

ShARed Governance of Sustainable fisheries and aquaculture activities as leverage to protect marine resources in the Adriatic sea

WP3– Governance framework

D3.1.3 Application document as output from the assessments resulting from D3.2.3

Study on maritime intra-sectorial interactions analysis as a deepening of the spill over effects of the establishment of Natura 2000 areas in the upper Adriatic sea

Project acronym: ARGOS

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Project title: ShARed GOVERNance of Sustainable fisheries and aquaculture activities as leverage to protect marine resources in the Adriatic Sea

Priority Axis: Environment and cultural heritage

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Work Package: WP 3 - Governance framework

Activity: 3.2 - Maritime Spatial Planning assessment

Partner in charge: P1 Veneto Region

Partner involved: all project partners

URL: <https://www.italy-croatia.eu/argos>

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Where we start

At the beginning of 2016, the European Commission notified Italy of the opening of an infringement procedure (EU-Pilot 8348/16/ENVI) for the lack of Natura 2000 marine sites, inviting it to expand the network of Sites of Community Interest (SCIs) and also establish an SCI in the Northern Adriatic to ensure better protection of dolphins and sea turtles.

The Ministry of the Environment and Protection of Land and Sea (MATTM) has therefore identified a path aimed at resolving the potential violation of EU legislation and thus prevent the start of an infringement procedure, providing for the establishment of new marine SCIs and SPAs with the help of the Regions, to which the Ministry has delegated the competence for the identification and management of Natura 2000 sites, in accordance with the provisions of Presidential Decree No. 357/1997 and subsequent amendments and additions.

ISPRA, in one of its scientific documents, identified the Northern Adriatic Sea as a critical area for bottlenose dolphin (*Tursiops truncatus*) and sea turtle (*Caretta caretta*) species, as these species tend to intensify their presence in this area. The Ministry therefore urged the Northern Adriatic Regions to take action to set up the necessary marine SCIs, to protect the two species, within the 12 Italian NM.

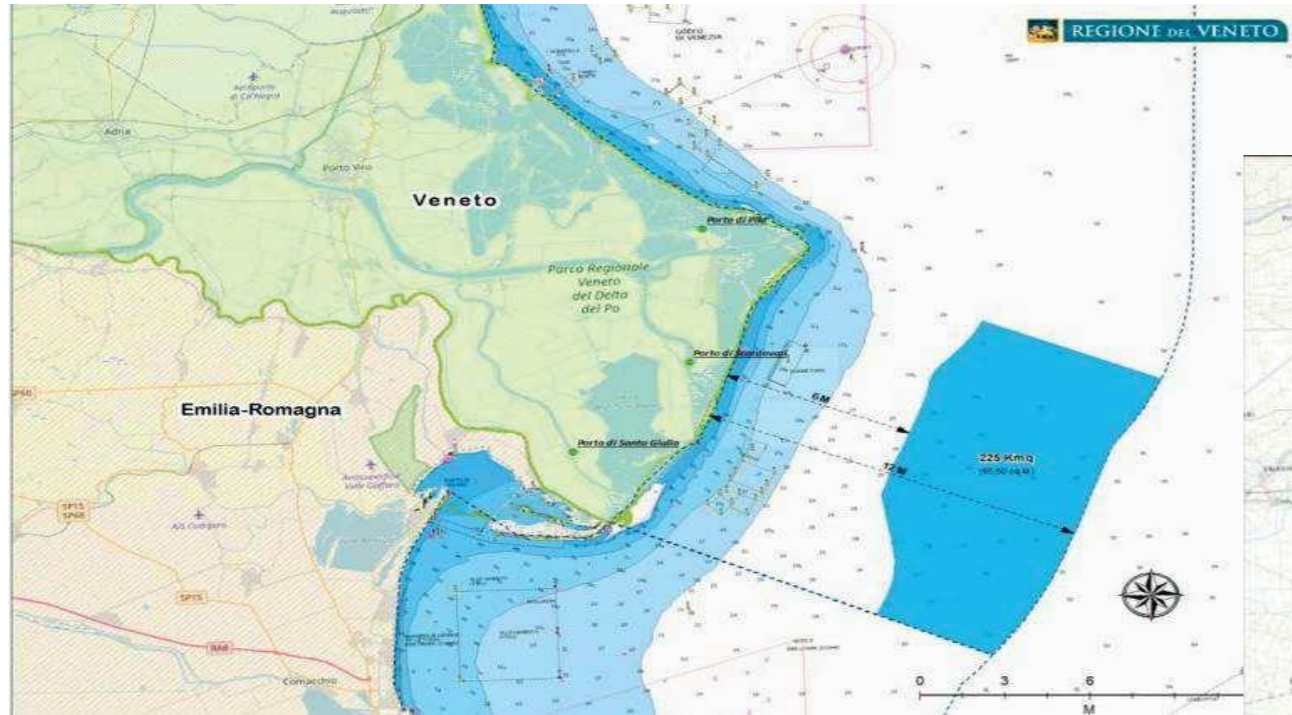
The Veneto Region, through its participation in the Northern Adriatic District tables and in a participatory type strategy (CLLD), sensitised all the stakeholders in the area so that a process of sharing and discussion on the perimeter of the marine SCI and on the proposed conservation measures could be initiated.

The local FLAGs too helped on collecting information and made a local dissemination with the project TARTATUR.

