

Passato, presente e futuro dei fondali dall'Adriatico



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Il mar Adriatico

geomorfologia

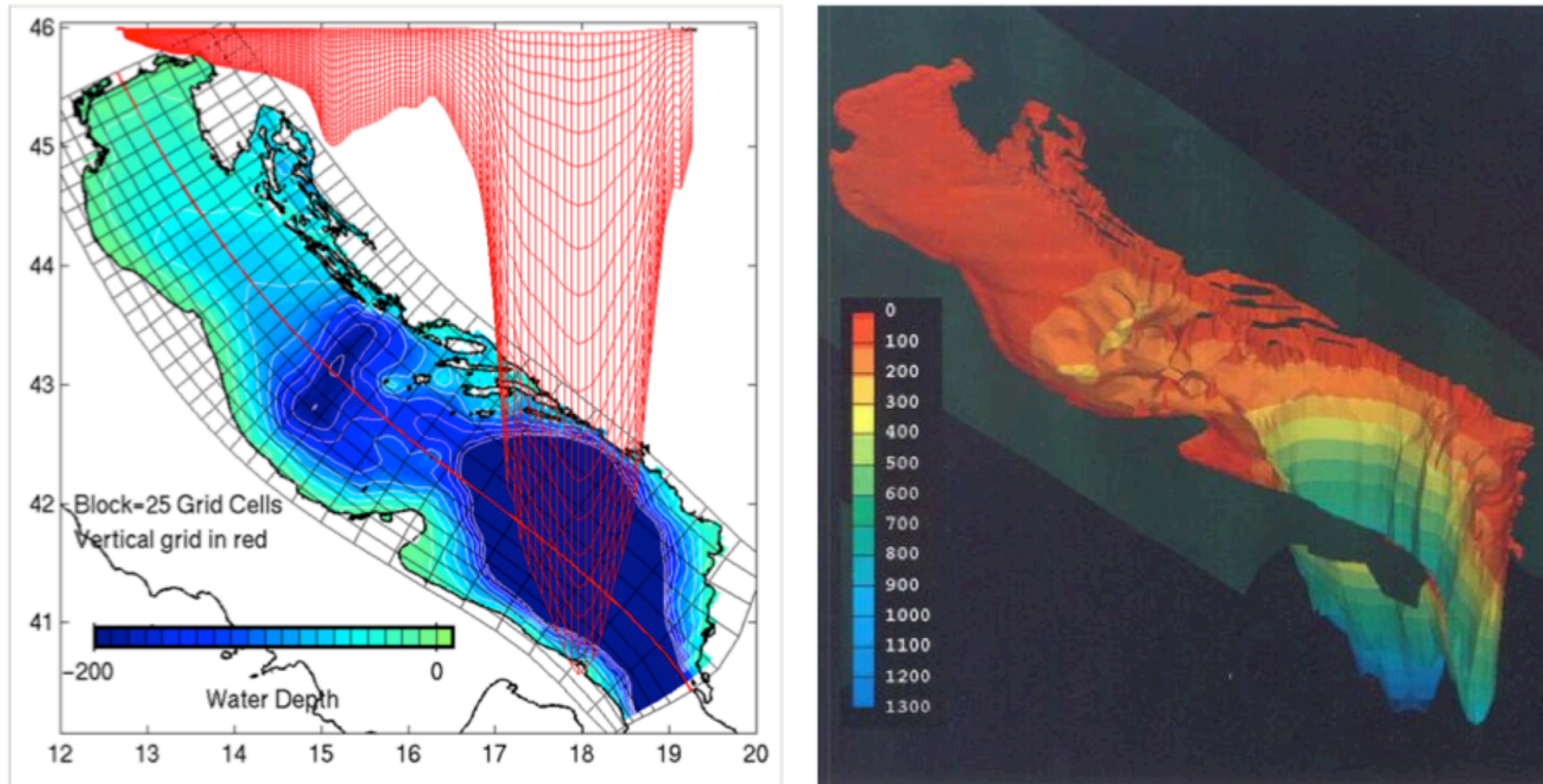
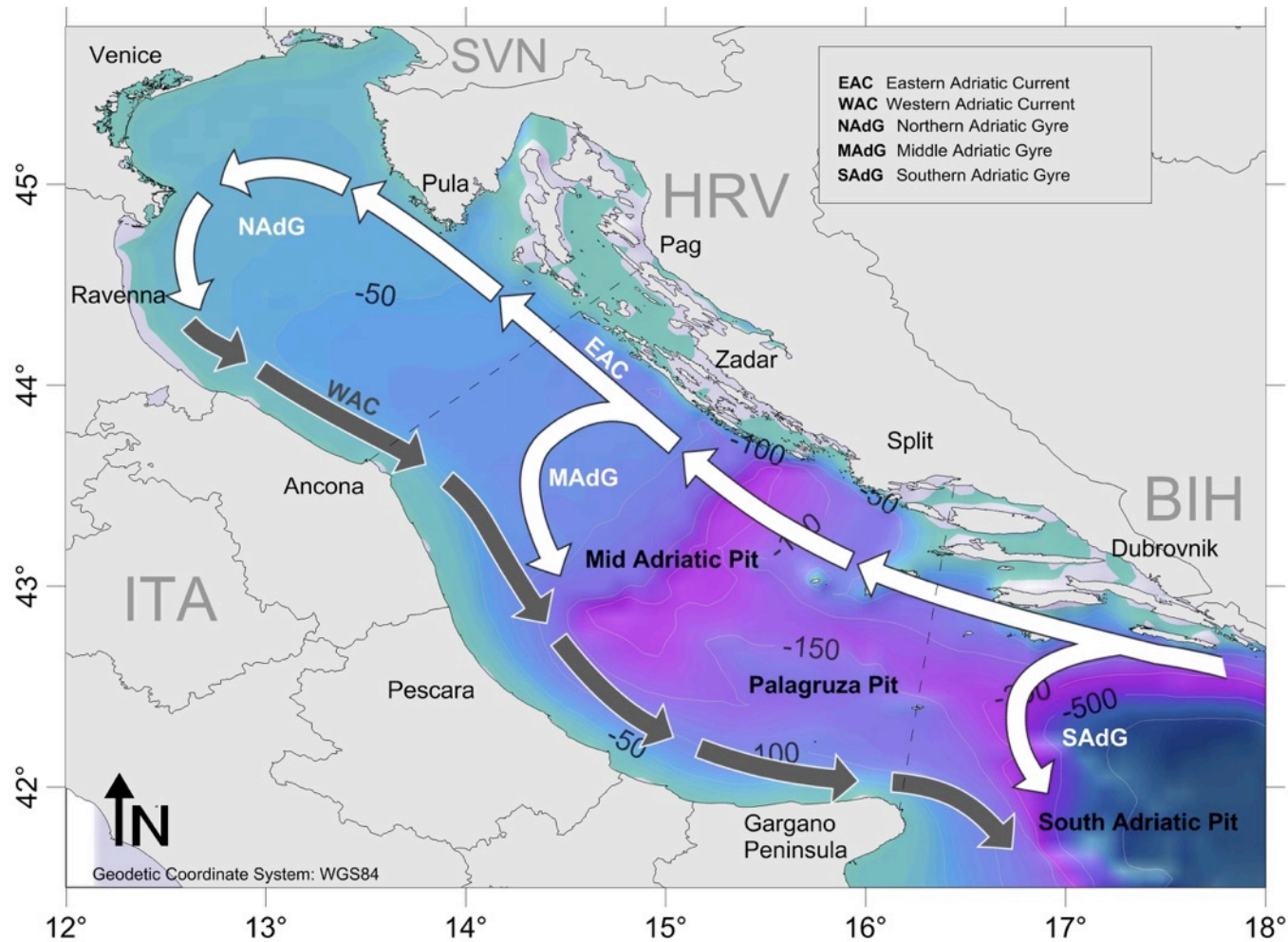


Fig. 7. A) Red transect down center of Adriatic illustrates the vertical resolution (credit: http://www.myroms.org/cstms/wiki/index.php/Sediment_dispersal_in_the_northwestern_Adriatic_Sea). B) Bathymetry of the Adriatic Sea (credit: <http://engineering.dartmouth.edu/adriatic/index.html>).

