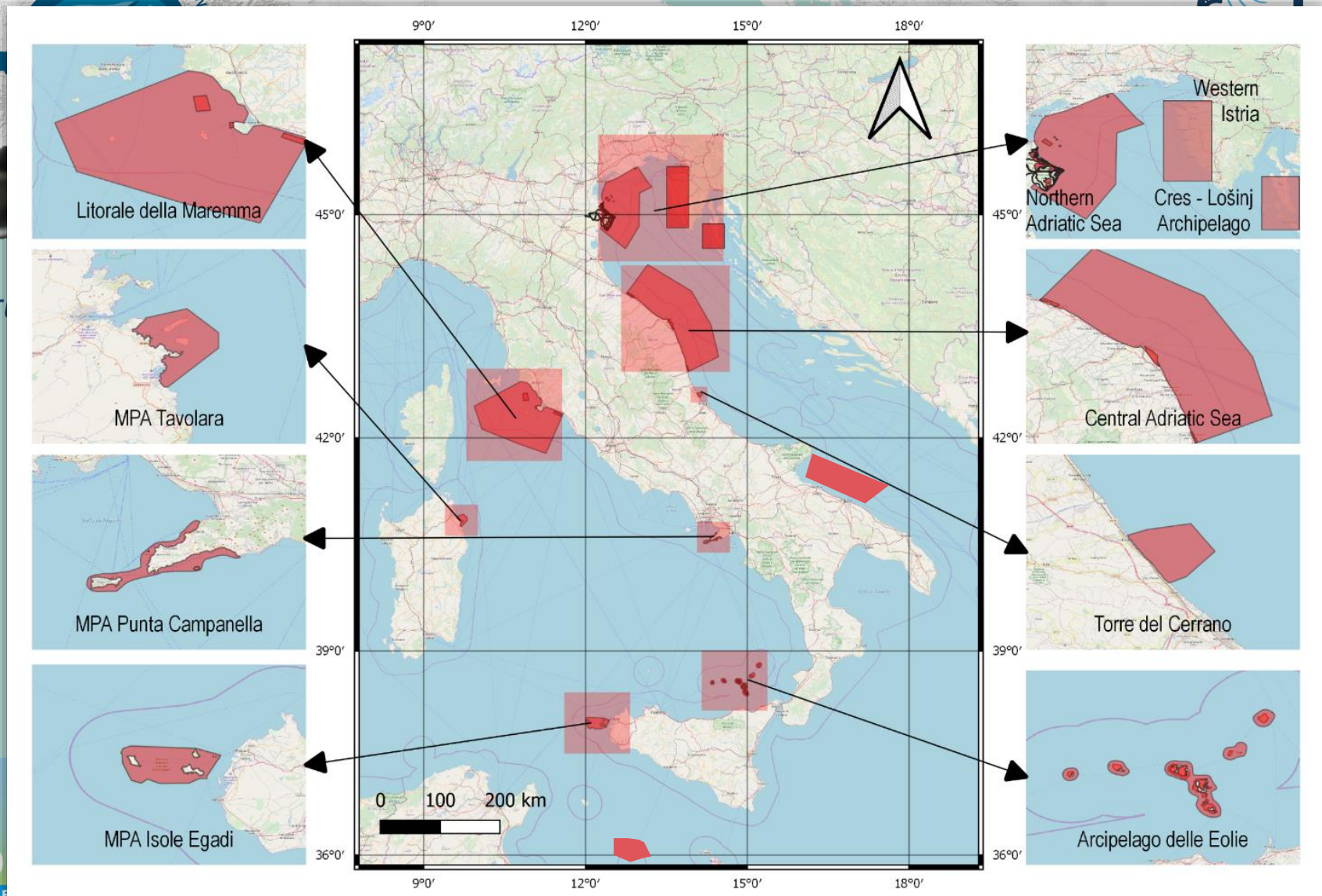
MarthaLife



*Tursiops truncatus*



*Caretta caretta*



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# Main issues



## Bycatch



## Depredation



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# Main issues



## Bycatch

## Depredation



## Ingestion of net: Delayed mortality

## Catch damage

# Economic loss up to 10K €



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# Main issues



## Bycatch



## Direct and Delayed Mortality







# Measures to reduce bycatch

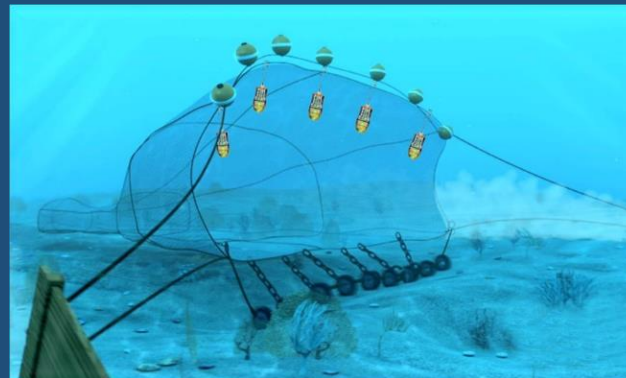
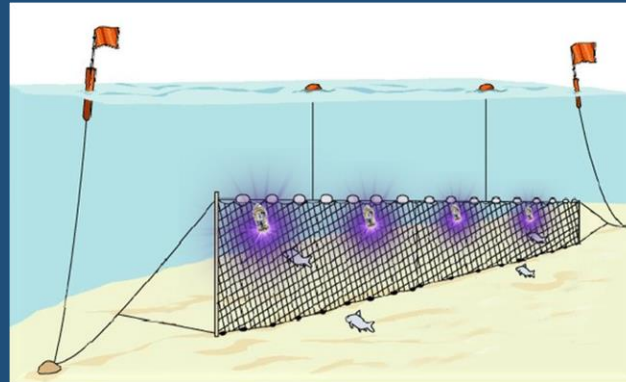


## Deterrent devices

### Acoustic deterrents



### Visual deterrents



### Alternative gears



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# Measures to reduce bycatch



## Deterrent devices

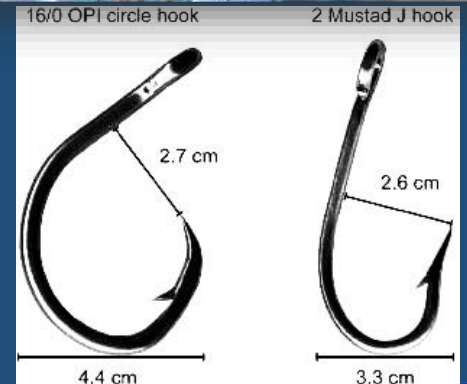
### Turtle excluder devices



### Visual deterrents



### Alternative gears





# Measures to reduce bycatch



## Alternative activities to fishing



### Dolphin Watching

The purpose of these courses is to "transform" fishers into qualified operators who can promote and manage dolphin watching activities. Allow fishermen to supplement their income through the development of dolphin watching activities.



- Responsible dolphin watching
- Best practice vs unacceptable practices
- Boat-based dolphin watching
- Photo-identification
- Environmental sustainability
- Social sustainability
- Economic sustainability







# Measures to reduce bycatch



## Information desks for fishers

Bureaucratic complications often limit fishermen's requests for funds

In order to facilitate the replacement of traditional and low impact fishing gear, an information, advice and technical assistance service will be activated to the fishermen, who will be able to assist in the preparation of documentation for the request for contributions for the future European Maritime and Fisheries Fund (EMFF) for the period after 2014-2020.

The information desks will also provide support to fishermen for the production of all the administrative procedures necessary to undertake dolphin watching activities.

- MPA Isole Egadi
- MPA Torre del Cerrano
- MPA Isola di Tavolara (with local FLAG)
- Aeolian Archipelago
- Central Adriatic (CNR)
- North Adriatic (UNIPD)
- Talamone (UNISI)







# How to introduce new measures/devices



Two types of advanced technology can be introduced in a fisheries:

- some technology can be adopted by fishermen **voluntarily** – e.g. to help catch more fish – a clear short-term benefits not obvious.
- Some technologies can be introduced as **management measure** to ensure a fishery is sustainable (BRD). In this case fishermen may need persuasion – e.g. more selective fishing gears to reduce discards – a longer-term benefit which is not obvious.