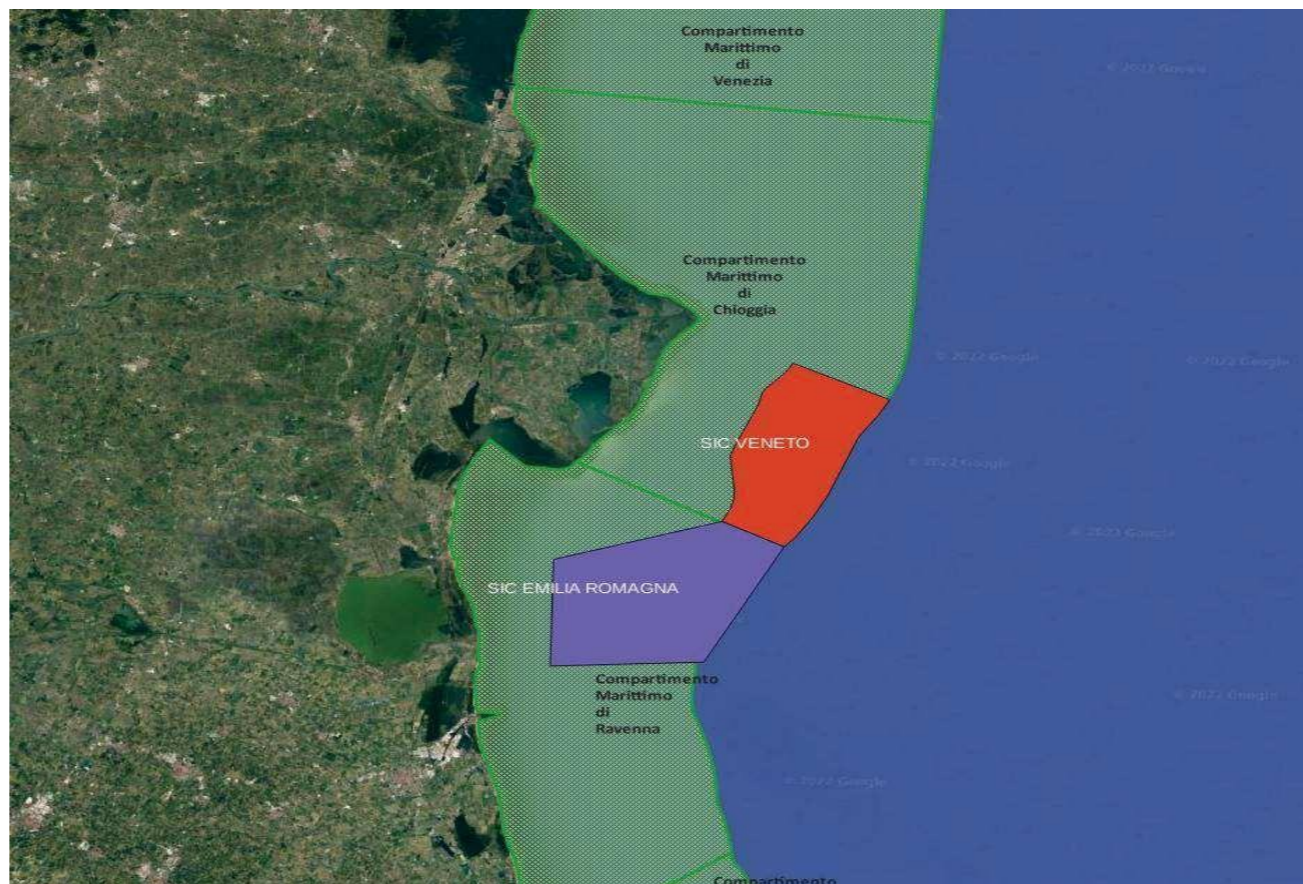
The synthesis of all these studies, presented in Bologna at a meeting of the Northern Adriatic District, led to the perimeter of the marine SCI in the waters of the Veneto Region and, with a similar procedure, in those of the Emilia Romagna Region.

The regional administrative acts that sanctioned its creation are:

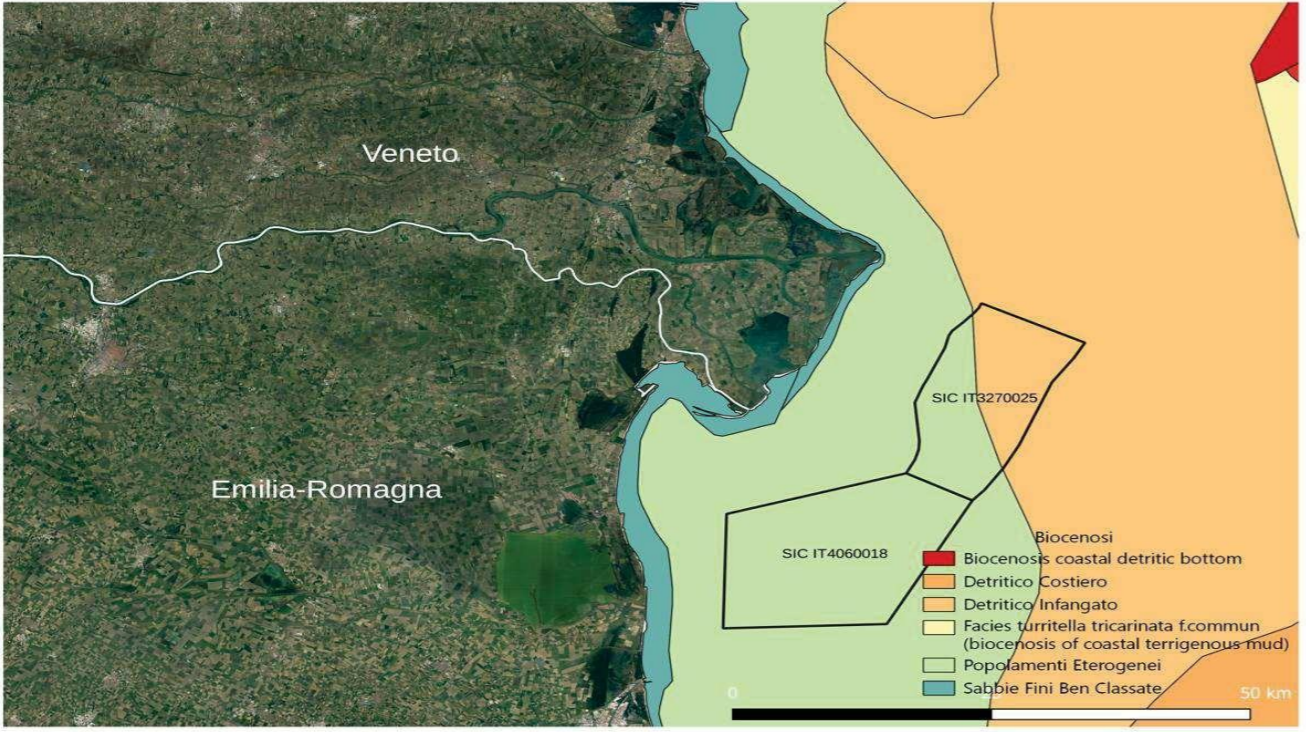
- DGR no. 1135 of 06 August 2020 Identification of new Site of Community Importance named S.I.C. IT3270025 "Northern Adriatic Veneto - Po Delta". Natura 2000 European Ecological Network. Directives 92/43/EEC and 2009/147/EC. VENETO REGION
- DGR. 1572 of 09/11/2020 Identification of the SCI IT4060018 Northern Adriatic - REGION EMILIA ROMAGNA