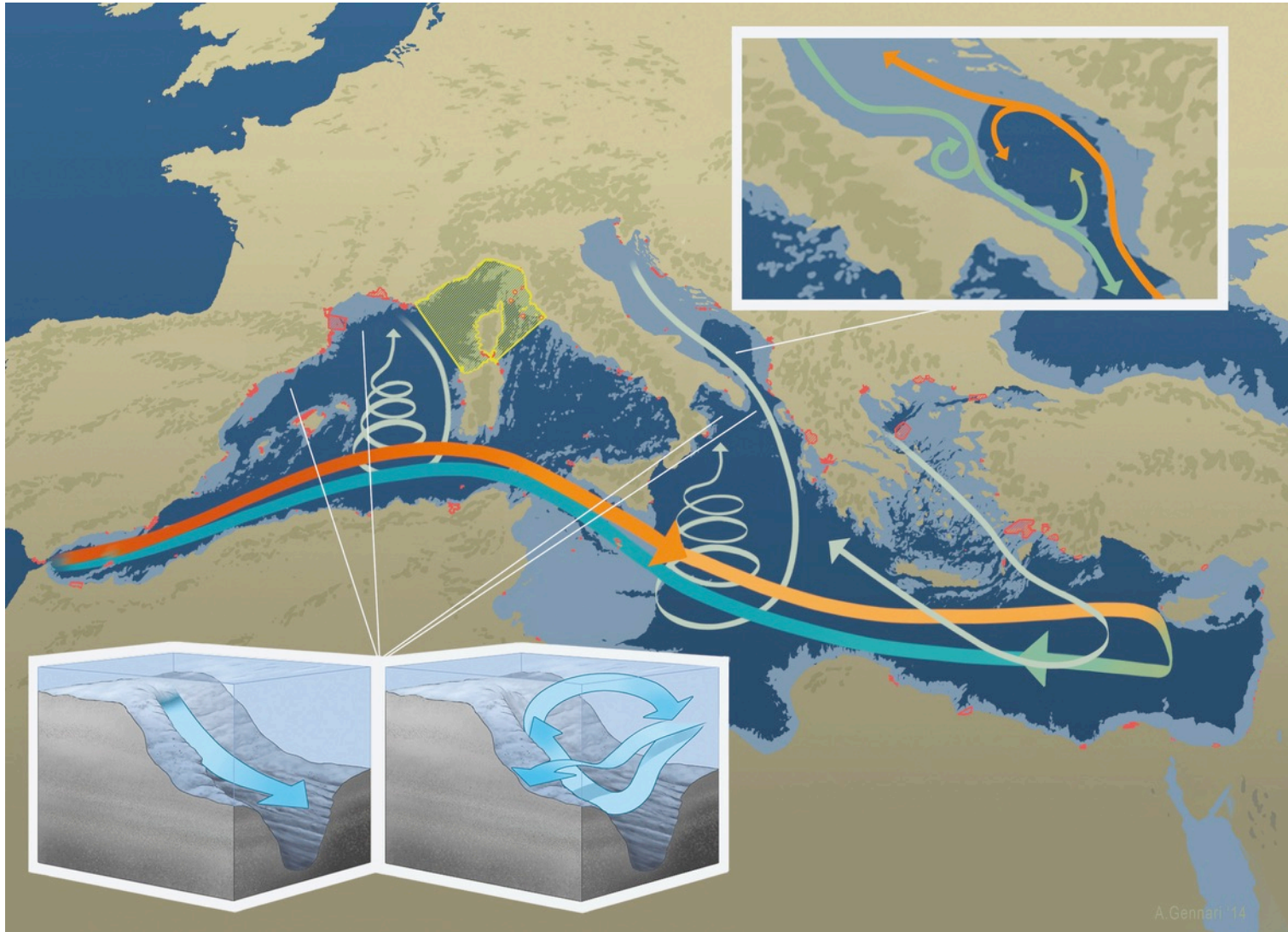
Il mar Adriatico

le correnti principali



Il mar Adriatico

le correnti principali – effetti su larga scala



Il mar Adriatico

le correnti principali – effetti su piccola scala
trasporto sedimenti

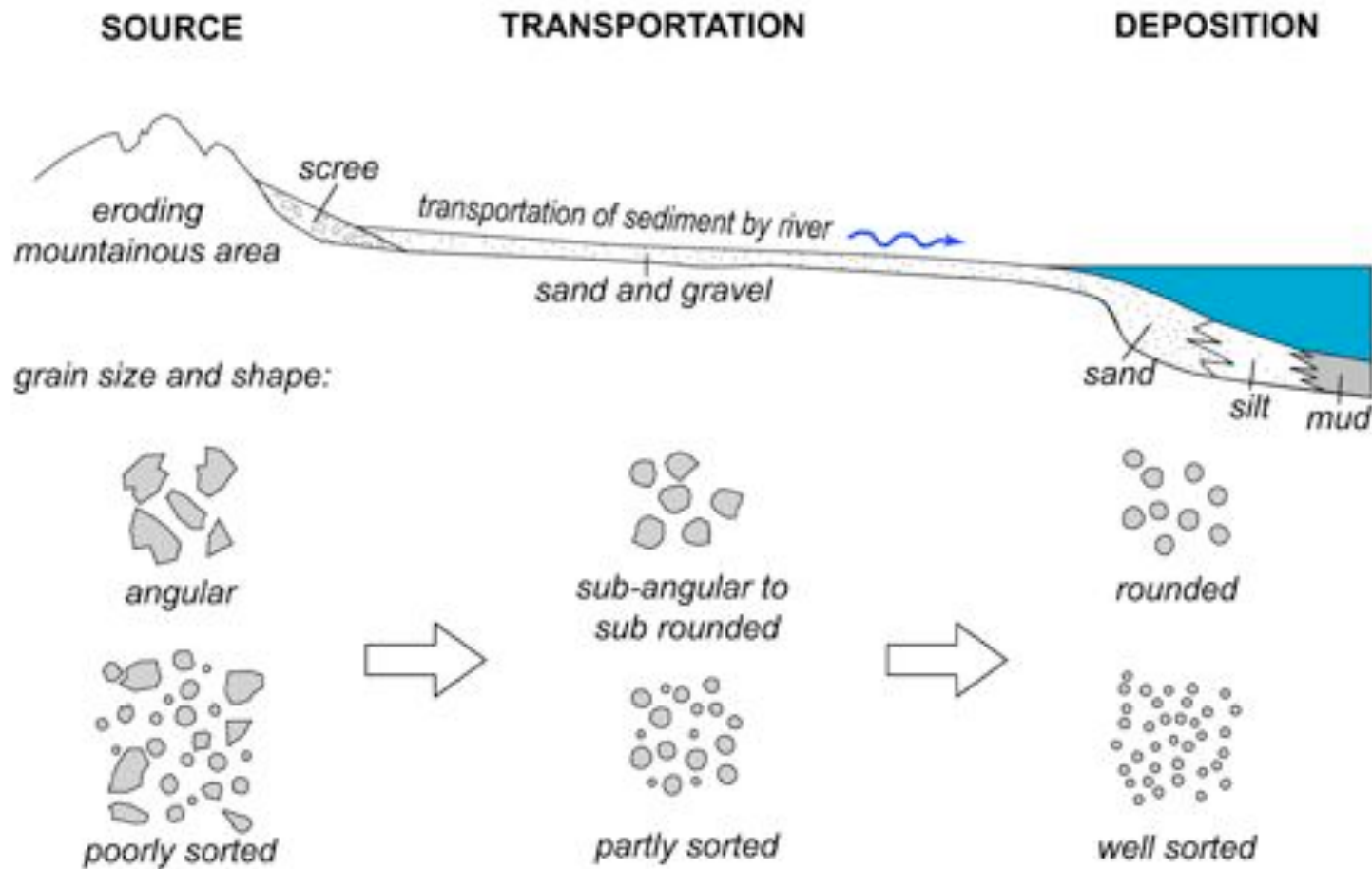


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trasporto sedimenti

SEDIMENT TRANSPORTATION & SORTING

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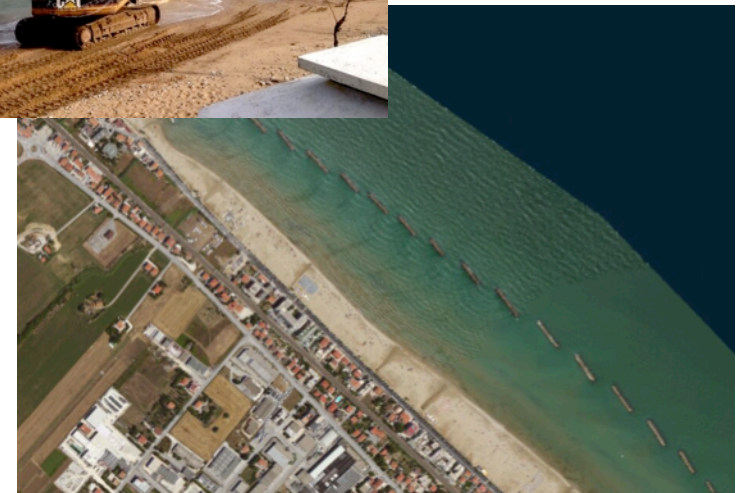
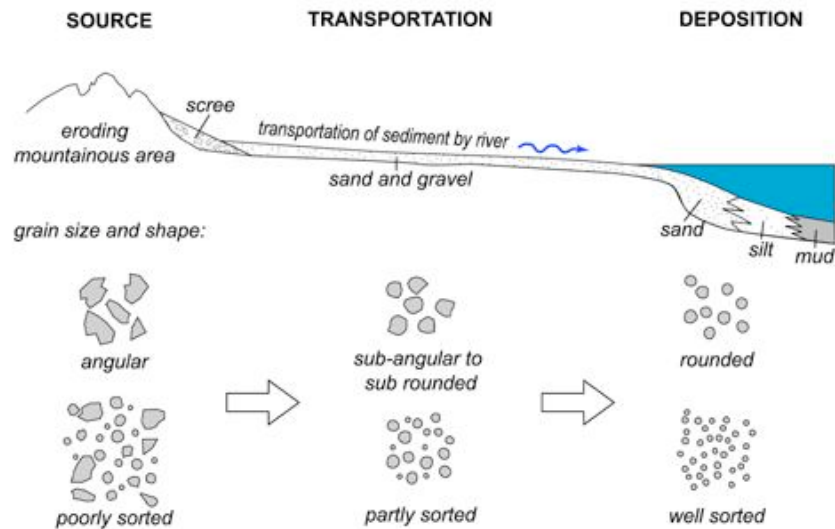
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alterazioni trasporto



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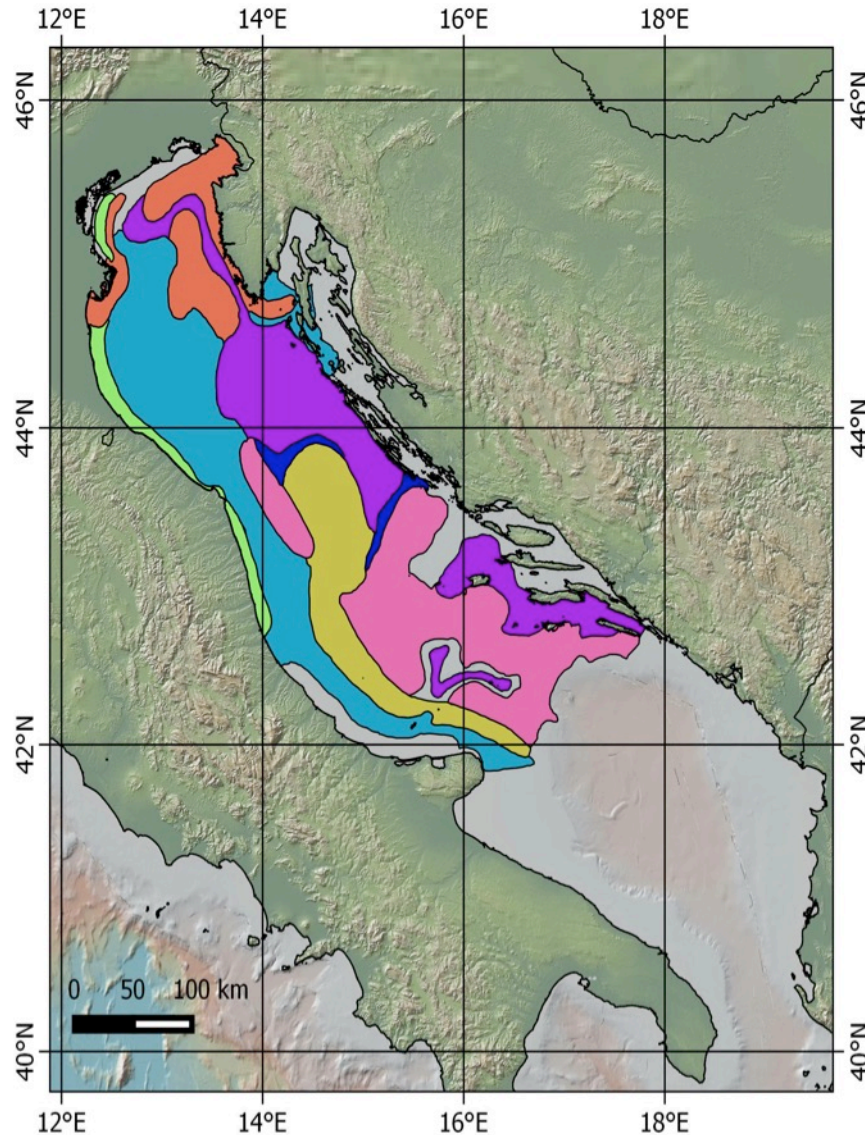
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alterazioni trasporto



Il mar Adriatico

sedimenti e biocenosi



Biocenoses from Gamulin-Brida, 1974

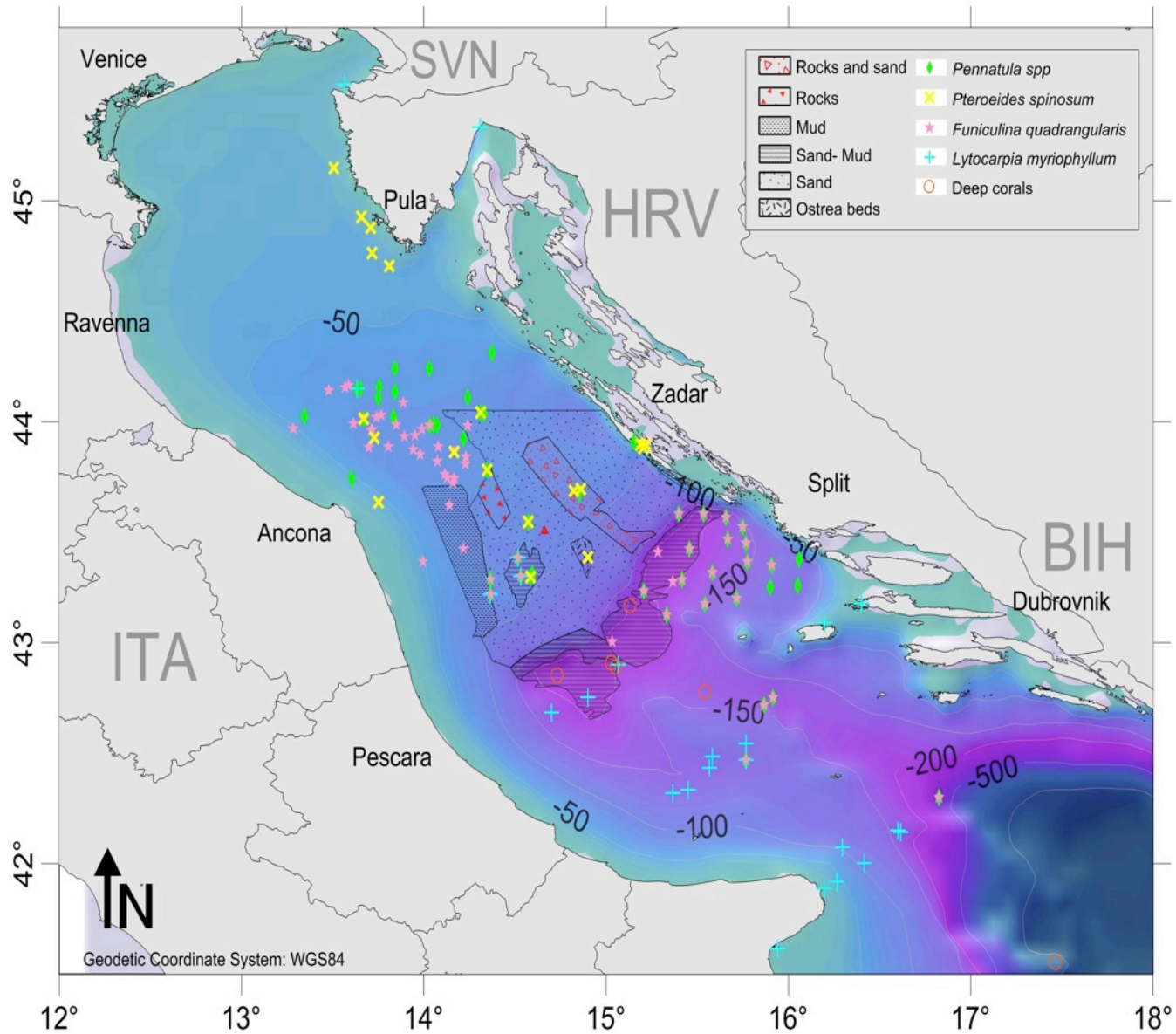
- Biocenosis of detritic muddy bottoms
- Biocenosis of detritic bottom
- Mixed bottoms
- Biocenosis of well sorted fine sands
- Biocenosis of off-shore muddy bottoms
- Biocenosis of costal terrigenous muds - Facies of sessile organisms
- Biocenosis of coastal terrigenous muds - Facies with *Turritella* spp.

Mercator Projection

Base Map: Global Multi-Resolution Topography (GMRT), Version 2.7

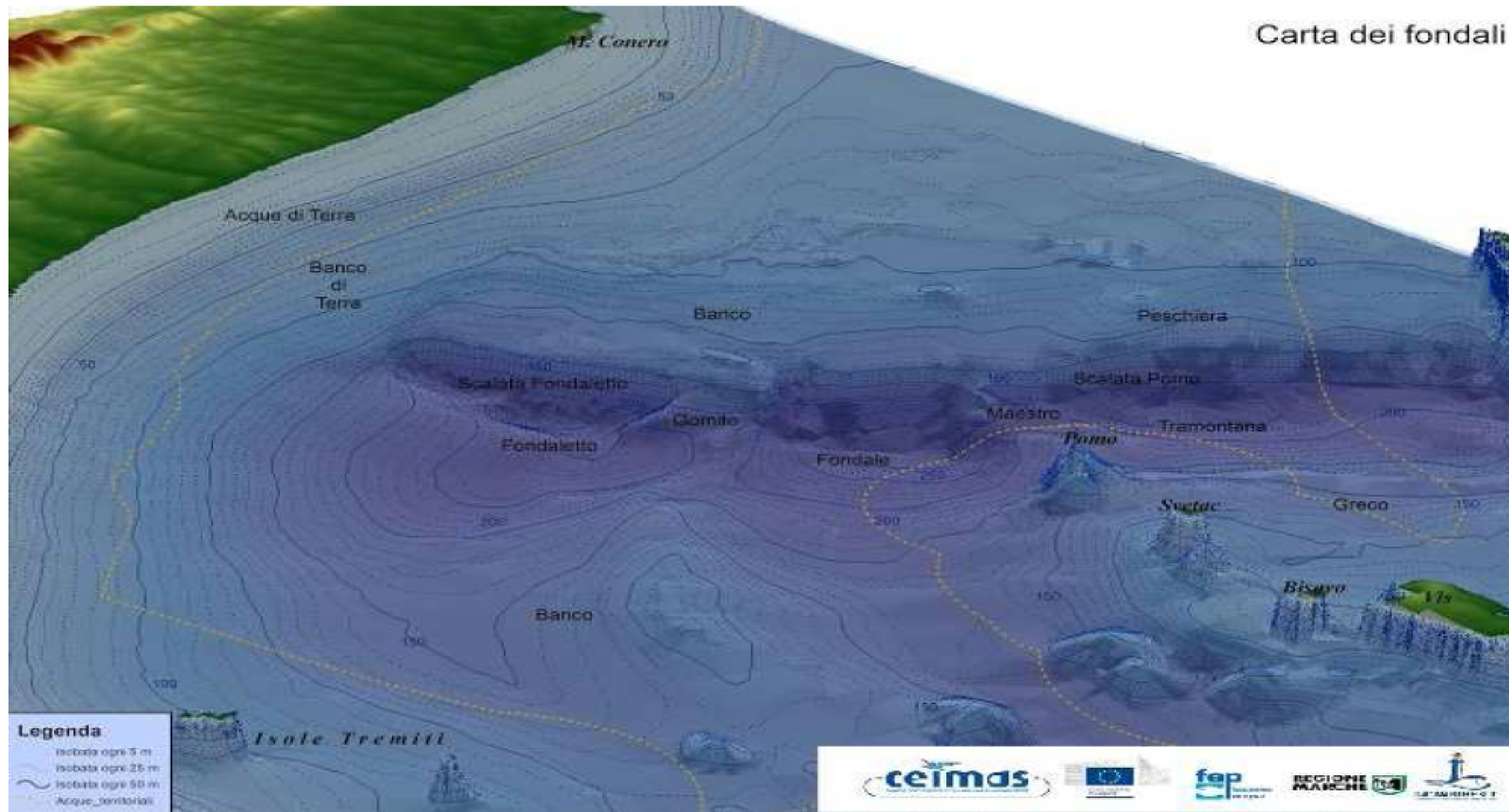
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sedimenti e biocenosi