The first may need to be controlled or at least monitored (to avoid overexploitation)

The second may need to be initiated by management





# How to introduce new measures/devices



Before introducing a new technology it should take into account

- **What are the problems to be solved** and what are the targets (high discards of young fish (which species?, high discards of non-target species)
- **Which of the possible solutions is best:** a need to extend fishing to new areas, uneconomic fishing operations, new gears, modified gears etc

**Experimental trials** are essential in order to find out the right setup and to reduce the short term economic loss





# How to introduce new measures/devices



Before introducing a new technology it should take into account: main issues

There are usually 3 issues

- the **practical problem** of introducing a new gear
- the immediate **short-term effect** on the economics of fishing (often a loss)
- and the **longer term effect** of a change when the stock has responded (should be a benefit of course!)

But **fishermen usually do not like the long terms!!!**

**Stakeholders involvement:** fishermen, netmakers, suppliers, scientists, enforcement officers as well as managers and the environmental bodies)





# How to introduce new measures/devices



Before introducing a new technology it should take into account: new technology should be

- **Practical** at sea (do not involve major changes to the common practices, easy to use and cheap to maintain)
- **Acceptable for fishermen** (Economically viable)
- **Acceptable for management** (achieves the management, biological targets)
- **Enforceable** (easy to be controlled)



# How to involve fishers



## 1. Communication

### Channel



Ambiente



PROTECTING TURTLES FROM THE THREAT OF BYCATCH



Stress

sibility to



greenreport.it



HUFFINGTON POST  
IN COLLABORAZIONE CON IL Gruppo Espresso

DICOVERSITA  
Delfini, nel mar Adriatico migliorano le interazioni con i pescatori Croati  
di Raffaele Cava 14 aprile 2023



Home Ischia  
Dove Alloggiare Alberghi Ville ...  
Raggiungi Orani Porti Autobe

I pescatori a difesa delle tartarughe marine del Mediterraneo  
In Programma: Sab 11 Maggio alle Ore 10:30 Fino alle ore alle Ore 12:30



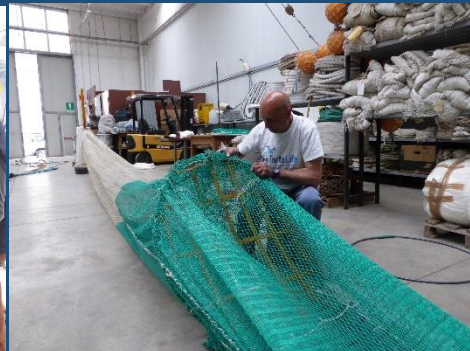


# How to involve fishers



## 2. Engage fishers in their responsibility

- **Bottom-up solutions** (involve fishers from the early stages, seeking to develop technical measures and any management measures)
- **Consultation** (involve fishers early on to gather their input, address their concerns, and incorporate their views on fishing gears (and into the design and management of MPAs))
- **Involve fishers as partners and active actors in the conservation process** (as stewards of the environment). This will enhance compliance and enforcement strategies







# How to involve fishers



## 3. Trust of fishermen

- Inclusive approach that recognizes their expertise, concerns, and needs.
- Demonstrate competence (including technical competence) on issues that concern them
- To demonstrate empathy for their issues beyond those strictly related to the project
- Embarking with them helps a lot in getting closer to them, because it creates an atmosphere of complicity, as they know that we understand their problems and their hardships.







# How to involve fishers



## 4. Collaborative Planning

- Foster collaborative partnerships between fishers, government agencies, conservation organizations, and other stakeholders involved in sensitive species conservation (and MPA planning and management).
- Encourage open dialogue, mutual respect, and shared decision-making to ensure that solutions reflect the needs and interests of all stakeholders.
- Communication and Dialogue: Maintain open and transparent communication channels with fishermen. Address concerns promptly, provide updates on progress (AMP), and seek input on potential adjustments or improvements.
- Adaptive Management Approach: Adopt an adaptive management approach that allows for flexibility in design and management (MPAs).