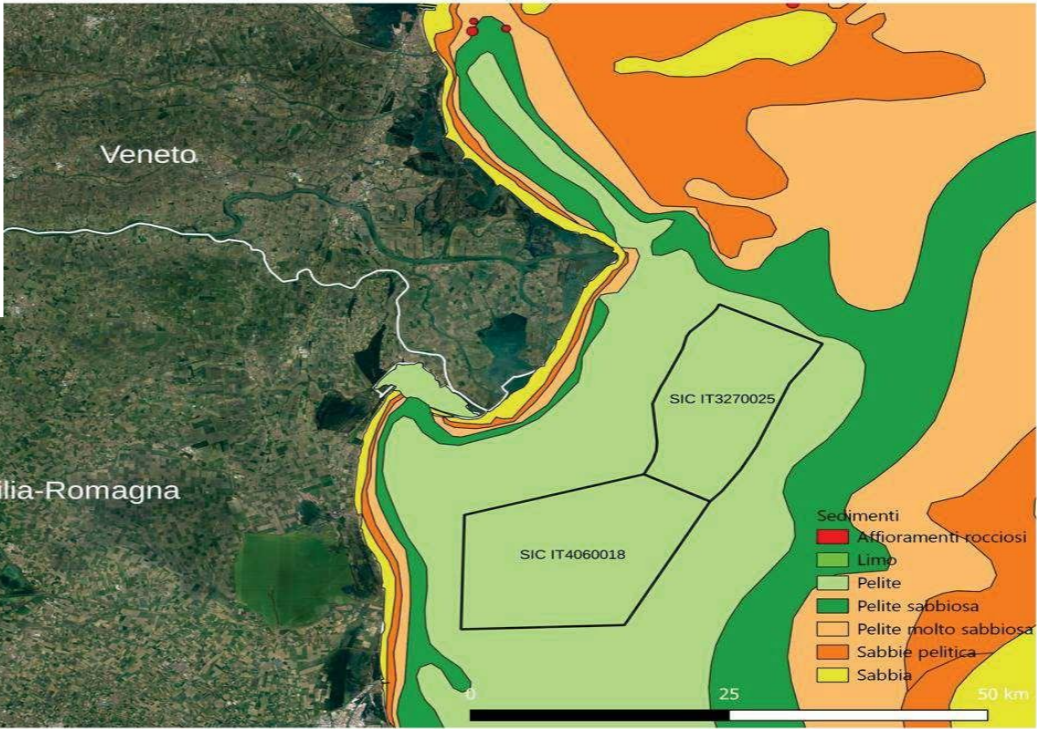
The marine SCI IT3270025 'Northern Adriatic Veneto - Po Delta' is located in the Maritime Compartment of Chioggia. It is located between the 6 and 12 mile line from the Veneto coast, with a length of approximately 22 km and a total surface area of 22,513 hectares, equal to 225.1 km². The marine SCI IT4060018 'Northern Adriatic Emilia Romagna' is located in the Ravenna Maritime Compartment. It is located between the 4-6 mile line and the 12 mile line from the coast, with a less elongated shape than the Veneto SCI and a total surface area of 31,160 hectares, equal to 311.6 km².