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sedimenti e biocenosi

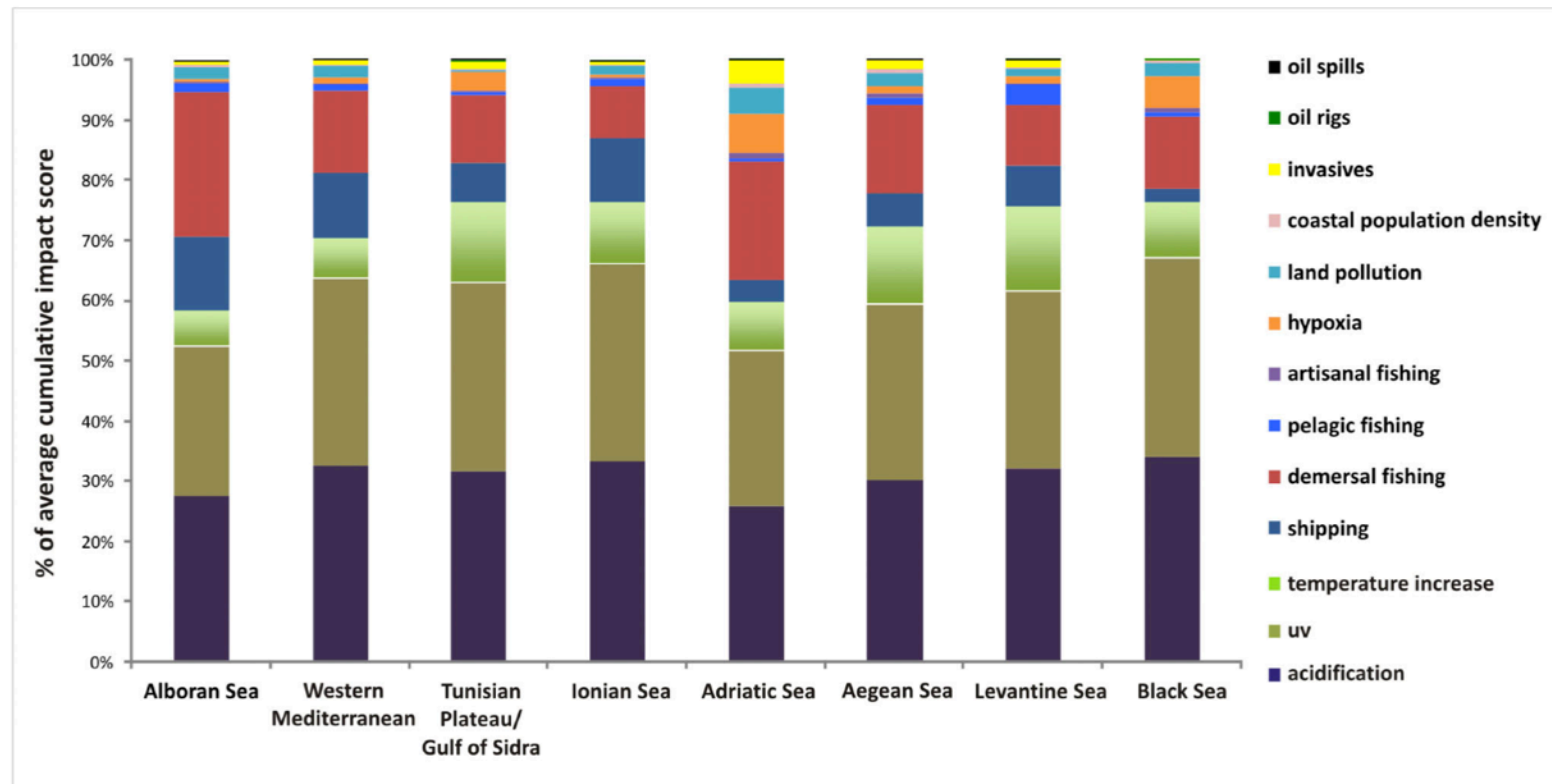


(Consorzio Economia Ittica Marina Sambenedettese)

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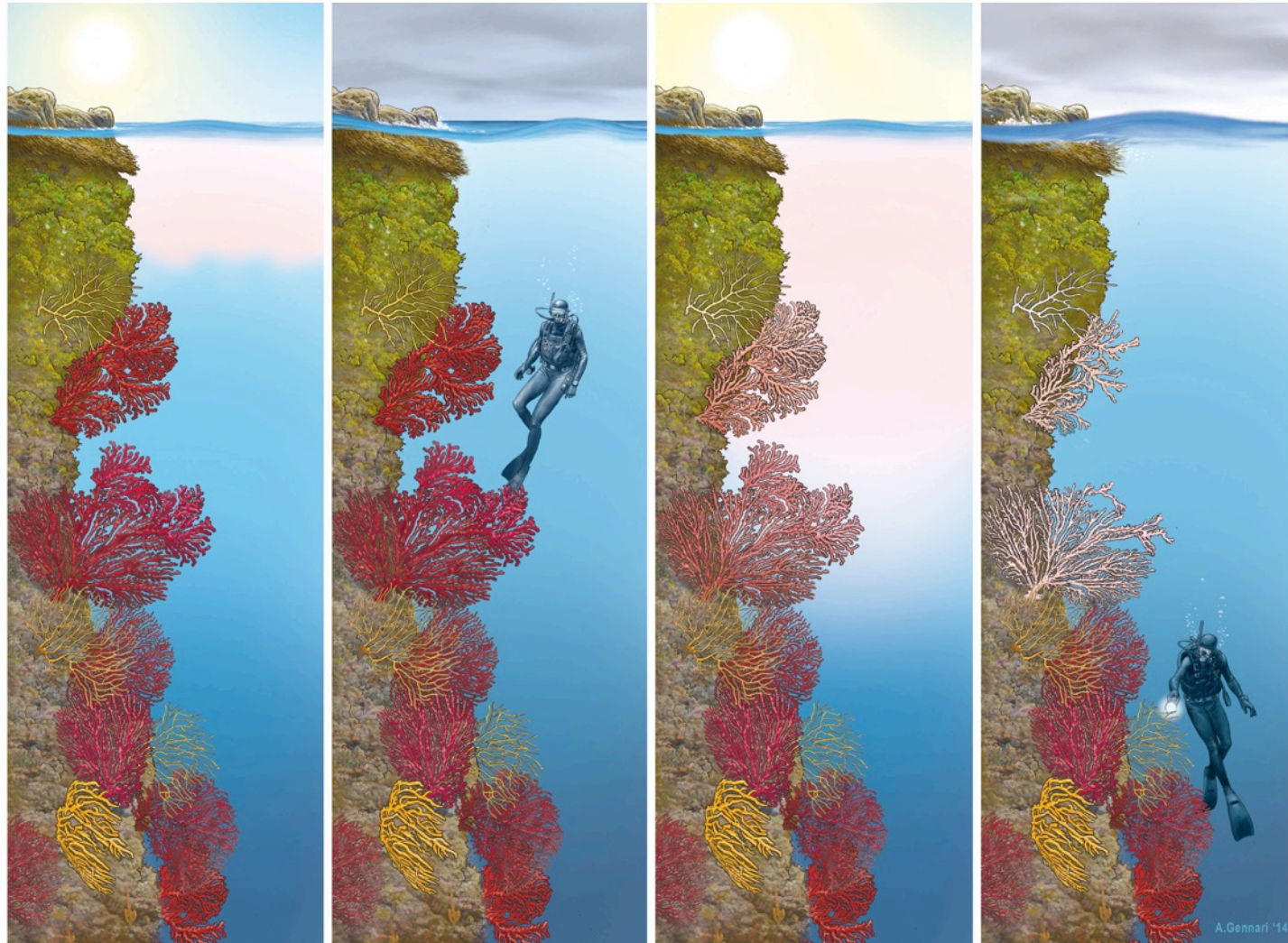
impatti

a.



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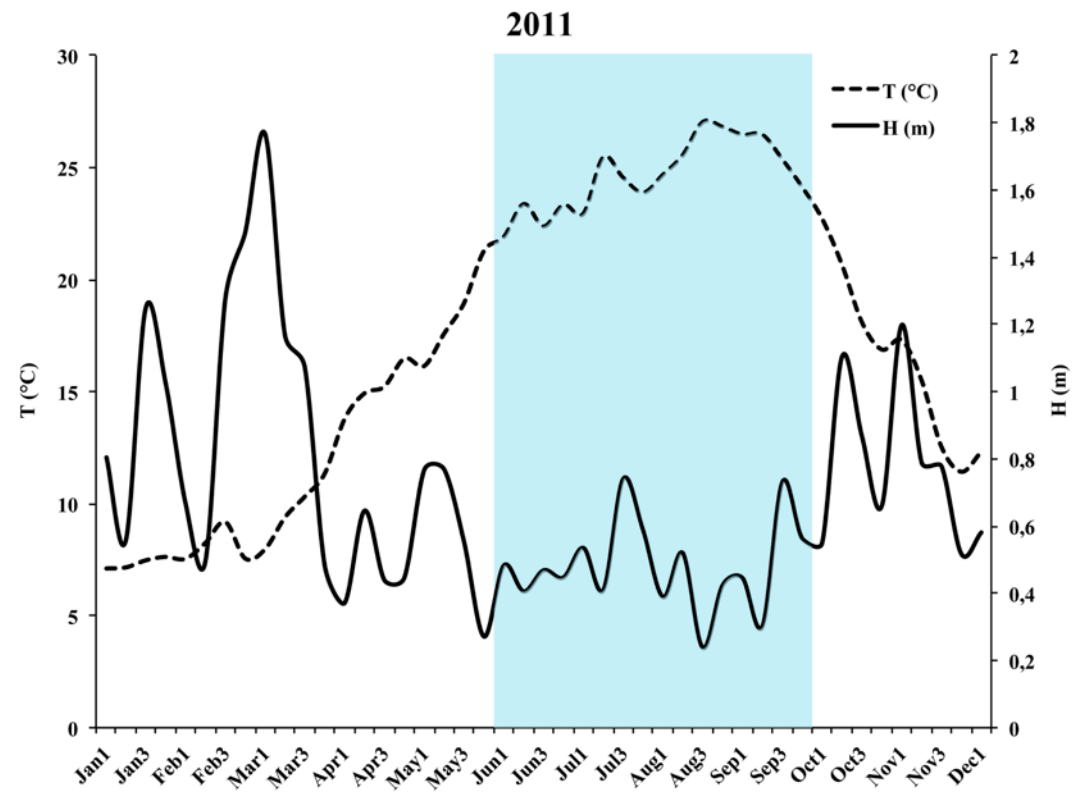
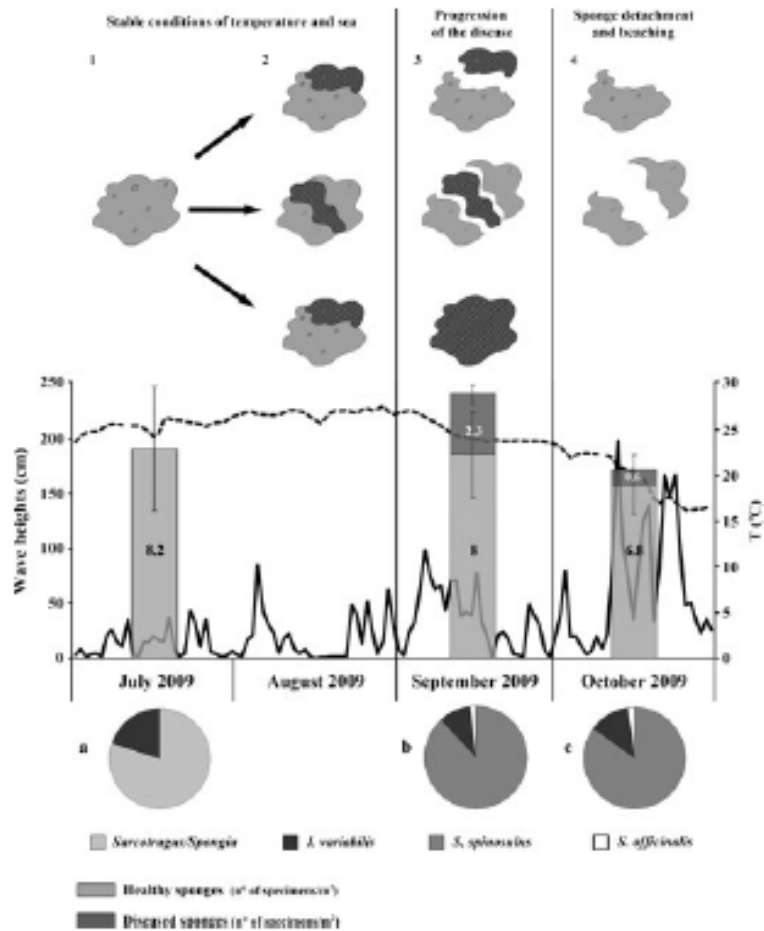
impatti – riscaldamento globale