# How to involve fishers

## 5. Education, Outreach and capacity building



Daniel Li Veli

### Handling and release of cetacean bycatch

Animals that have been accidentally captured undergo heavy stress, the cause of which is often difficult to immediately identify. This can lead to unpredictable reactions on the part of the animal, so it is important to learn how to handle the animals as gently as possible while maintaining an otherwise quiet and peaceful environment to avoid adding further stresses to the situation. In fact, these small considerations increase the likelihood of cetacean survival. If there is any doubt as to whether an animal is already dead or simply unresponsive, it is always better to act as though the animal were still alive, taking the same care and precautions used when managing an animal to return it to the water as soon as possible.

**REMEMBER TO NOTIFY THE COAST GUARD AT THE TOLL FREE NUMBER 1530 TO RECORD THE DETAILS OF THE CATCH INCLUDING:**

- Date
- GPS position (coordinates)
- Fisherman's contact information
- Boat name
- UE number
- Type/purpose of trip
- Fishing gear involved (e.g., net length, number of fishing lines, the duration of the trip, etc.)

**IT IS IMPORTANT TO INCLUDE**

- The name of the species captured
- The number of individuals
- Any additional notes (e.g., condition, any injuries/wounds, particular details, etc.)

**IF POSSIBLE, TAKE A PICTURE OF THE ANIMAL**

**When lifting the animal on board, be sure to avoid any rotation in the flip or tail while handling the net. If this is not possible, return the entangled animal to the water and allow it to readjust to a better position before lifting again to avoid causing injury during the recovery process.**

- Ensure that the animal is **not** in a position to hit any external objects. It is advisable to attach an additional rope to the net as close to the animal as possible to have better control over its movements
- Position the animal in the shade, in a peaceful and secure location and away from any engine exhaust coming from the fishing vessel

**marine RANGER!**  
Download the app on your Android or iOS devices to report dolphin sightings in real time

engage in monitoring or sensitive species (and co-management activities with them).

### COME SALVARE UNA TARTARUGA MARINA

RIUZIONE DELLA MORTALITÀ DELLA TARTARUGA MARINA NELLE ATTIVITÀ DI PESCA PROFESSIONALE

#### RECUPERO 1

- ✓ Liberata da reti e lenze con cura, facendo attenzione alla bocca e alle unghie
- ✓ Afferrata solo dalle estremità del carapace, non dalle pinne.
- ✓ Se ha abboccato all'amo issala a bordo utilizzando un retino.
- ✓ Mai lasciata a capovvota sul carapace.

#### 2 VALUTAZIONE STATO DI SALUTE

**È in buone condizioni**

- Se sollevandola muove le pinne ed è molto attiva.
- Se stimolata con la dita negli occhi reagisce chiudendo le palpebre.
- Se pizzicando la zona vicino all'ano con le dita la tartaruga reagisce.
- Falla riposare per un paio d'ore poi liberarla.
- Se non si è sicuri delle condizioni, allertare la Capitaneria o il Centro di Recupero più vicino.

**Non è in buone condizioni**

- Se sollevandola è poco reattiva e non muove le pinne.
- Se stimolata con le dita negli occhi non reagisce chiudendo le palpebre.
- Se pizzicando la zona vicino all'ano con le dita la tartaruga non reagisce.
- Allerta la Capitaneria e il Centro di Recupero più vicino.

#### PRIMO SOCCORSO 3

- ✓ Se è stata catturata nelle reti stendila e portata in giù in un luogo tranquillo su una superficie morbida, sollevando il posteriore di 20-30 cm per far defluire dai polmoni eventuale acqua ingerita.
- ✓ Se ha abboccato all'amo di un palangaro taglia la lenza il più vicino possibile alla bocca (F&P) e ammorza il F&P con un pezzo di legno o plastica in modo che non la inghiotti. Non tentare di aprire la bocca con strumenti veri né di tirare la lenza cercando di estrarre l'amo dalla bocca. In estate tienila all'ombra e coprila con un asciugamano bagnato sul carapace.
- ✓ Non tenerla immersa in acqua.
- ✓ In inverno tienila in un luogo caldo e asciutto e coprila con una coperta.
- ✓ Copri la testa e gli occhi, ma mai le narici.