No presence of seagrass meadows, maerl or coralligenous formations

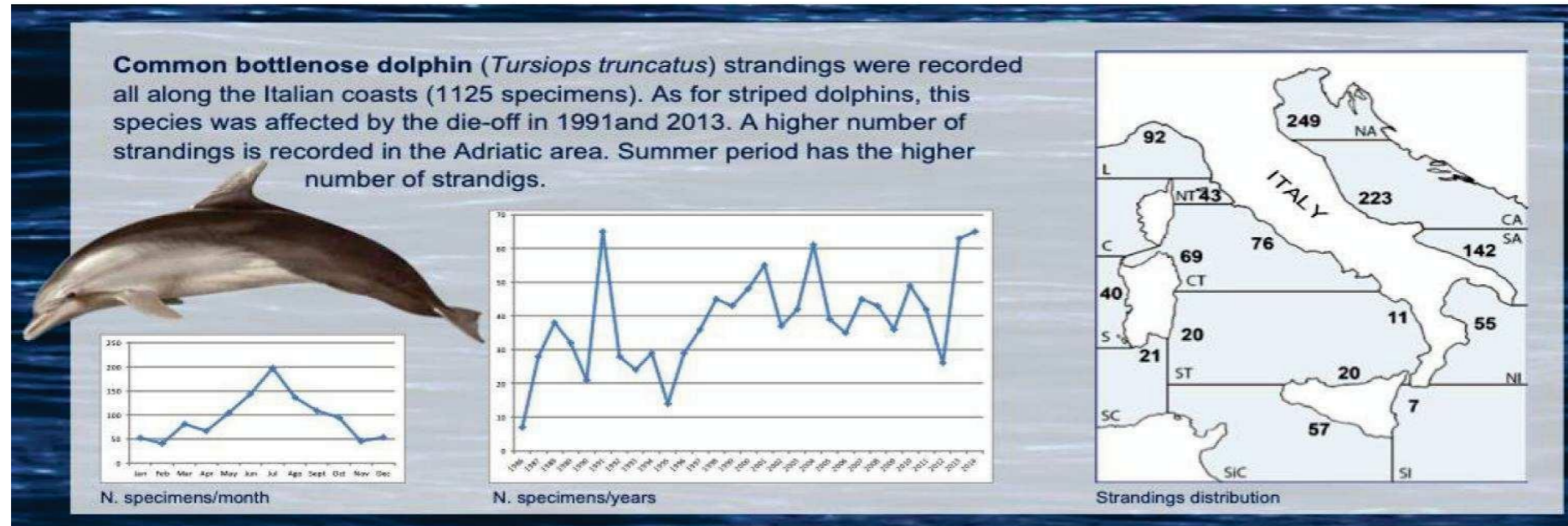


Biocenosis



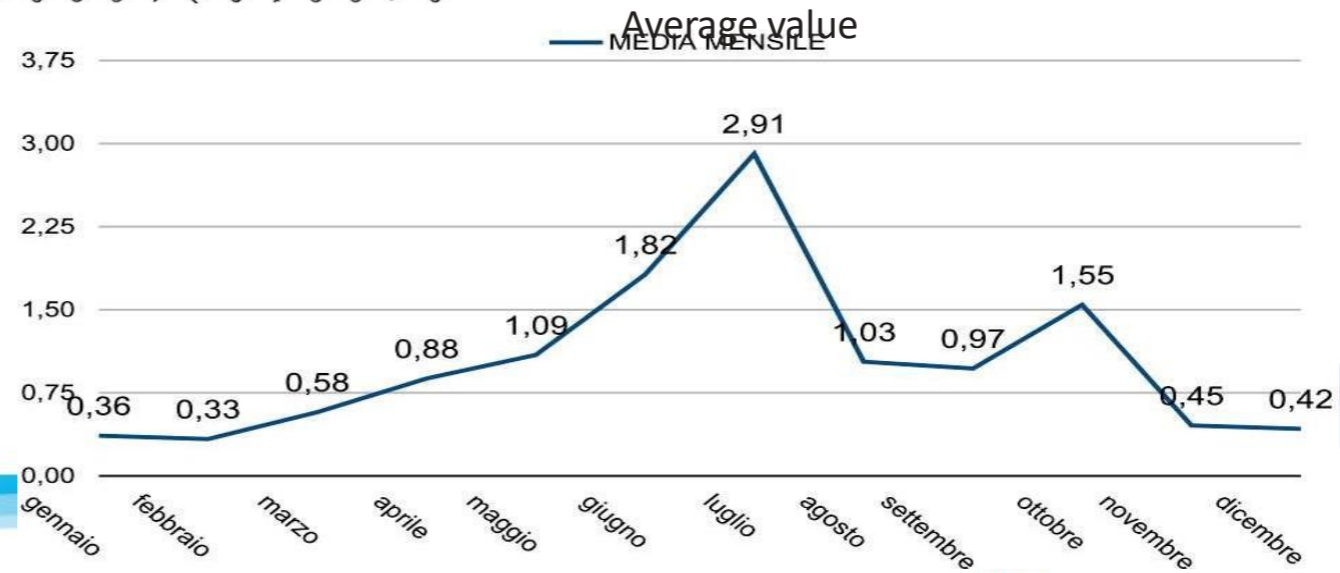
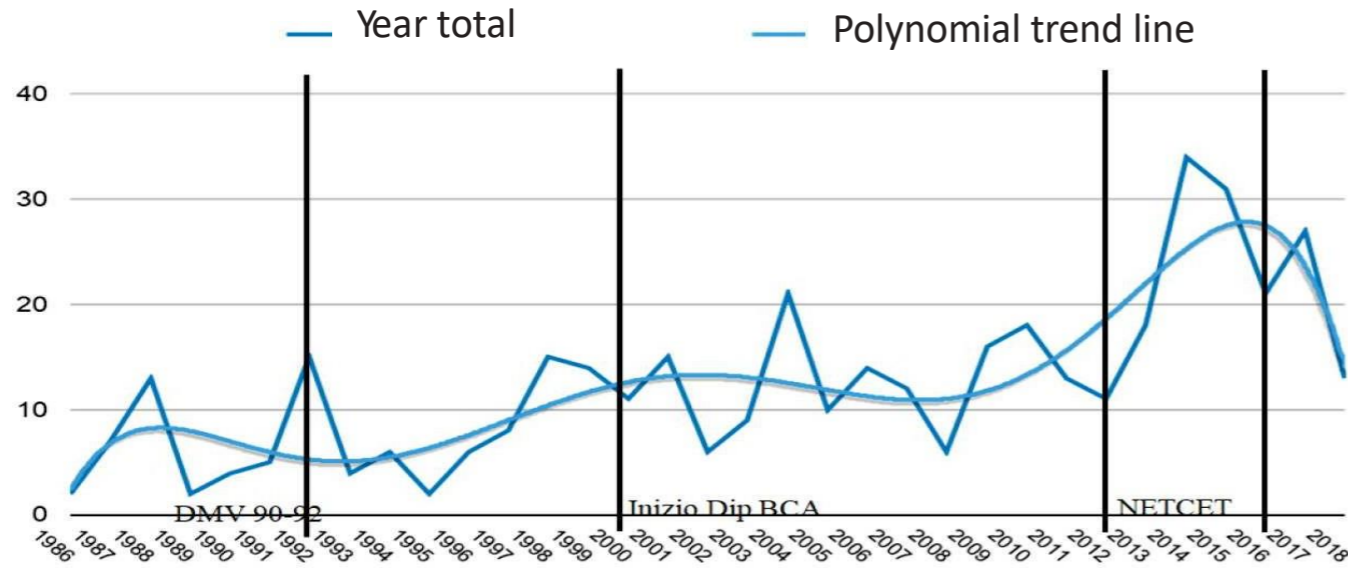
Sediment

Stranding of dolphins



Variations in the availability of prey for higher predatory organisms such as bottlenose dolphins affect their abundance and distribution due to environmental causes at the base of the trophic chain in primary production. The presence of dolphins may also depend on other factors that are more related to their behaviour than human activities, such as the distribution of fishing effort (e.g. as a result of feeding by trawlers) and anthropogenic noise.

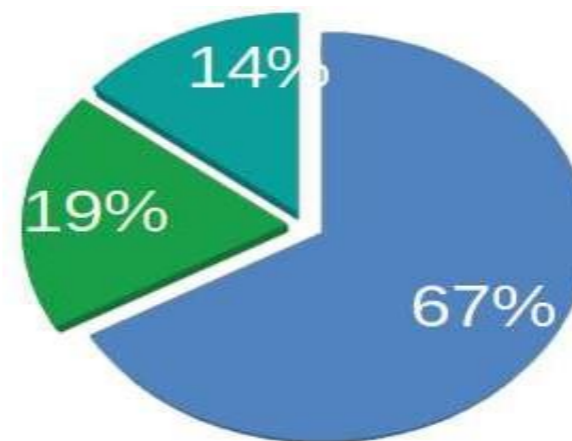
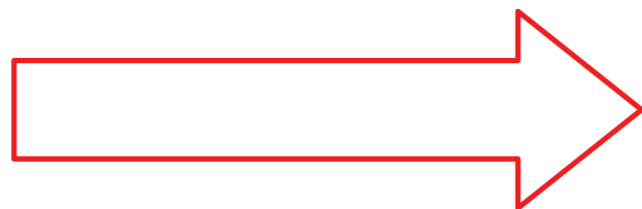
Stranding of dolphins



Principal causes of death of dolphins

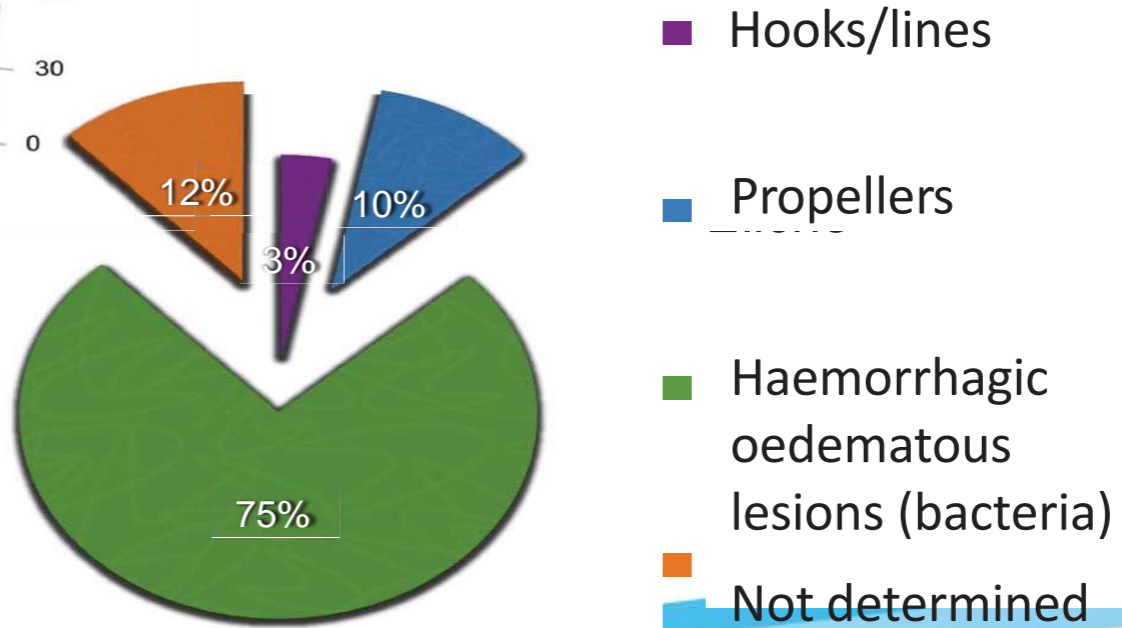
Causes of death

- 39% not determinable
- 47% spontaneous
- 14% directly or indirectly attributable to man