Il mar Adriatico

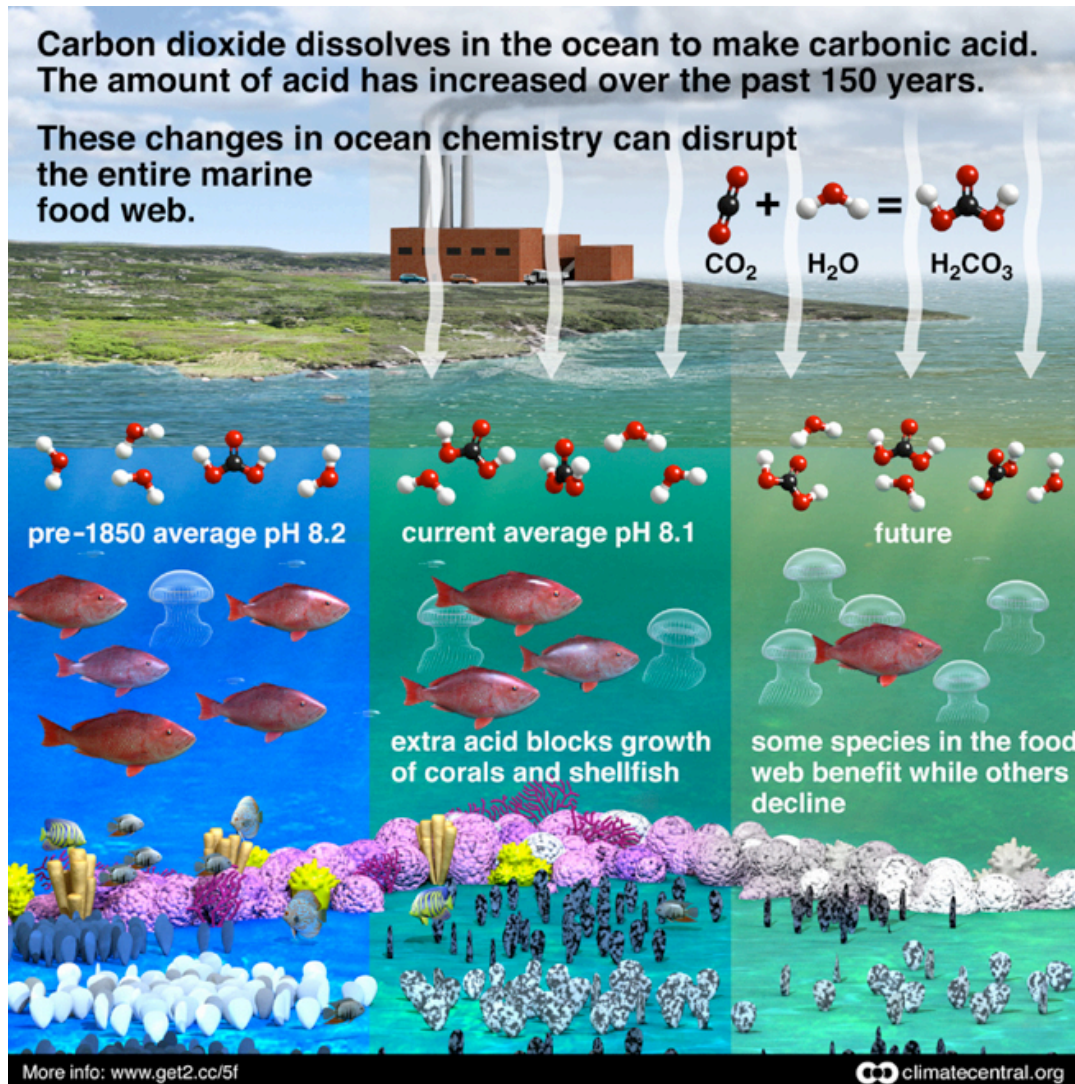
impatti – riscaldamento globale

Sponge disease in the Adriatic Sea



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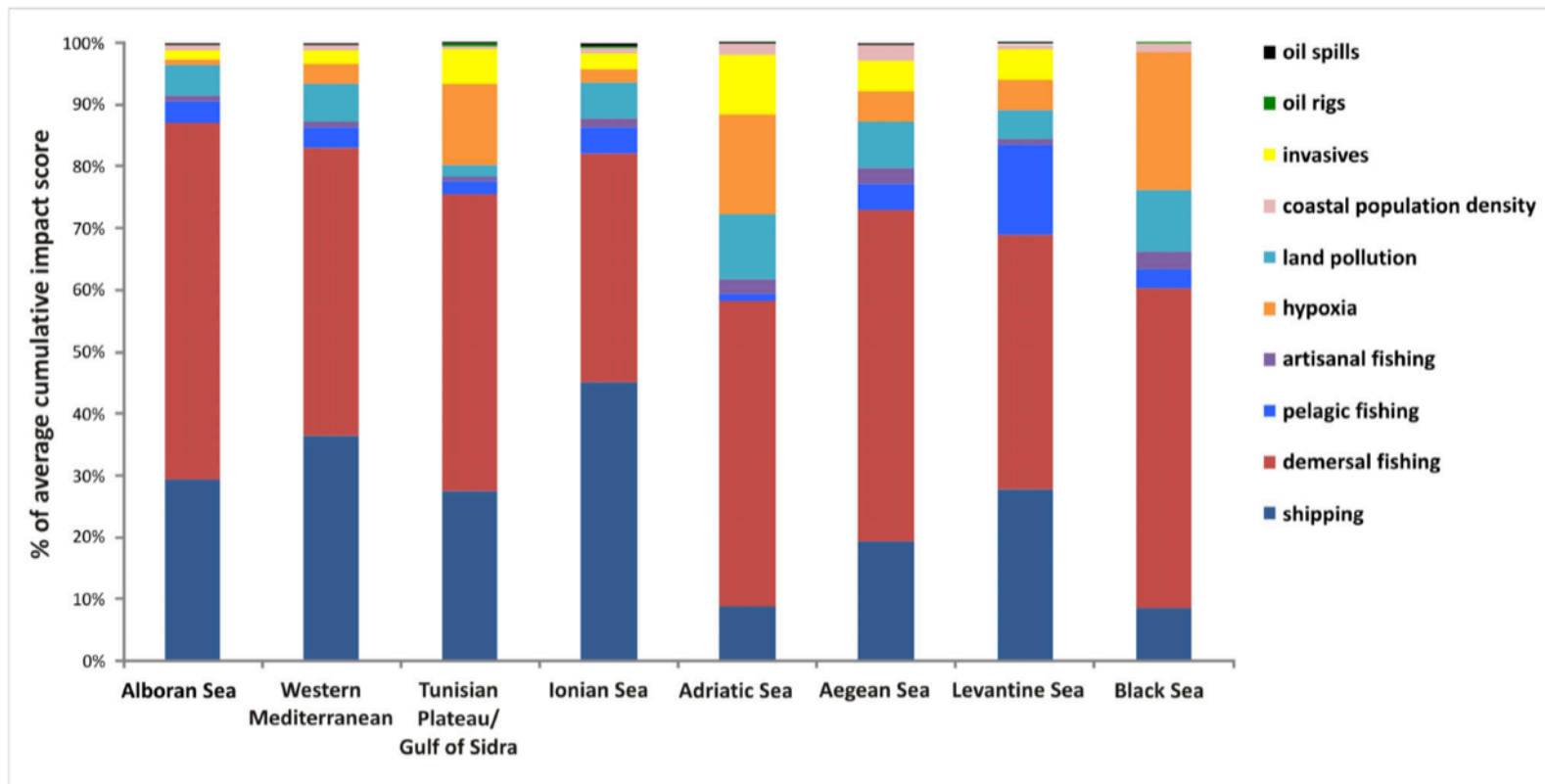
impatti - acidificazione



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impatti - senza effetto clima

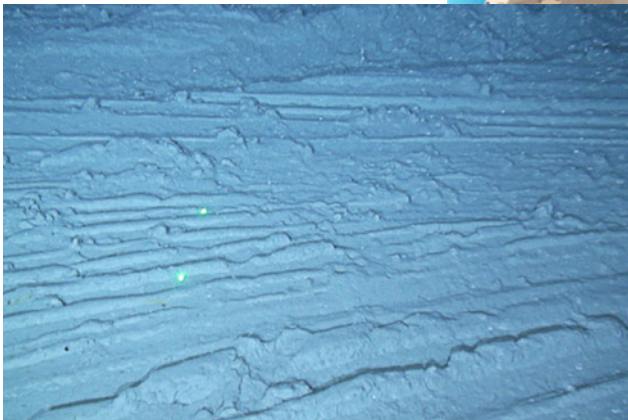
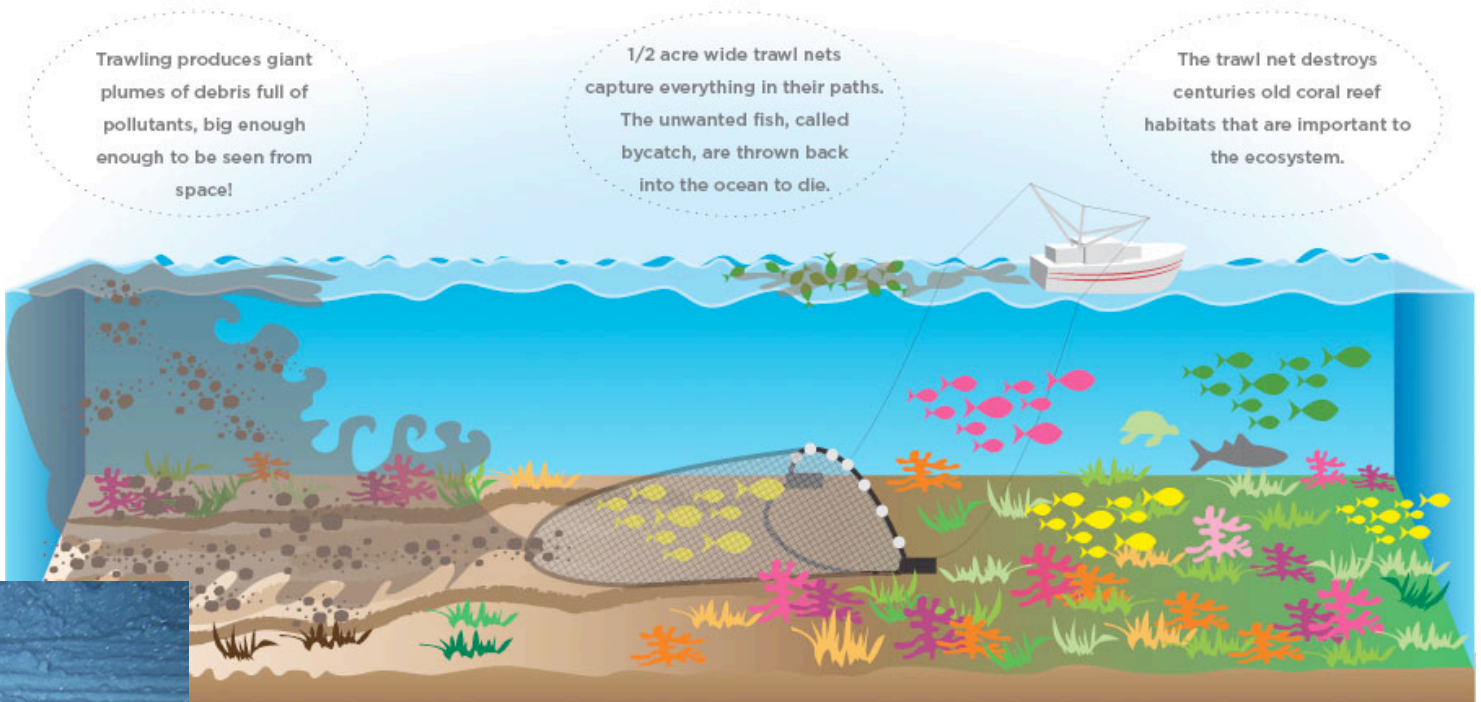
b.





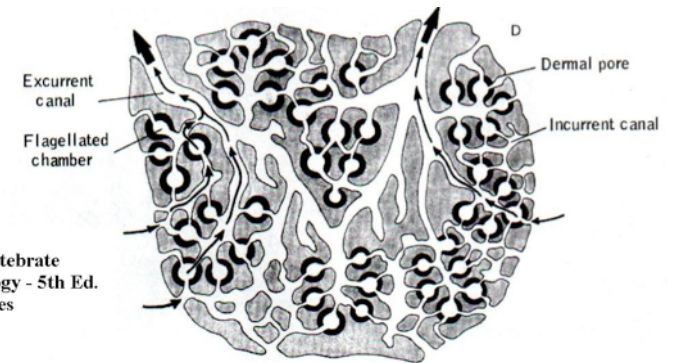
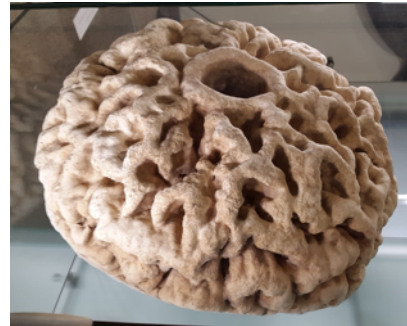
Il mar Adriatico impatti

THE MUDDY TRUTH ABOUT **BOTTOM TRAWLING**



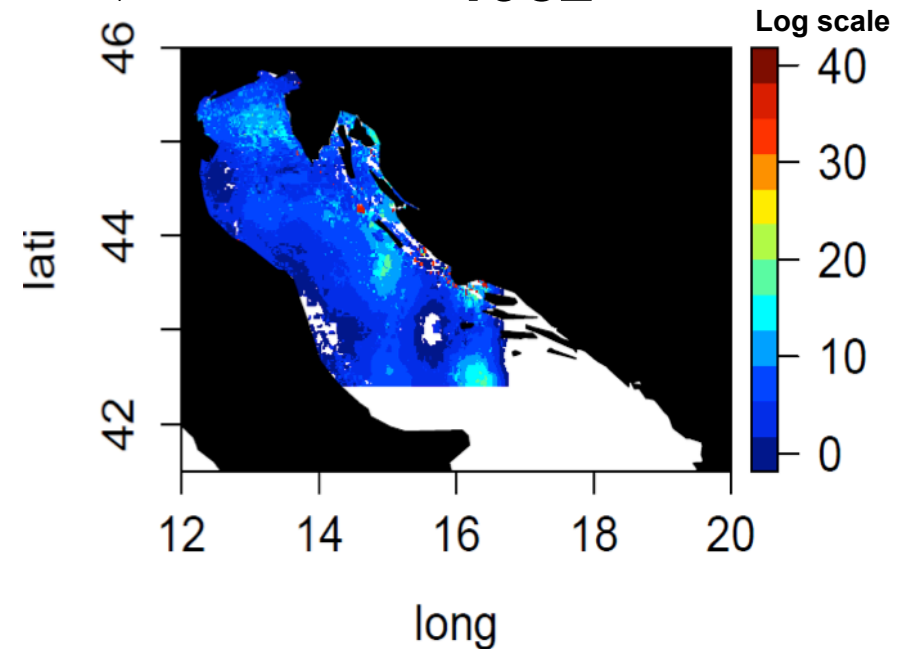
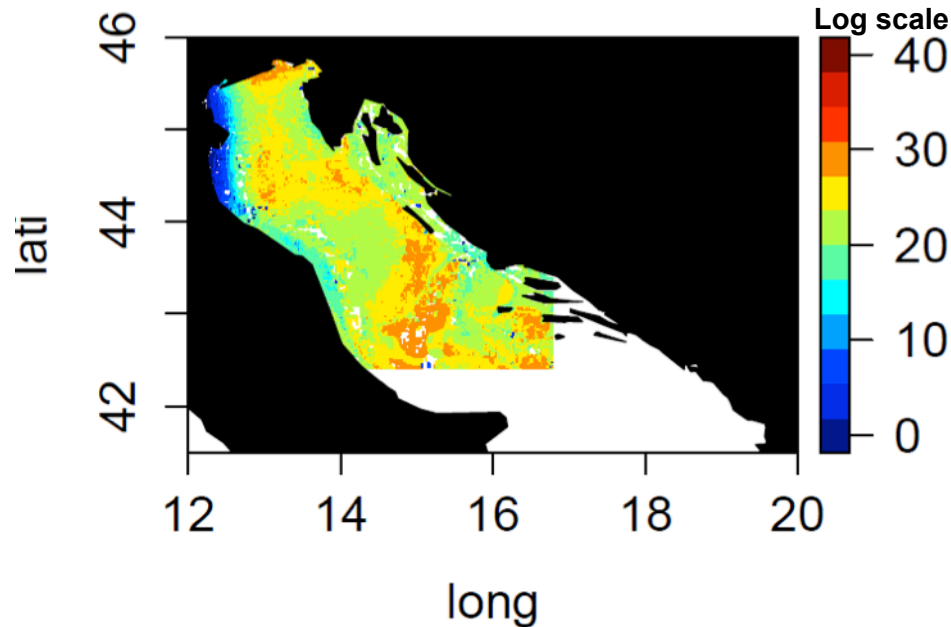
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trend storici delle specie strutturanti