#### 4 RILEVAMENTO DATI

- ✓ Osserva se sono presenti l'arghette (in genere) sulle pinne.
- ✓ Prendi nota dell'ora e posizione di cattura.
- ✓ Misura le dimensioni del carapace.
- ✓ Consegnala al personale della Capitaneria di Porto o del Centro di Recupero, se in cattive condizioni oppure se ferita o se ha ingerito un amo.

#### LIBERAZIONE 5

- ✓ Se è in buone condizioni liberata delicatamente, cercando di lasciarla solo quando è vicina alla superficie dell'acqua, a motore in posizione neutra, senza le reti in acqua.

**Contatti**  
Tel: 1530  
Chiamare CP e, se presente, centro di recupero più vicino





# How to involve fishers



## 6. Business (avoiding commercial loss)

- Recognize the economic concerns of fishermen who may be impacted by new devices (and MPA regulations).
- Alternative Livelihoods: eco-tourism, sustainable aquaculture, alternative sources of income
- Recognize and incentivize conservation goals (Demonstrate Benefits: i.e. added value to fishing products through labelling).



ities and gears, such as economic losses and provide

ublish reward programs, demonstrate to contribute to

added value to fishing products through

Compensation?

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# How to involve fishers

## 7. Presence

- Fishers must 'feel' the constant presence of the researchers (or MPA representatives).
- Too often, activities only go on as long as there is a project that guarantees a certain relationship.
- Then when the project is over, the presence disappears and the fishermen gradually lose interest in conservation and abandon the good practices undertaken





# How to involve fishers

## 9. Scientific Credibility

- Scientifically sound results

1 Ecological Indicators

2 Flexible Turtle Excluder Device (TED): an effective tool for Mediterranean coastal multispecies bottom trawl fisheries

3 An interview-based approach to assess sea turtle bycatch in Italian waters

4 Aquatic Conservation: Marine and Freshwater Ecosystems

5 Fisheries Research

6 Evidence of loggerhead sea turtle (*Caretta caretta*, Linnaeus, 1758) injuries caused by Rapido (beam) trawling in the Mediterranean

7 Reducing Sea Turtle Bycatch in the Mediterranean Mixed Demersal Fisheries

8 Marine Policy 160 (2024) 105981

9 Fisheries Research

10 Acoustic deterrent devices as mitigation tool to prevent dolphin-fishery interactions in the Aeolian Archipelago (Southern Tyrrhenian Sea)

11 PLOS ONE

12 Pots as alternative and sustainable fishing gear in the Mediterranean Sea: an overview

13 A low-cost approach in acoustic monitoring of dolphin presence

14 Fishers' Perception on the Interaction between Dolphins and Fishing Activities in Italian and Croatian Waters

15 Assessment of interactive acoustic deterrent devices set on trammel nets to reduce dolphin-fishery interactions in the Northern Tyrrhenian Sea

Etc.





# How to involve fishers



## 10. Tactile awareness (?)

- This is a concept indicating the need for the public to physically interact with a protected species or its habitat to fully appreciate the importance of protection.
  - Sea turtle Rescue centers
  - Dolphin watching







# Fisher's collaboration



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# Documentary



# Life DELFI

DOCUMENTARY

A FILM BY ROBERTO LO MONACO  
NARRATED BY BARBASCURA-X



PRODUCED BY CNR-IRBIM  
WITH THE CONTRIBUTION FINANCING OF THE LIFE PROGRAM OF EUROPEAN UNION



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*Now when the dolphin is caught and perceives itself to be trapped in the net, it bides its time, not at all disturbed but well pleased, for it feasts without stint on the fish that have been gathered with no trouble to itself. But as soon as it comes near the shore, **it bites its way through the net and makes its escape.** Yet if it should not get away in time, on the first occasion it suffers no harm: the fishermen merely sew rushes to its crest and let it go. **But if it is taken a second time, they recognize it from the seam and punish it with a beating.** This, however, rarely occurs: most dolphins are grateful for their pardon in the first instance and take care to do no harm in the future.*

*Plutarch (46-120 A.D)- De sollertia animalium (On the Intelligence of Animals)- chap. 26*



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# Thank you