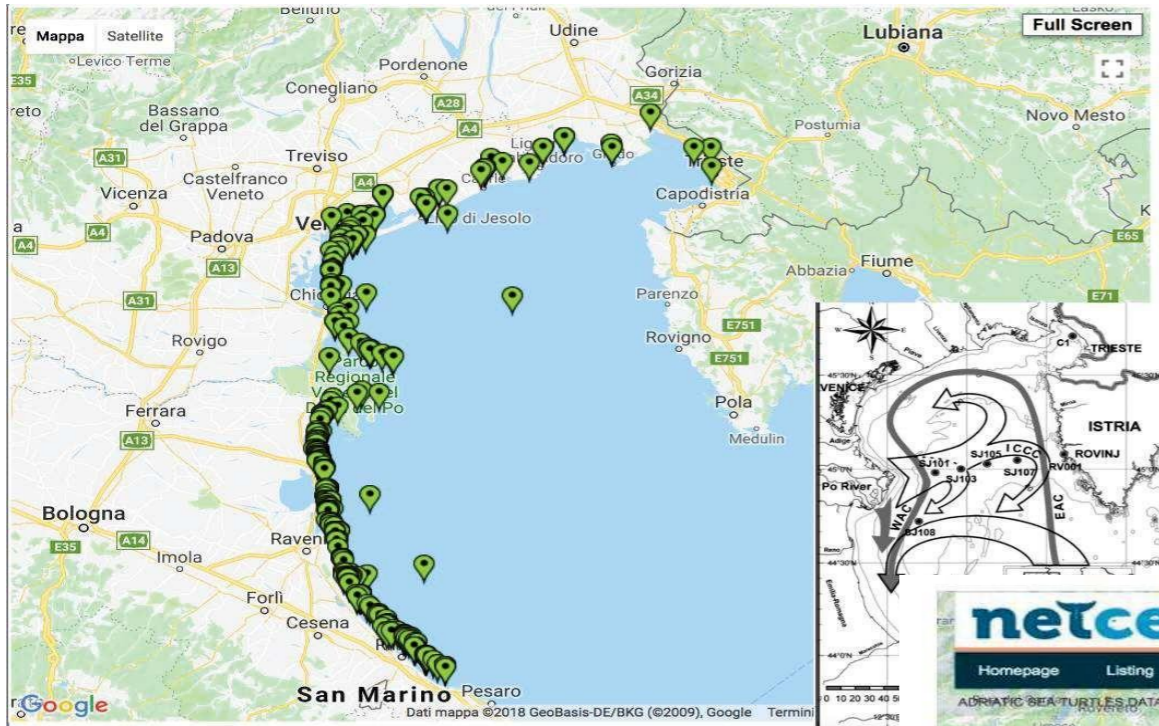


- Interaction with fisheries
- firearm/harpon vessel
- trauma

Stranding of turtles and principal causes of death



Where dolphins and turtles strand



Dolphins have learnt to coexist with humans by exploiting the opportunities that activities, especially those related to fishing and aquaculture, give them. The activity of many cetaceans focuses around marine fishing activities, following their boats and waiting for the discarded product to be available to them. Over time, this almost symbiotic behavior has developed in two different ways:

- For trawl boat fishermen, there is a form of protection of the bottlenose dolphin seen as a 'playmate'.
- For gill net fishermen, dolphins (but also turtles) are seen as disturbing elements, causing economic damage through the loss or deterioration of the product caught, or even damage to the fishing gear itself.

What activities can interfere with dolphins and turtles?

- Fishing (professional and sport)
- Aquaculture
- Marine transport activities
- Mining activities

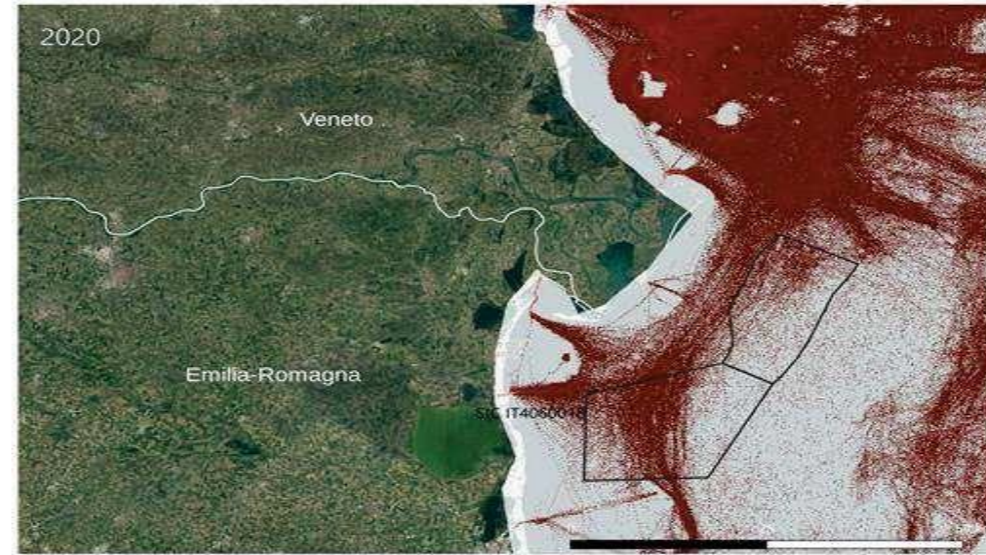
The maritime space, in relation to fishing activities, can be subdivided on the basis of the fishing gears insisting on the different ranges of distance from the coast:

- 0-3NM: hydraulic dredges (Adriatic clam and smooth callista), longlines, gillnets
- 3-6NM: hydraulic dredges (smooth callista), gillnets, trawl, purse seines, flying nets
- Over 6NM: trawl, purse seine, flying nets.