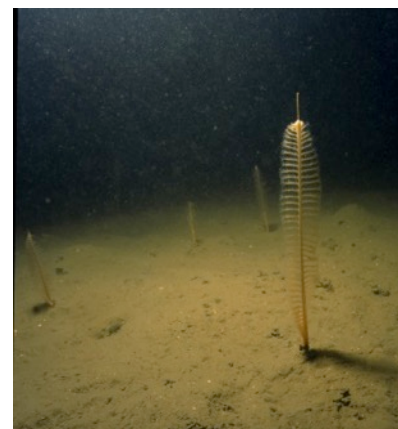
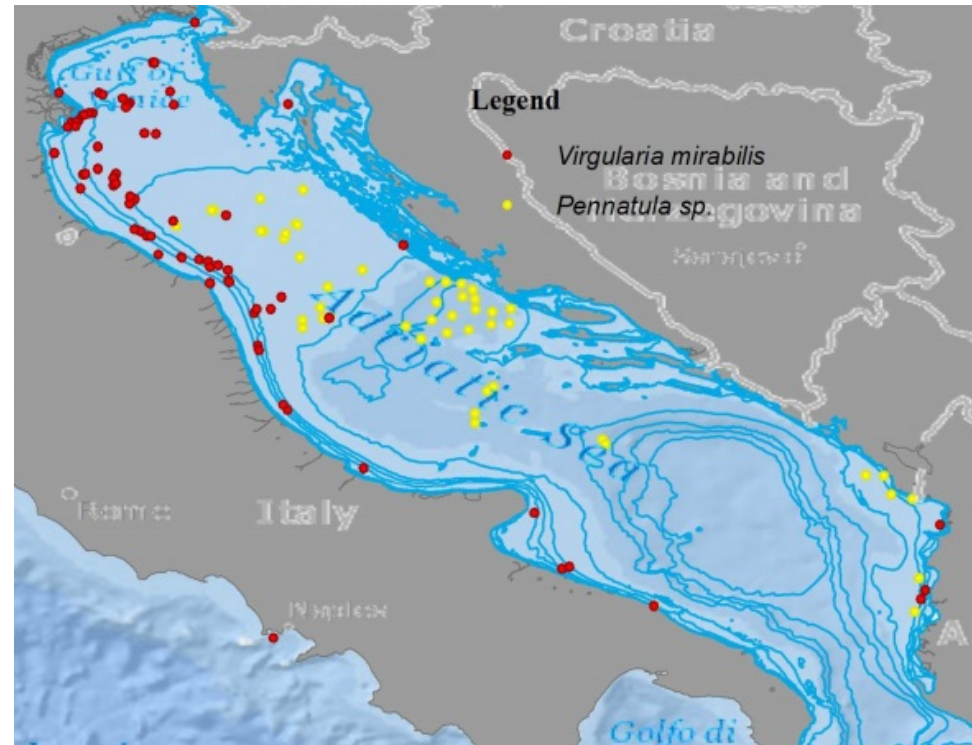
Vatova sponges 1943-49

Dipeta sponges 1982



Il mar Adriatico

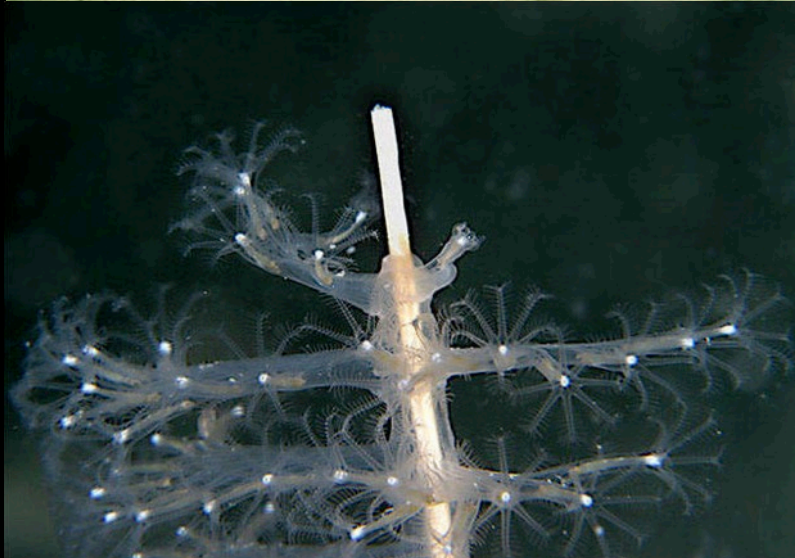
trend storici delle specie strutturanti



Funiculina quadrangularis



Virgularia mirabilis



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trend storici delle specie strutturanti

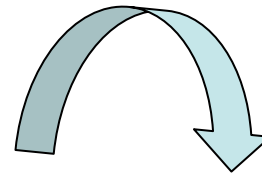


Lytocarpia myriophillum



Il mar Adriatico

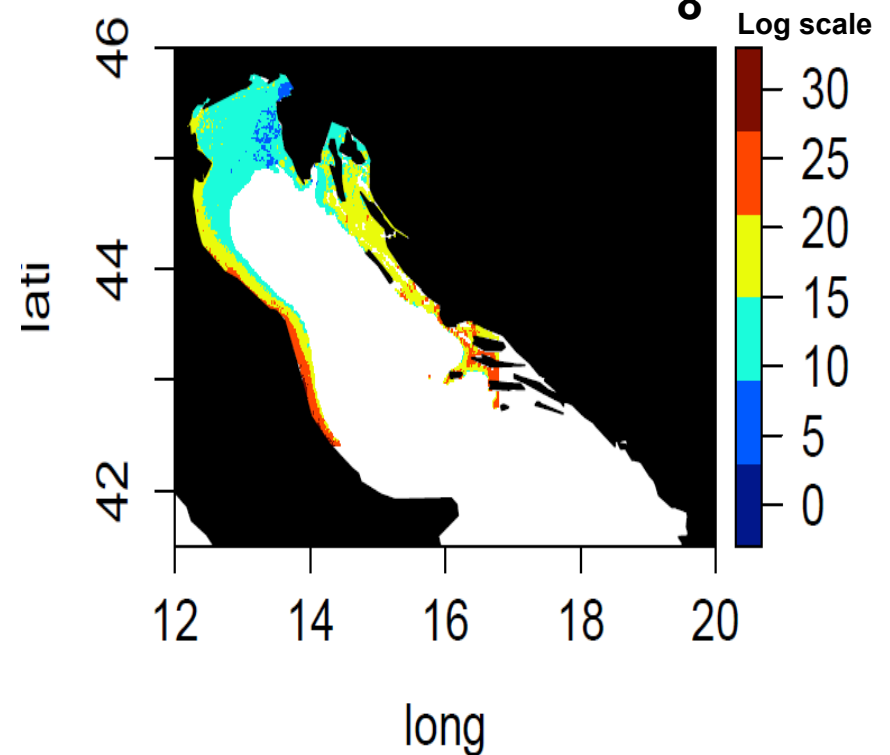
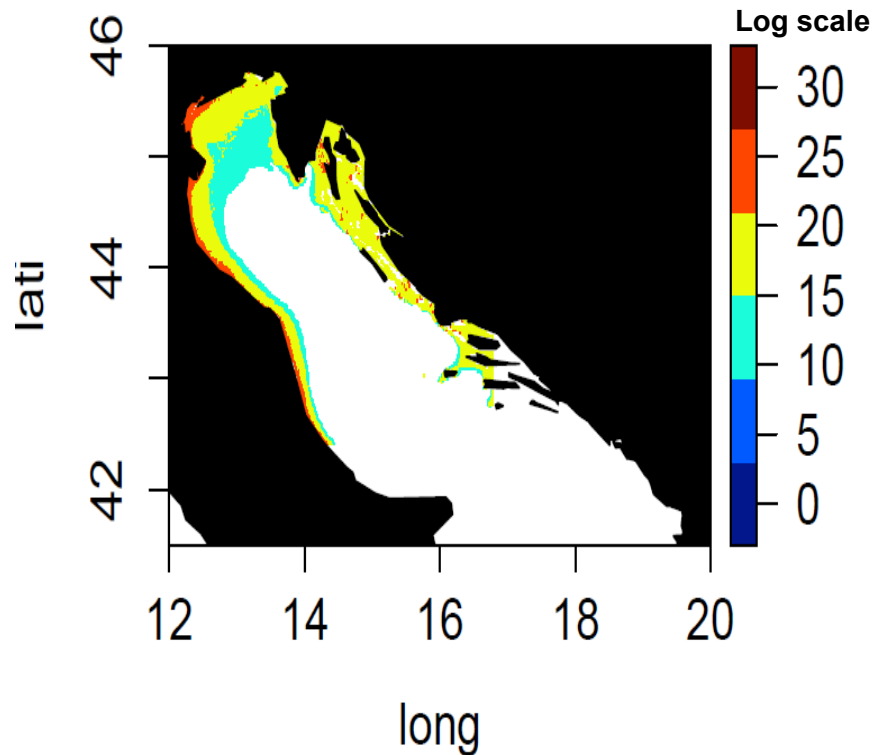
trend storici delle specie strutturanti



Vatova *Chamelea gallina* 1943-49

Prisma *Chamelea gallina* 1996-9

8

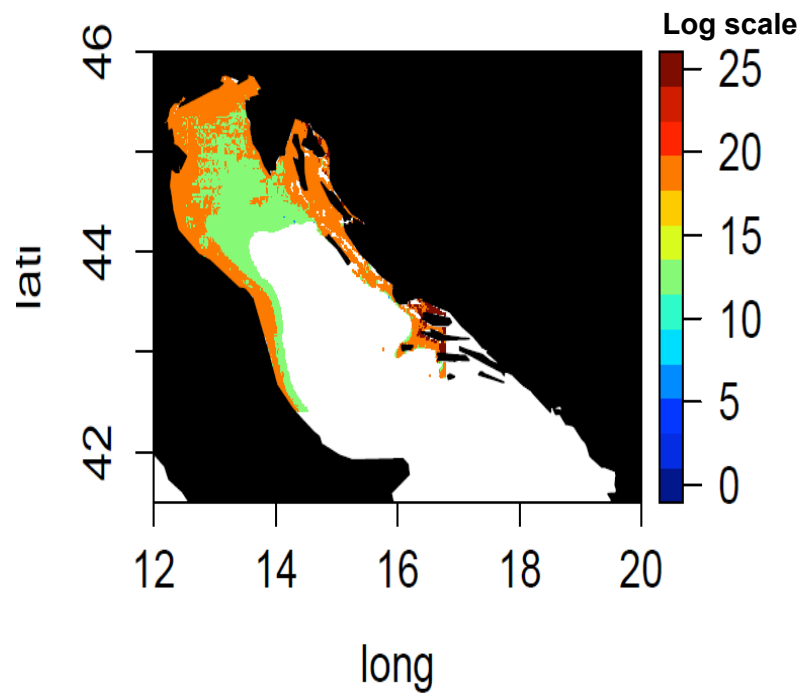


Il mar Adriatico

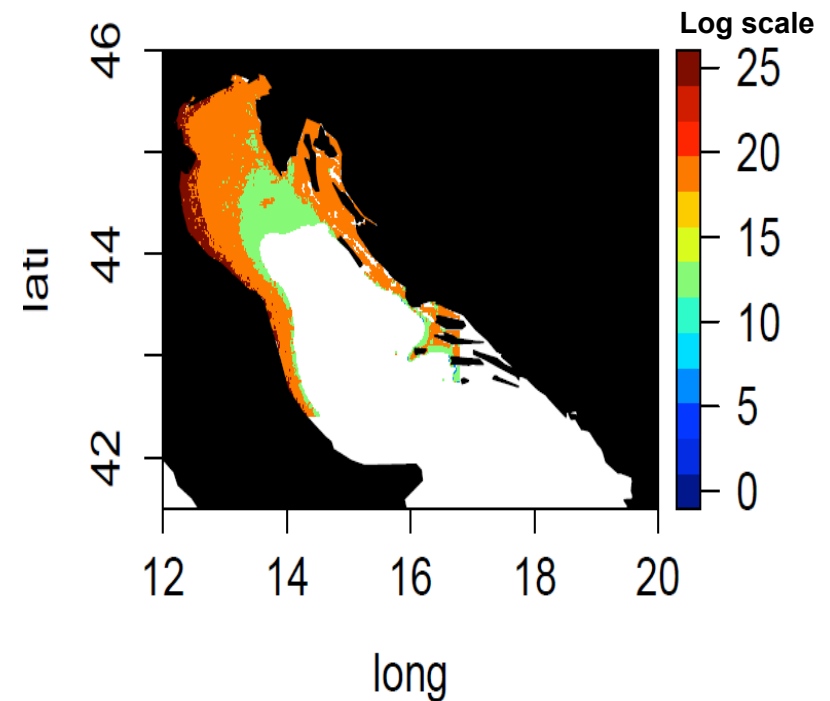
trend storici delle specie strutturanti



Vatova Corbula gibba 1943-49

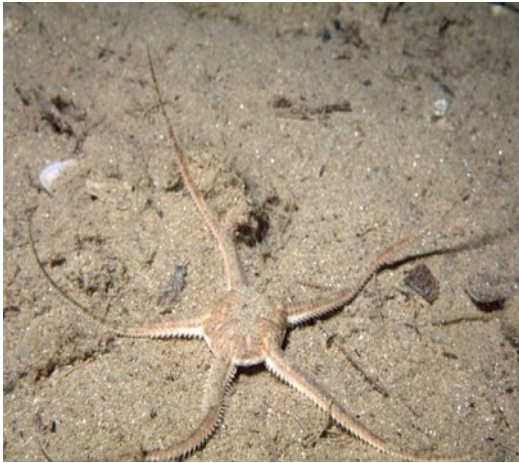


Prisma Corbula gibba 1996-98

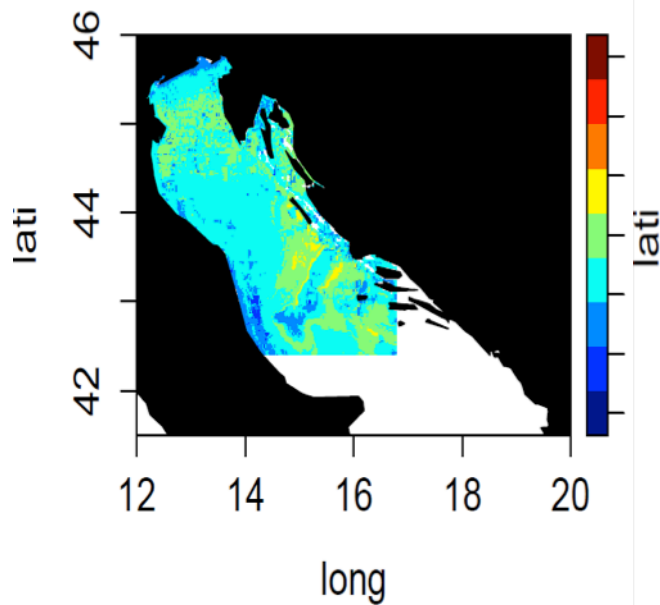


Il mar Adriatico

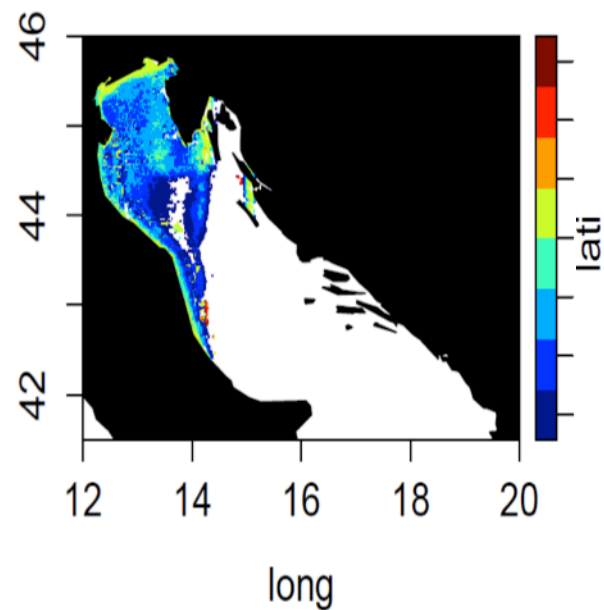
trend storici delle specie strutturanti



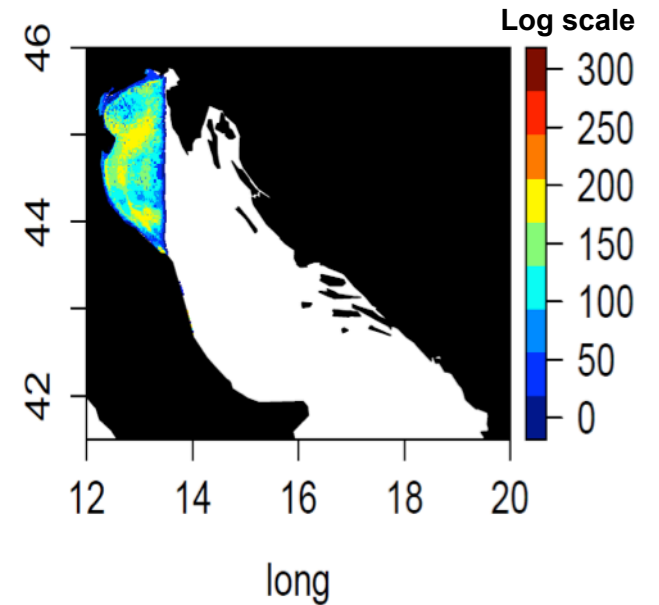
Vatova ophiura 1943-49



Pipeta ophiura 1982



Prisma ophiura 1996-98

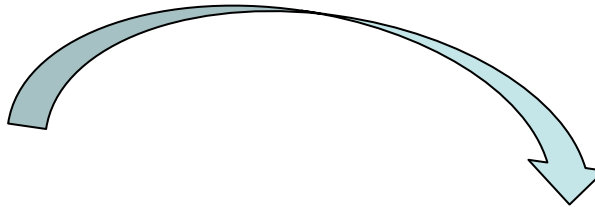


Il mar Adriatico

trend storici delle specie strutturanti

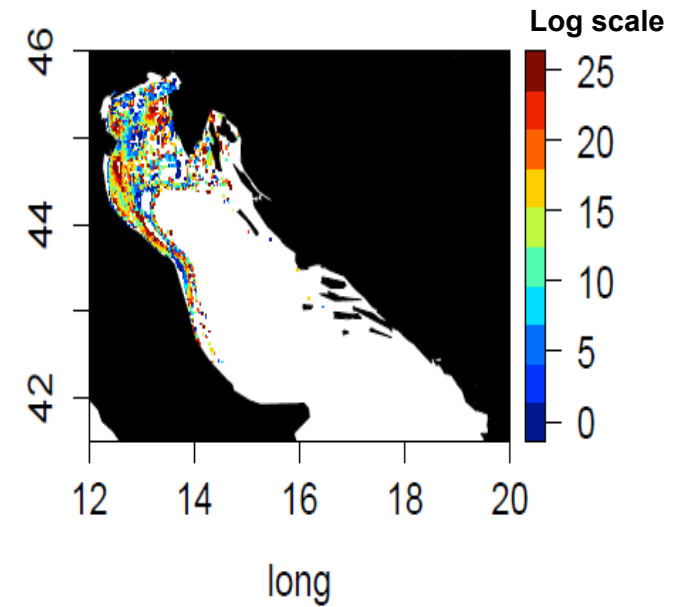
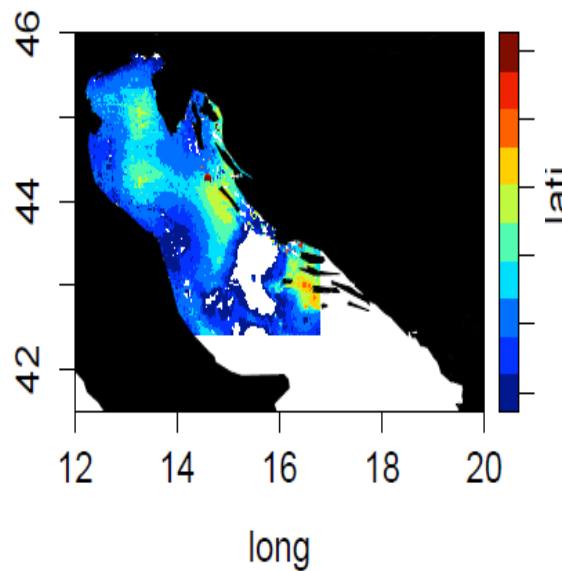
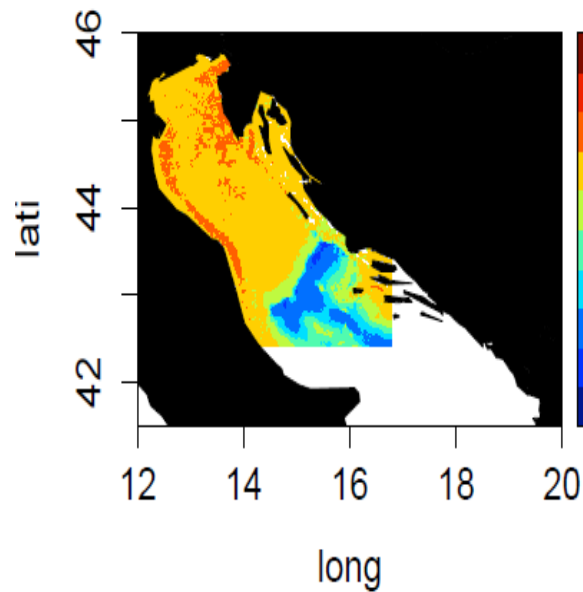


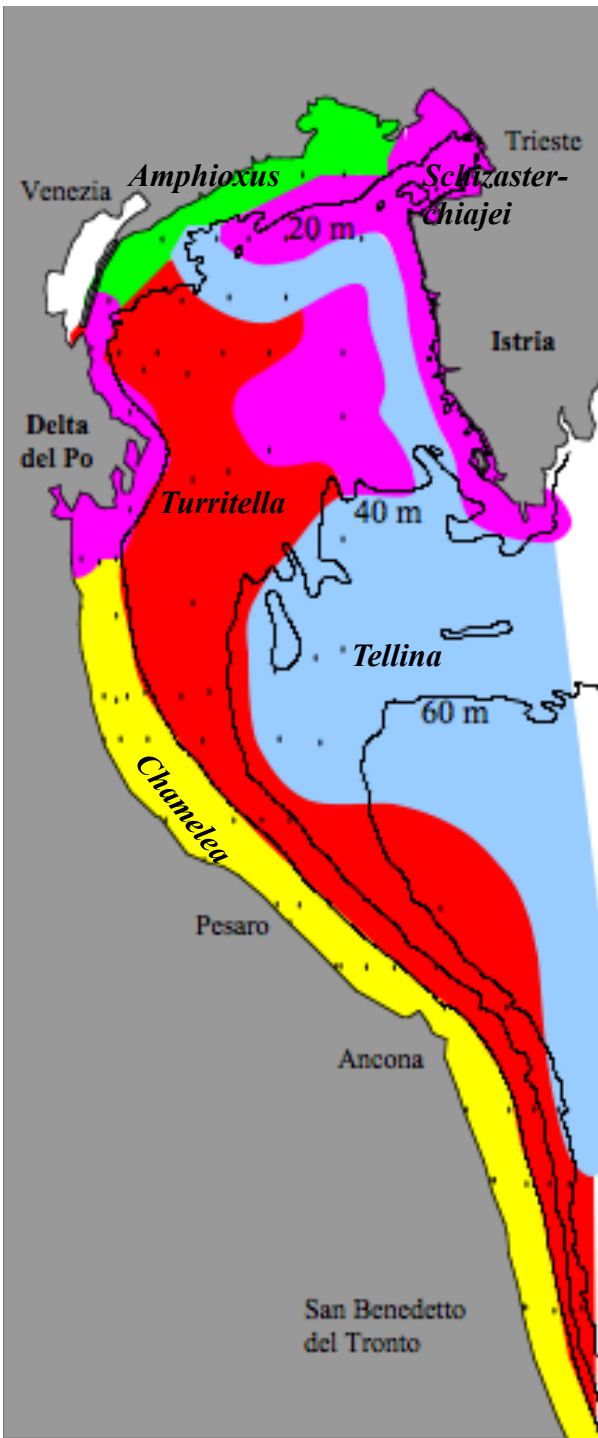
Vatova oloturia 1943-49



Pipeta oloturia 1982

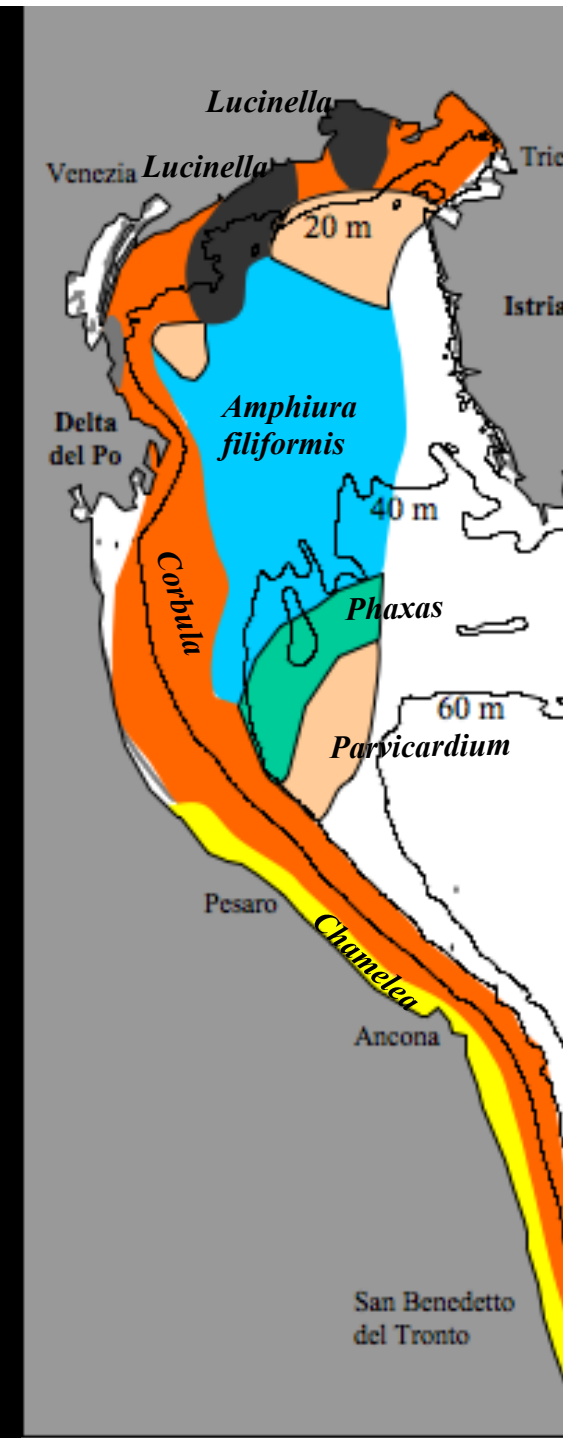
Prisma oloturia 1996-98





Cambiamenti nelle comunità di fondo mobile negli ultimi 60 anni

- 195 vs 68 specie (49 in comune)
- La comunità a *Chamelea* si è ristretta mentre quella a *Corbula* si è estesa
- La comunità ad *Amphiura filiformis*, oggi dominante ha rimpiazzato quelle a *Turritella communis* e *Amphiura chiajei* le più comuni negli anni '40.



Il mar Adriatico

ipotesi per il futuro

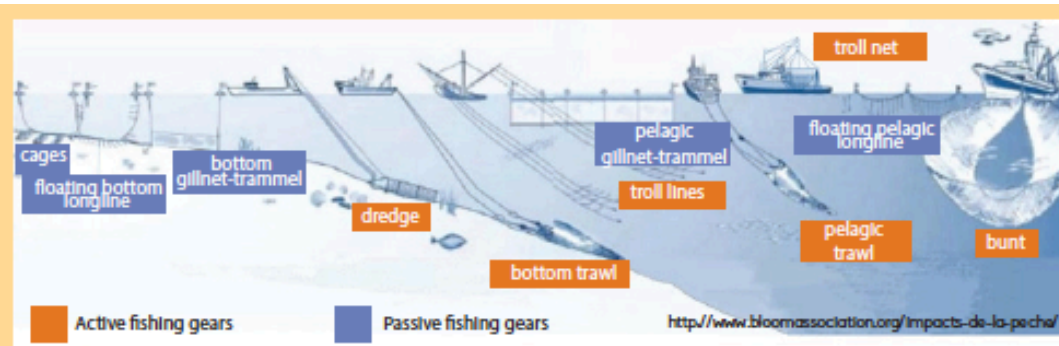
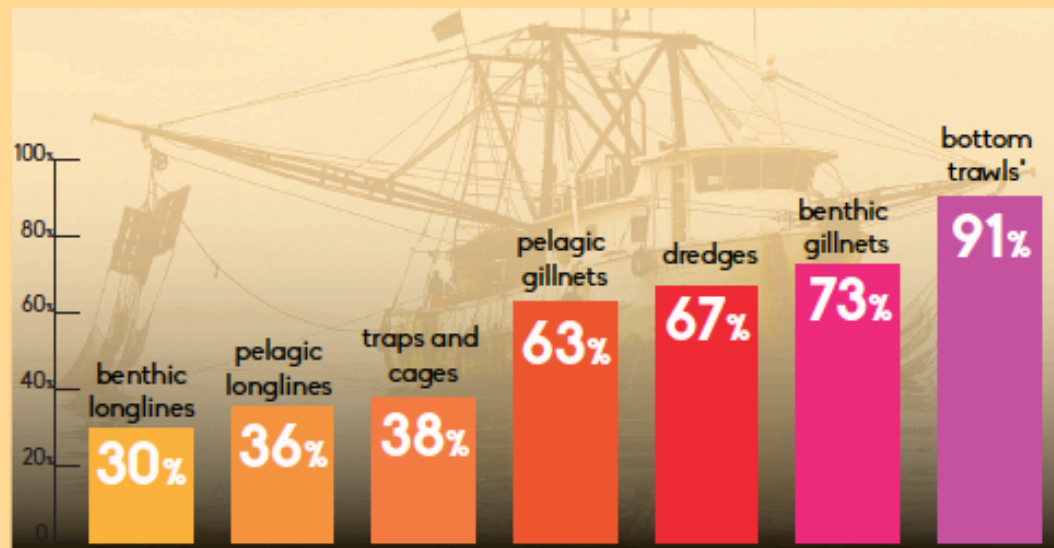


Figure 1. Fishing gear typologies



* those used on the surface, the study did not consider the deep trawl, or it raises even more serious problems.

Figure 2. On a scale from 0 to 100 the fishing destructive level of fishing tools (Lance et al., 2003).