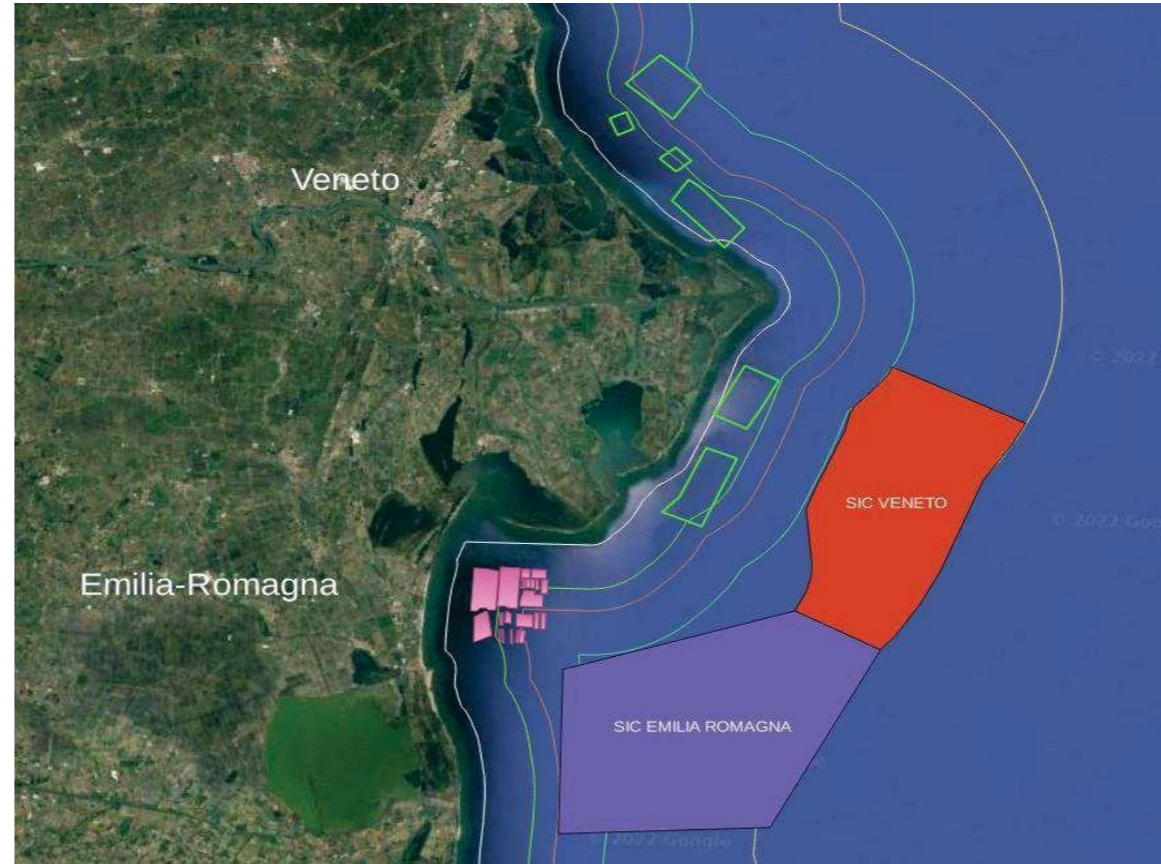
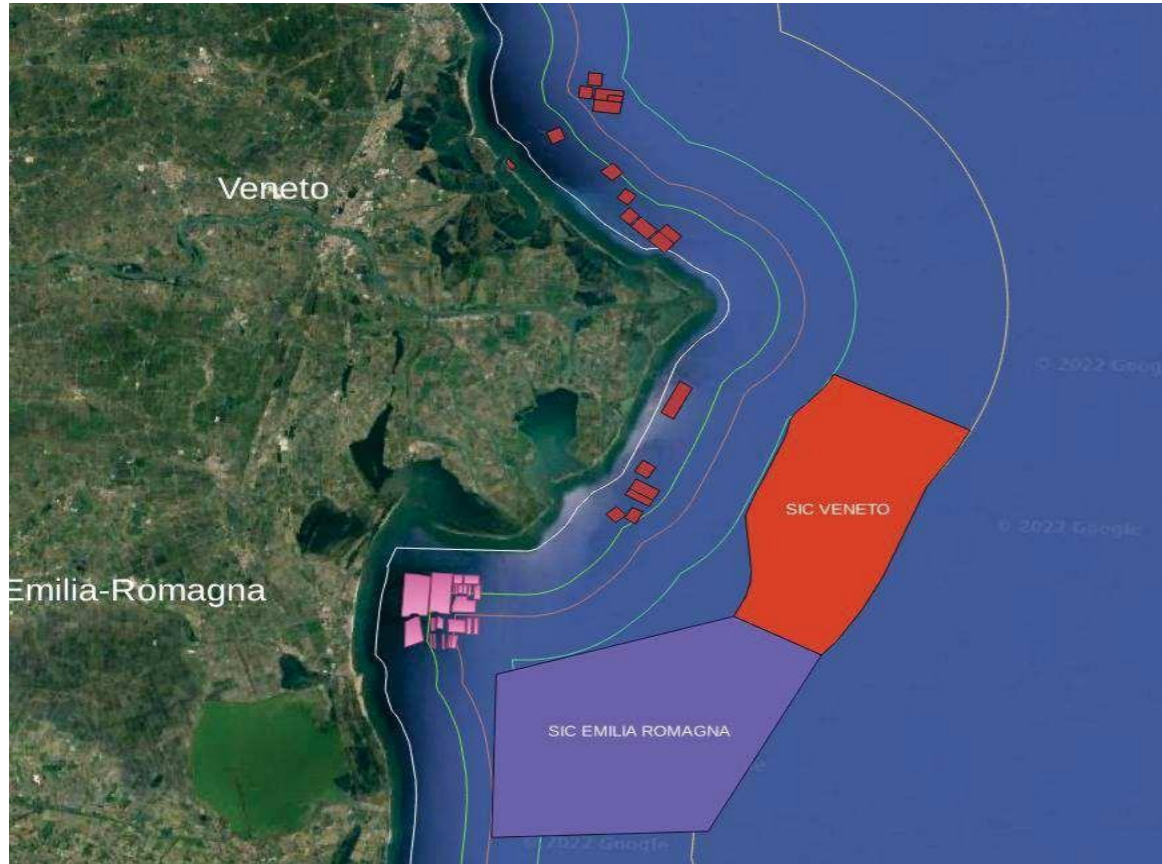
The location of the SCI area, between 6 NM and 12 NM, means that interference is limited to a few types of professional fishing; in fact, trawling and flying boats operate almost exclusively within the area. No shoals of smooth callista are present in the area, thus excluding the presence of hydraulic dredges and, as far as purse seines are concerned, there are no vessels operating with this gear in Veneto.

The AIS system can help us define passages within the SCI areas of Veneto and Emilia Romagna. For fishing, however, the AIS is not accurate in defining simple movement or fishing activity as it is not mandatory for the captain