Photo: Mike Marinina/Marine PhotoBank

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Per i pescherecci iscritti nei compartimenti marittimi: da Brindisi a Imperia è disposta l'Interruzione temporanea obbligatoria delle attività di pesca per **30 giorni consecutivi dal 15 settembre al 14 ottobre del corrente anno**

Interruzione temporanea obbligatoria delle attività di pesca per **42 giorni consecutivi dal 28 luglio al 7 settembre**



centimetri - LA STAMPA



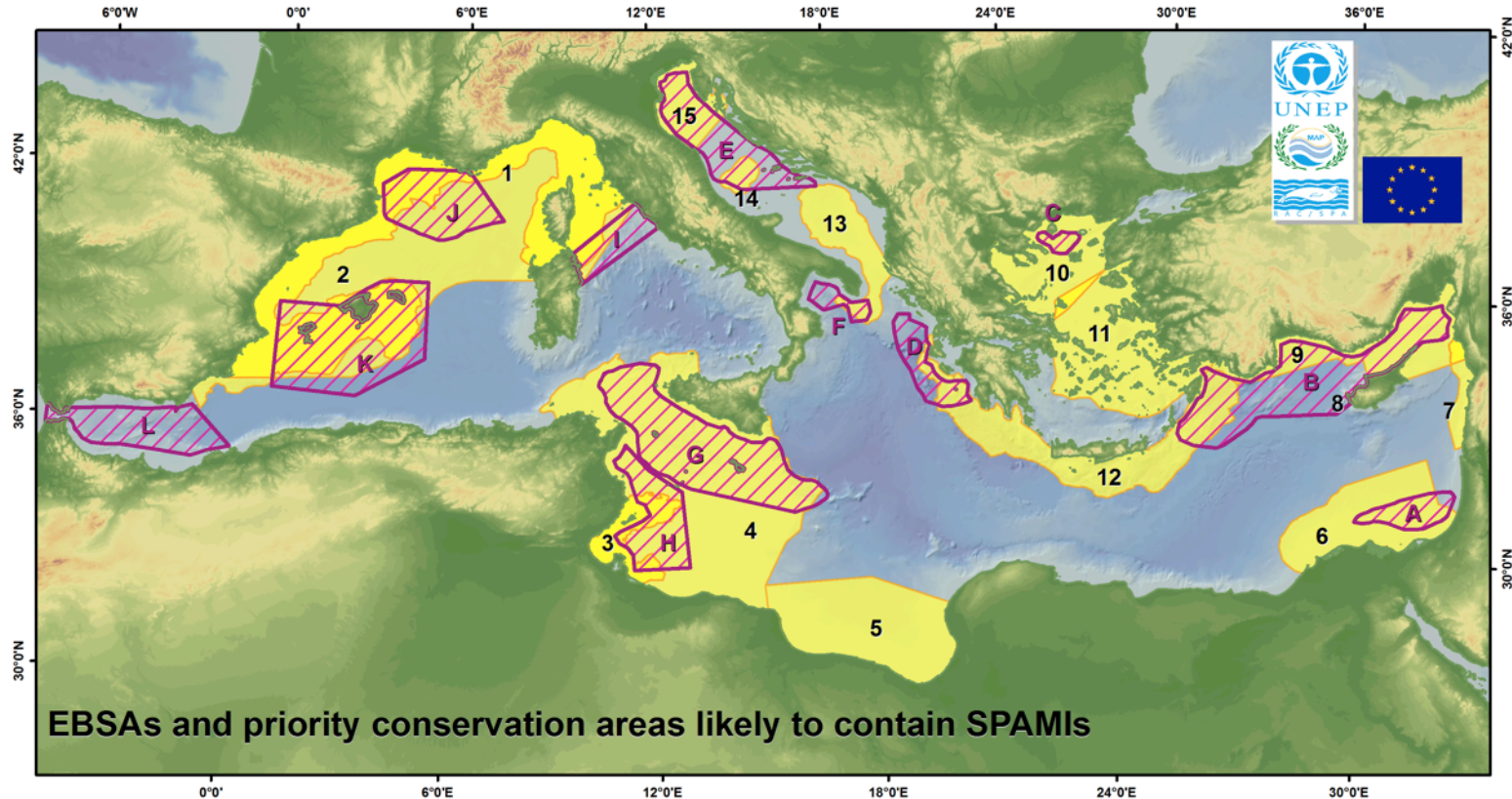
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EBSAs and priority conservation areas likely to contain SPAMIs

Ecologically or Biologically Significant Areas (EBSAs)*

- | | |
|---------------------------------------------------|----------------------------------|
| 1 EBSAs | Overlapping area between EBSAs |
| 1. North-western Mediterranean Pelagic Ecosystems | 9. North-East Levantine Sea |
| 2. North-western Mediterranean Benthic Ecosystems | 10. North Aegean Sea |
| 3. Gulf of Gabès | 11. Central Aegean Sea |
| 4. Sicilian Channel | 12. Hellenic Trench |
| 5. Gulf of Sirte | 13. South Adriatic Ionian Strait |
| 6. Nile Delta Fan | 14. Jabuka / Pomo Pit |
| 7. East Levantine Canyons (ELCA) | 15. Northern Adriatic |
| 8. Akamas and Chrysochou Bay | |

Specially Protected Areas of Mediterranean Importance (SPAMIs)*

- | | |
|----------------------------------|----------------------------------|
| SPAMI potential areas | |
| A. Nile Delta Region | G. Northern Strait of Sicily |
| B. Northeastern Levantine Sea | H. Southern Strait of Sicily |
| C. Thracian Sea | I. Central Tyrrhenian |
| D. Northeastern Ionian | J. Gulf of Lions Shelf and Slope |
| E. Northern and Central Adriatic | M. Southern Balearic |
| F. Santa Maria di Leuca | N. Alborán Seamounts |

* Extr. Meet. of the F.P. for SPAs (Istanbul, Turkey, 2010)

0 120 240 360 480 600 km
Lambert azimuthal Equal Area (LAEA)-ETRS-1989
GIS: RAC/SPA-S. Requena. Vers. April, 2015.

* CBD's COP 2014 (Pyeongchang, Rep. Korea)

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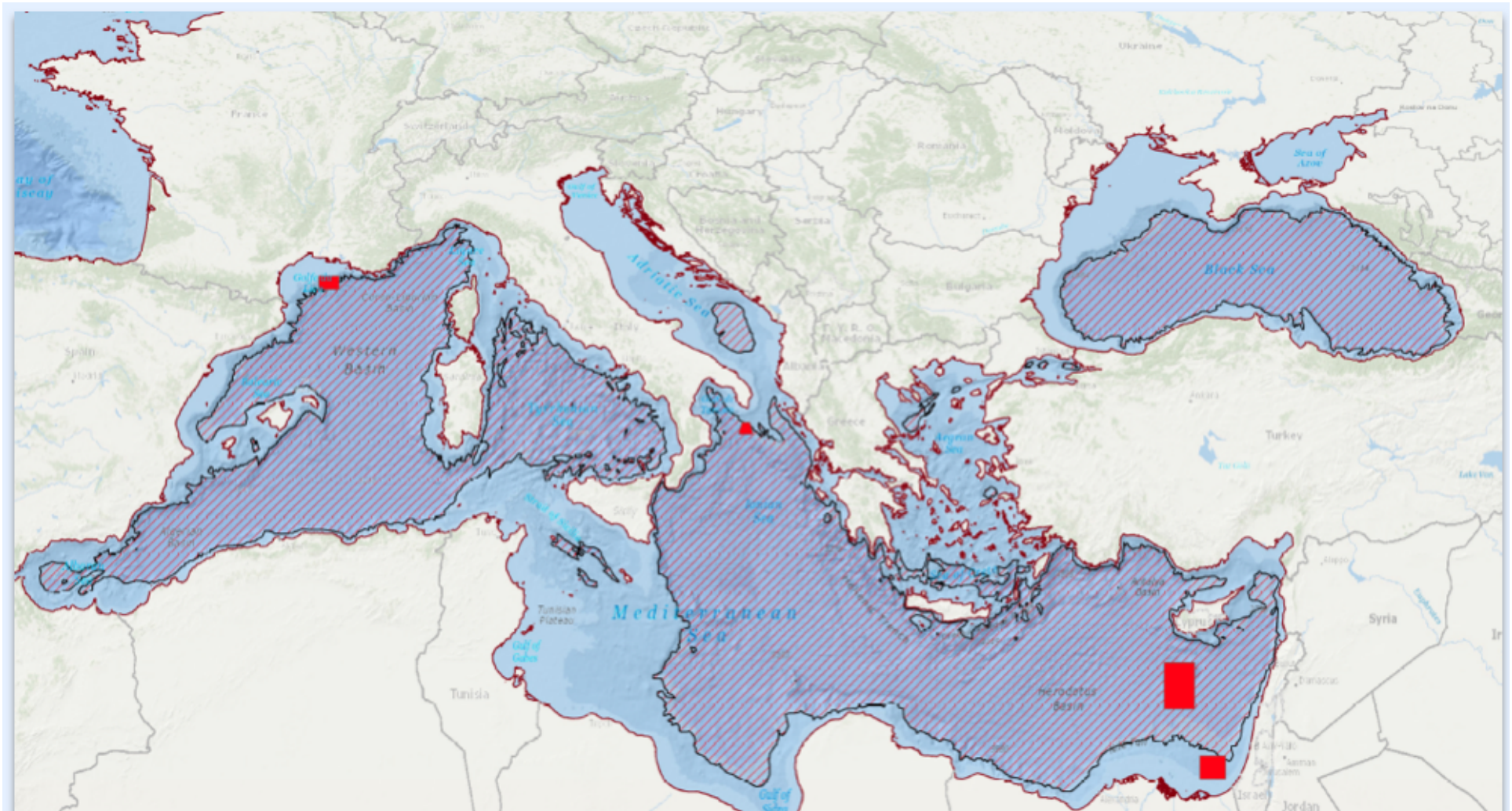
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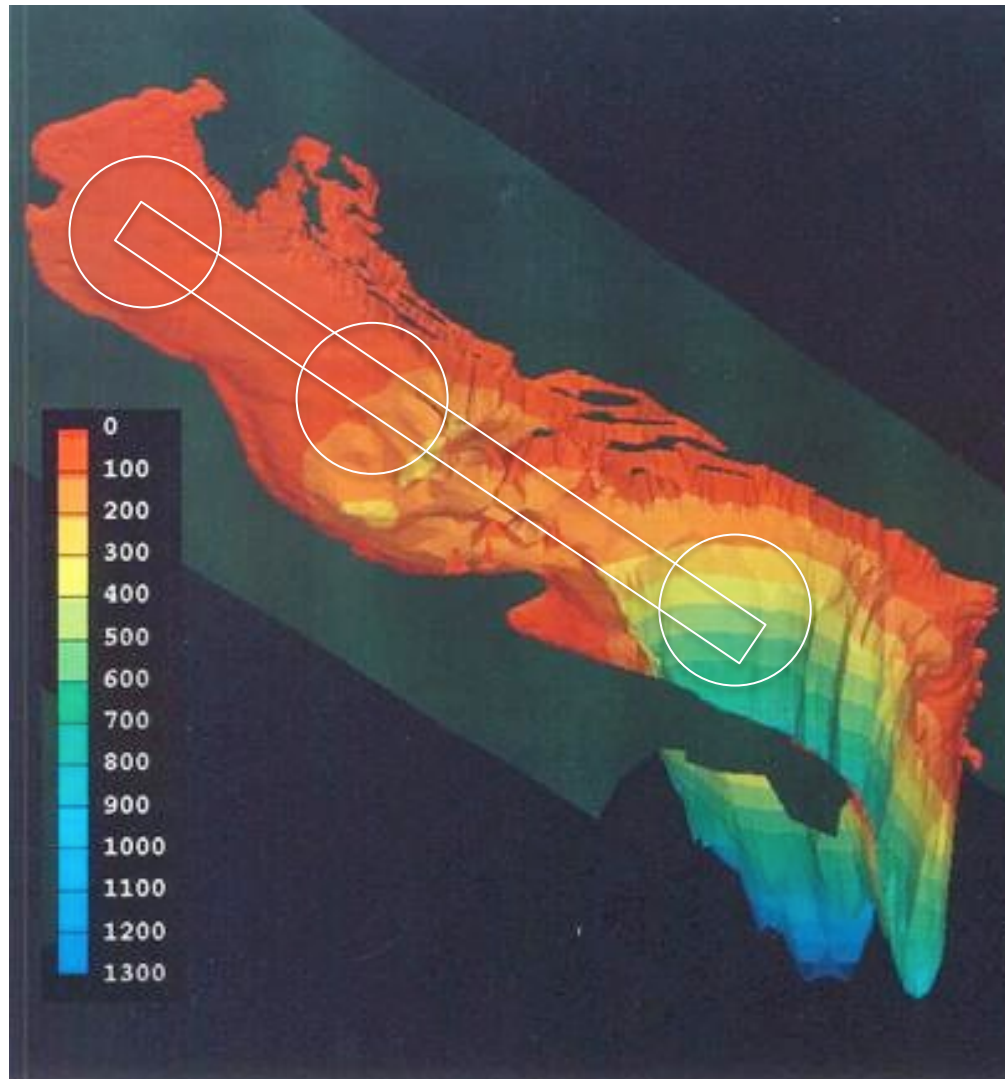


Location of the four GFCM FRAs and 1000 m isobaths in the Mediterranean and Black Sea

Fishery Restricted Areas

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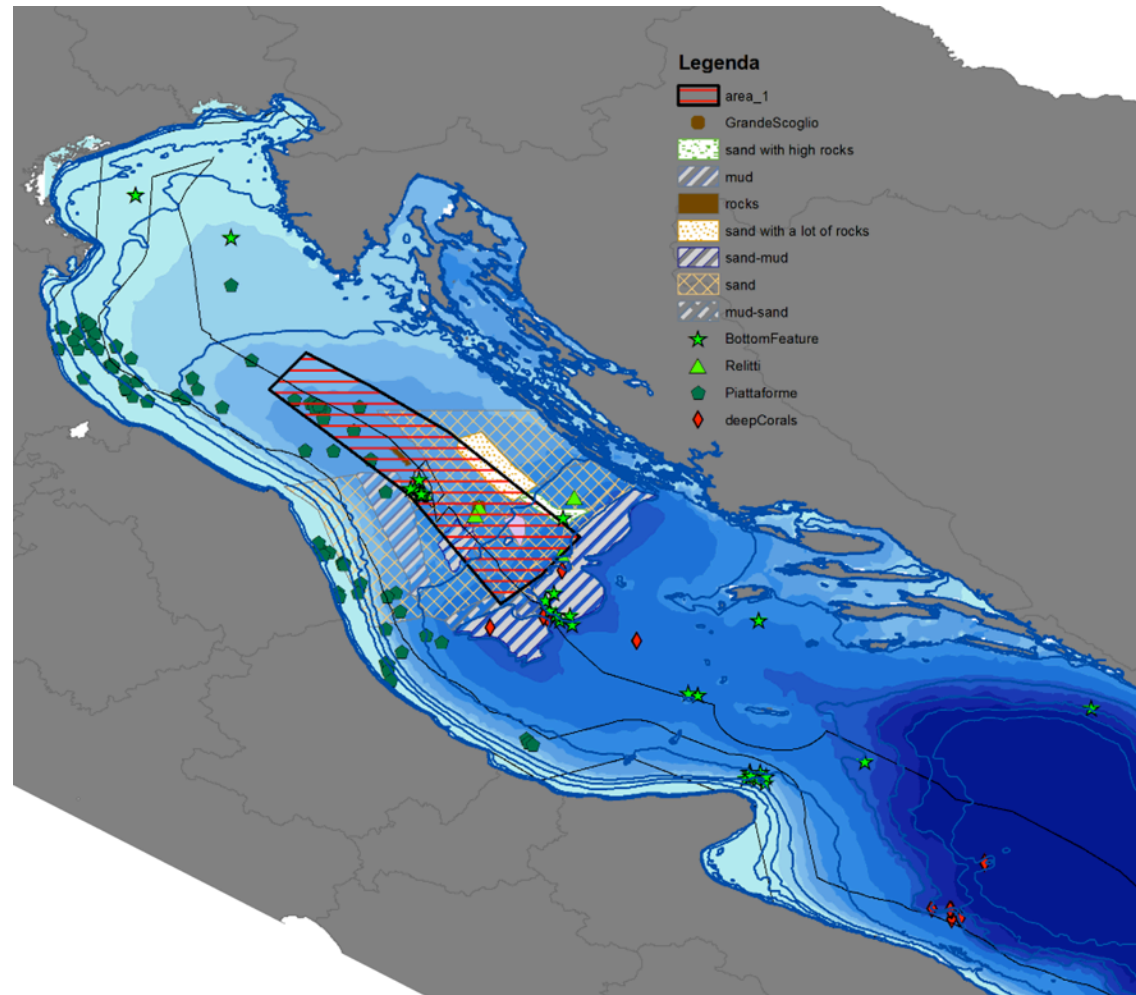
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Different levels of connectivity between areas

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Grazie per l'attenzione



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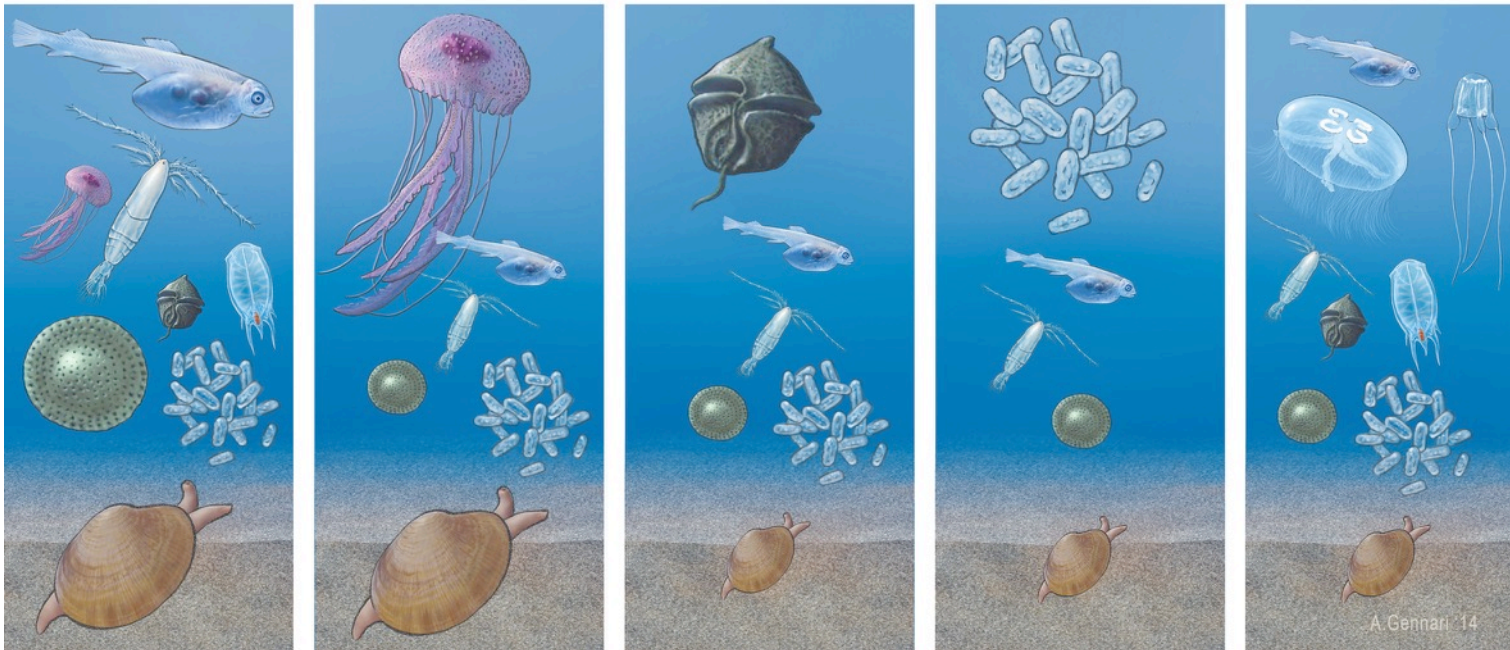
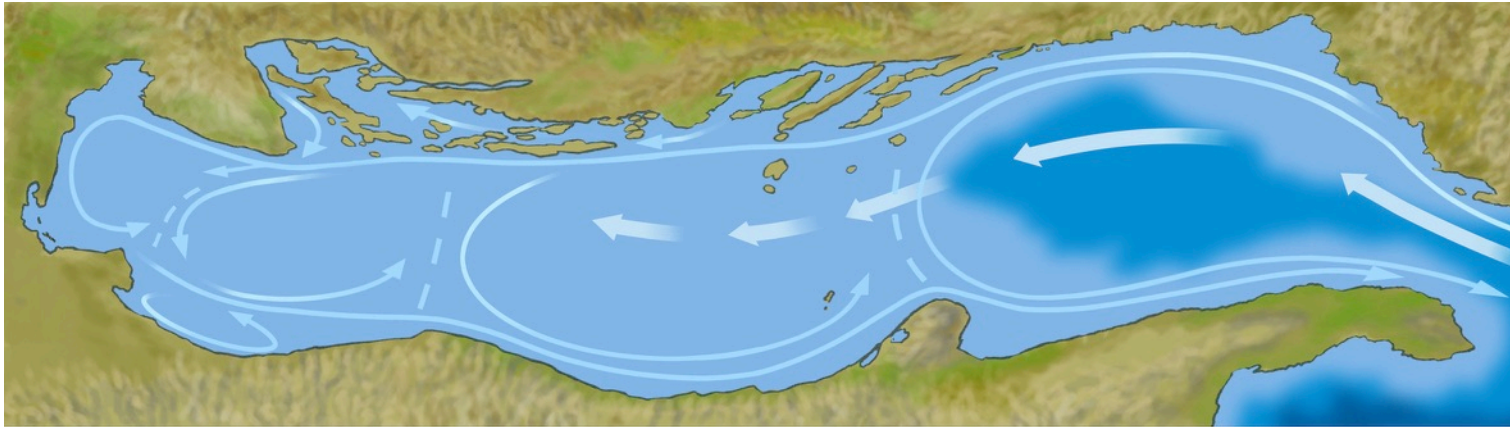
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sedimenti e biocenosi

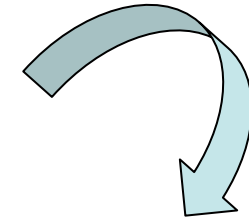
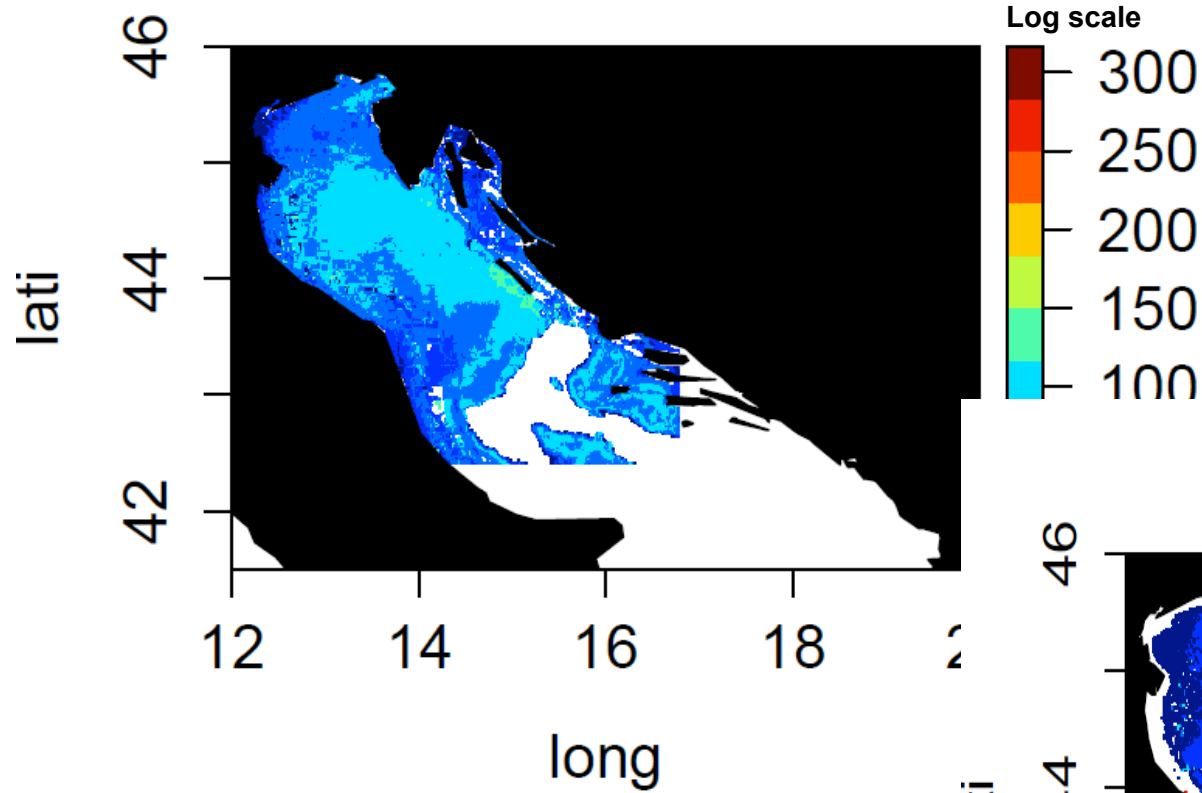


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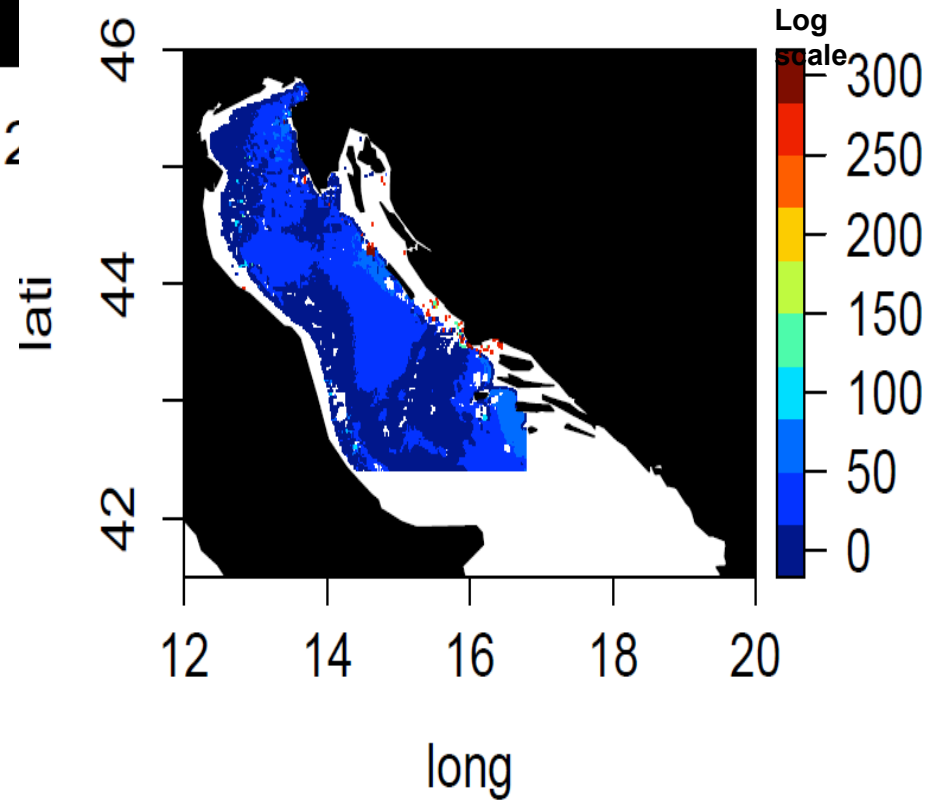
sedimenti e biocenosi



Vatova ascidians 1943-49



Pipeta ascidian 1982





Phaxas



Amphiura filiformis



Phaxas adriaticus
Italy, Ancona, Ancona
NMR 39031. Common size 18 mm

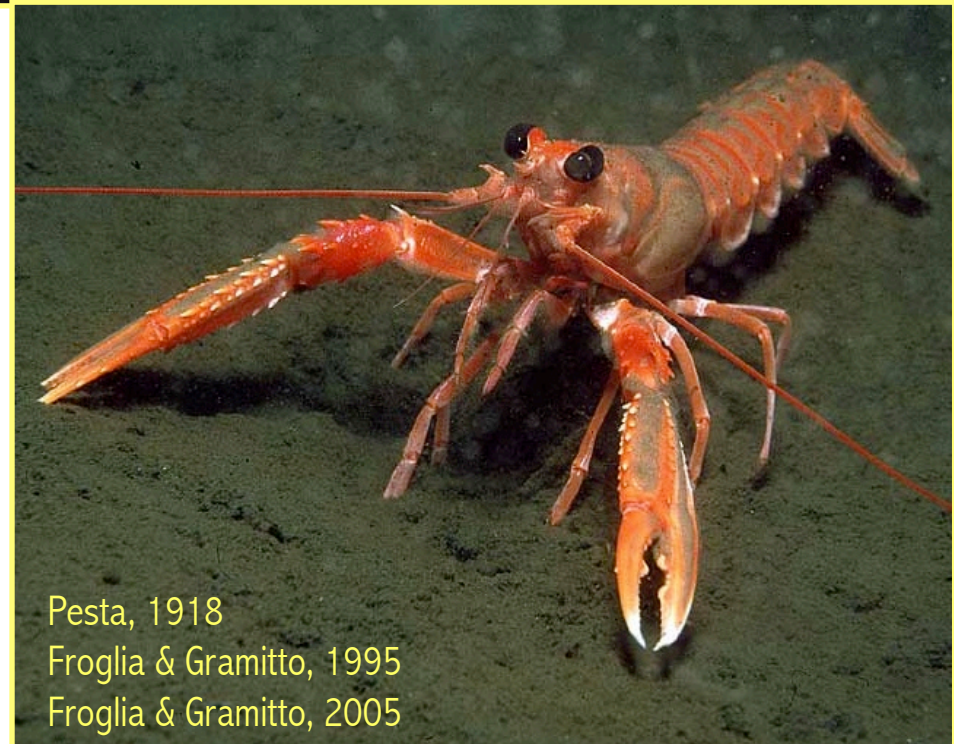
Pervicardium



Crostacei decapodi

Fino al 1918 erano riportate solo 2 segnalazioni per la mazzancolla (*Melicertus kerathurus*) per il medio e alto Adriatico. Attualmente la specie è pescata con una produzione per il 2006 di 123, 164 e 15 tonnellate rispettivamente per le Marche, l' Emilia Romagna ed il Veneto

Nella fossa di Pomo la taxocenosi a Decapodi è caratterizzata da scampi e galateidi. Mentre nel 1992-93 i galateidi erano rappresentati da *Munida intermedia*, nel 2003 è stata riscontrata la presenza di una seconda specie *Munida rutilanti*, mai osservata in precedenza, che già due anni dopo risultava la specie dominante nell'area con la contemporanea drastica riduzione di *M. intermedia*.



Pesta, 1918
Frogia & Gramitto, 1995
Frogia & Gramitto, 2005