Fishery activities



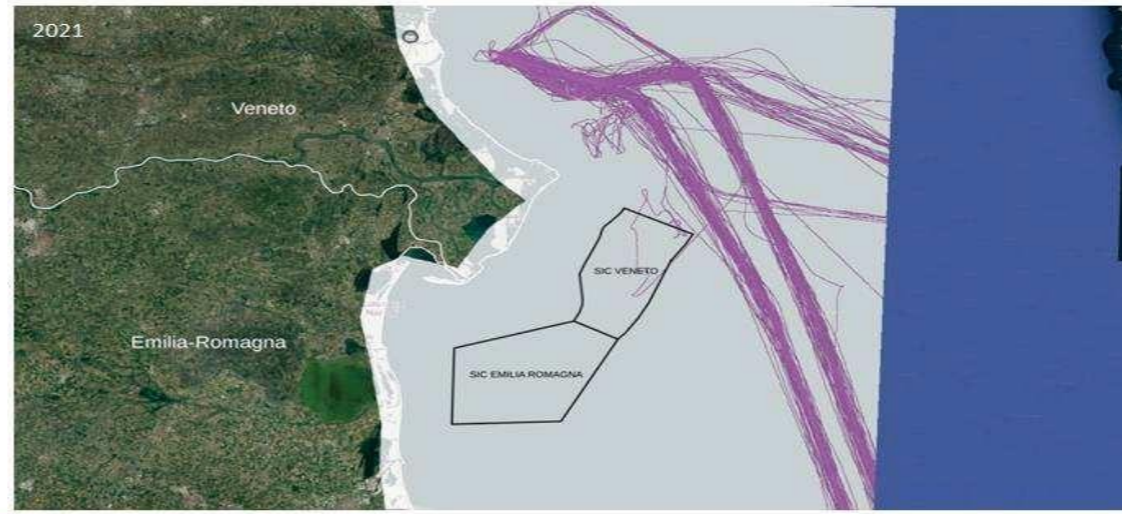
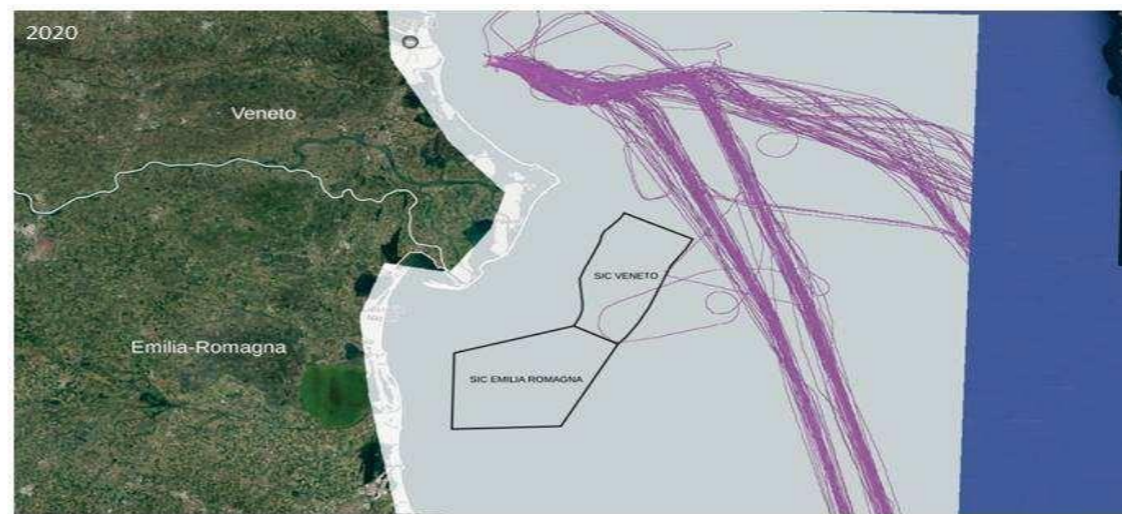
Aquaculture and AZA



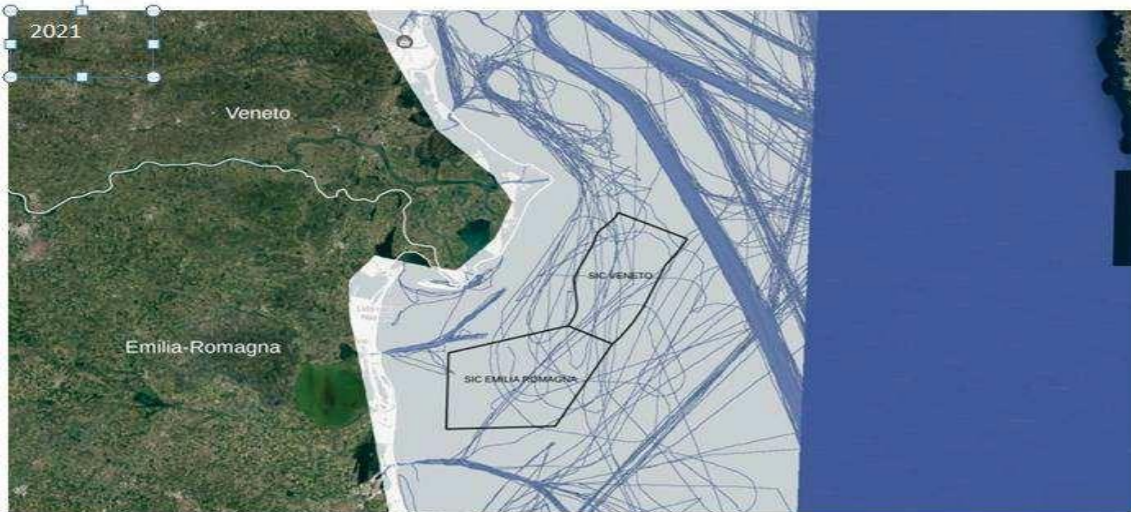
Container ship



LNG ship



Passenger vessels



Pleasure craft



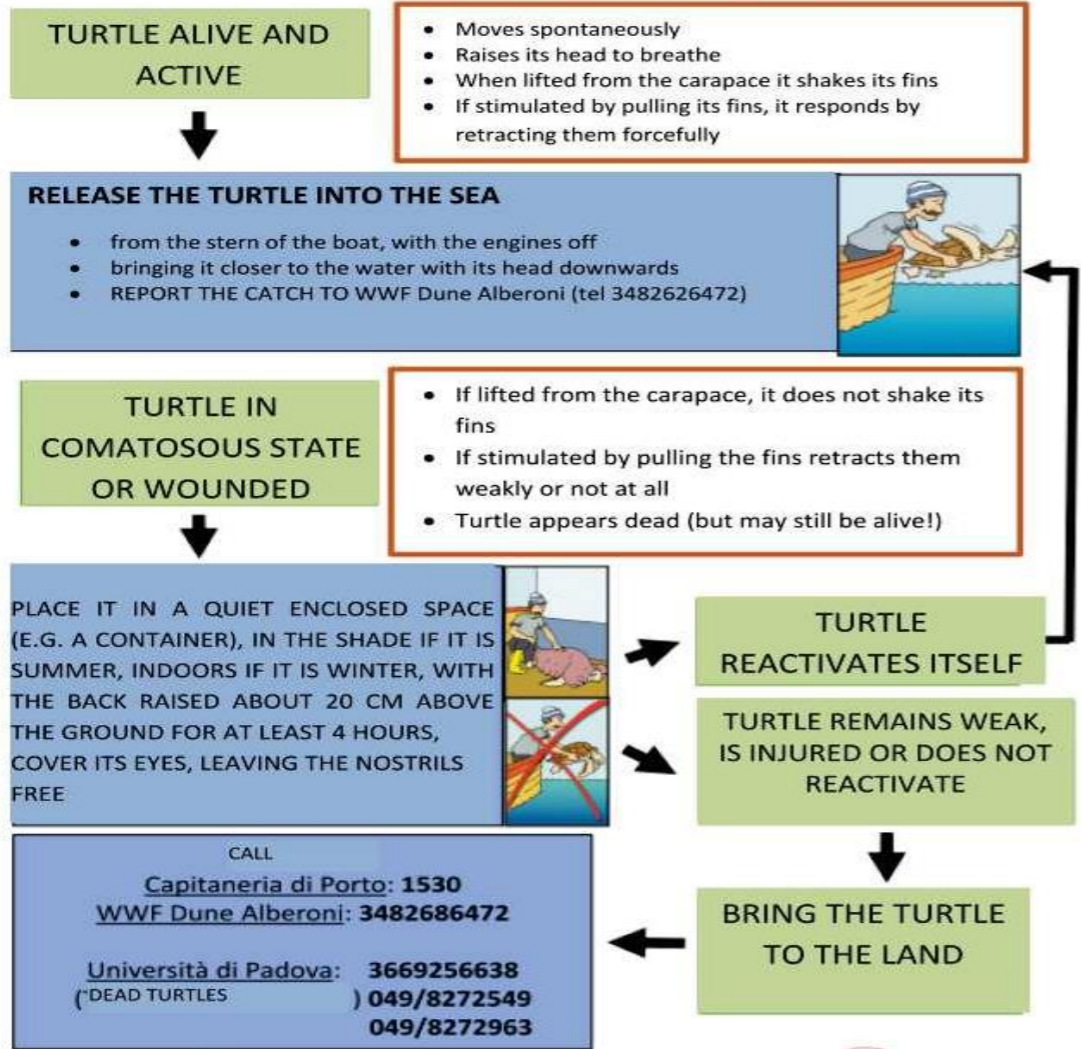
The establishment of a marine SCI area can be done to protect one or more habitats, one or more species, or both variants, but it requires appropriate studies to highlight the correct behaviour to adopt.

Up to now there is no evidence of any change due to the new SCI areas.



In the specific case of the two marine SCI areas established in the northern Adriatic, the protection of the two species *Tursiops truncatus* and *Caretta caretta* involved an analysis of possible interferences and specific measures that were listed in the two DGRs establishing the SCI areas.

- Avoid deliberately approaching the species in question, unless they approach the boats.
- Report the discovery of dead and/or stranded specimens to the competent territorial Harbour Offices.
- Maintain a straight course when trawls and trawl nets are in operation.
- Marking gillnets and other gear with TAGs.
- Apply to fishing equipment currently in use any mitigation measures that will be envisaged, if effective, to reduce bycatch for turtles as part of the application of good practices.
- Prohibition of the use of longlines and single and multiple hooked lines.
- Prohibition of the construction of new wind farms, according to Art. 5 paragraph 1) of the Decree of 17 October 2007.
- Prohibition of the practice of windsurfing, kitesurfing, water skiing, jet skis, motorised towing of flying equipment (kites, ascending parachutes and similar devices), demonstrations motor boating events.
- Prohibition of close interaction with animals including deliberate approaching, catching feeding, swimming in the presence of animals



What to do if a turtle is accidentally caught...



- Lift the turtle by the carapace (upper part of the shell), taking it by the sides or the two rapiers, but not by the fins (Fig. 1). If this is not possible lift it by the armpits.
- Place the turtle on something soft (rolled up towels, mat...).
- In summer cover it with a wet cloth (Fig. 2) and keep its head and eyes moist, keep it in the shade to prevent it from overheating.
- In winter keep it indoors to prevent loss of body heat and cover with a dry cloth if necessary
- If the turtle has foreign wounds or obvious fractures, try to protect them with bandages or cloths, move it carefully and notify WWF Dune Alberoni (tel. 34132685472)
- If you feel that the turtle has not fully recovered, call WWF Dune Alberoni (tel, 34826854725)

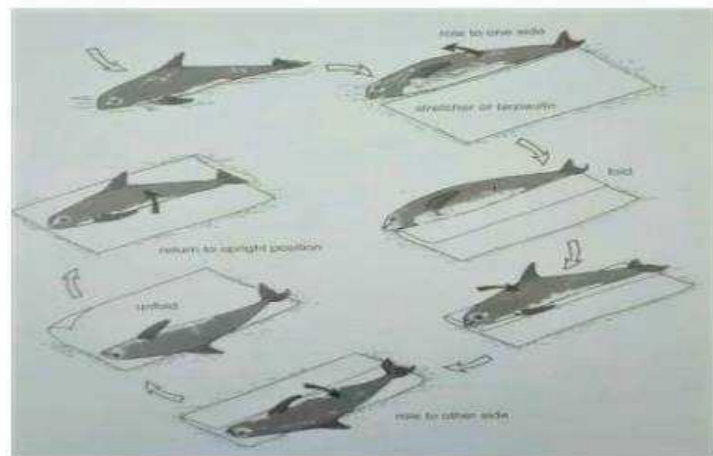
- Do not place the turtle on its stomach (Fig. 3) Keep the turtle resting on its back and always avoid placing it the other way round, as this makes breathing difficult.
- Do not detach the baleen from the turtle's body, even if there are many of them. You could create serious injuries to the skin.
- Do not throw the turtle into the sea if it has not fully recovered or if it appears dead (it may still be alive). It could drown.
- Do not put your hands near the turtle's mouth! Always keep your hands away to avoid being bitten, the turtle will be frightened.
- Do not put the turtle near excessive noise. Keep the animal in a quiet place, stress must always be kept to a minimum. Cover his orcs by leaving his nostrils free so he will calm down.
- Do not place the animal's head in abnormal positions, this may make breathing difficult (Fig. 4).
- Always place the tortoise in a place large enough to allow it to lie with its neck stretched out.


What to do if a dolphin is accidentally caught

THE DOLPHIN IS ALIVE

- Minimize stress (reduce noise and confusion as much as possible).
 - For your own safety pay attention to the mouth and tail!
 - Release the animal as soon as possible, following these instructions:
 - DO NOT pull the animal by the tail and/or fins;
 - DO NOT use ropes;
- If possible, place the animal on a towel or large towel so that the whole body from the fins to the genital slit is suspended (see Fig. 1). If there are no towels or cloths: available, lift the animal in 2-4 persons by passing the arms gently under the animal and sliding it gently over a smooth surface in the sea or gently accompanying it towards the water.



- Delicate points to watch out for are:
 - Eyes: do not touch them to avoid abrasions;
 - Fins: they can fracture if mishandled, always keep them close to the animal's body;
 - Venting: water and foreign bodies must not enter;
- If immediate release is not possible, contact your vet (University of Padua, 3669256638) and follow the steps below:
- Avoid overheating (even on cloudy days) by covering the animal with wet cloths, leaving the dorsal fin uncovered;
- Cover eyes with seawater and keep the vent moist but free;
- In winter, avoid cooling (cover dorsal fin and tail with a cloth). dorsal fin and tail);

THE DOLPHIN IS DEAD



LAND THE ANIMAL

CALLING (for both live and dead dolphins)
Capitaneria di Porto: 1530
or
Università di Padova: 3669256638

Some points that might be added to the measures for SCI area management:

- access to the area is only allowed after a training course explaining the procedures to be adopted, which are proposed in the sheets
- access to the protected area is only allowed to boats (professional or sports) equipped with an AIS tracking device
- sports boats must notify the local Port Authority of their intention to enter the area