



Strategies for **M**arine
Litter and **E**nvironmental
prevention of sea pollution in coastal areas



Valutazione dei rifiuti antropici nell'ambiente marino



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Regione Toscana



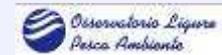


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Quattro tipologie di rifiuti:

1. Rifiuti spiaggiati
2. Rifiuti sul fondo
3. Rifiuti nella colonna d'acqua
4. Rifiuti in superficie





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Rifiuti spiaggiati

Stazioni di campionamento

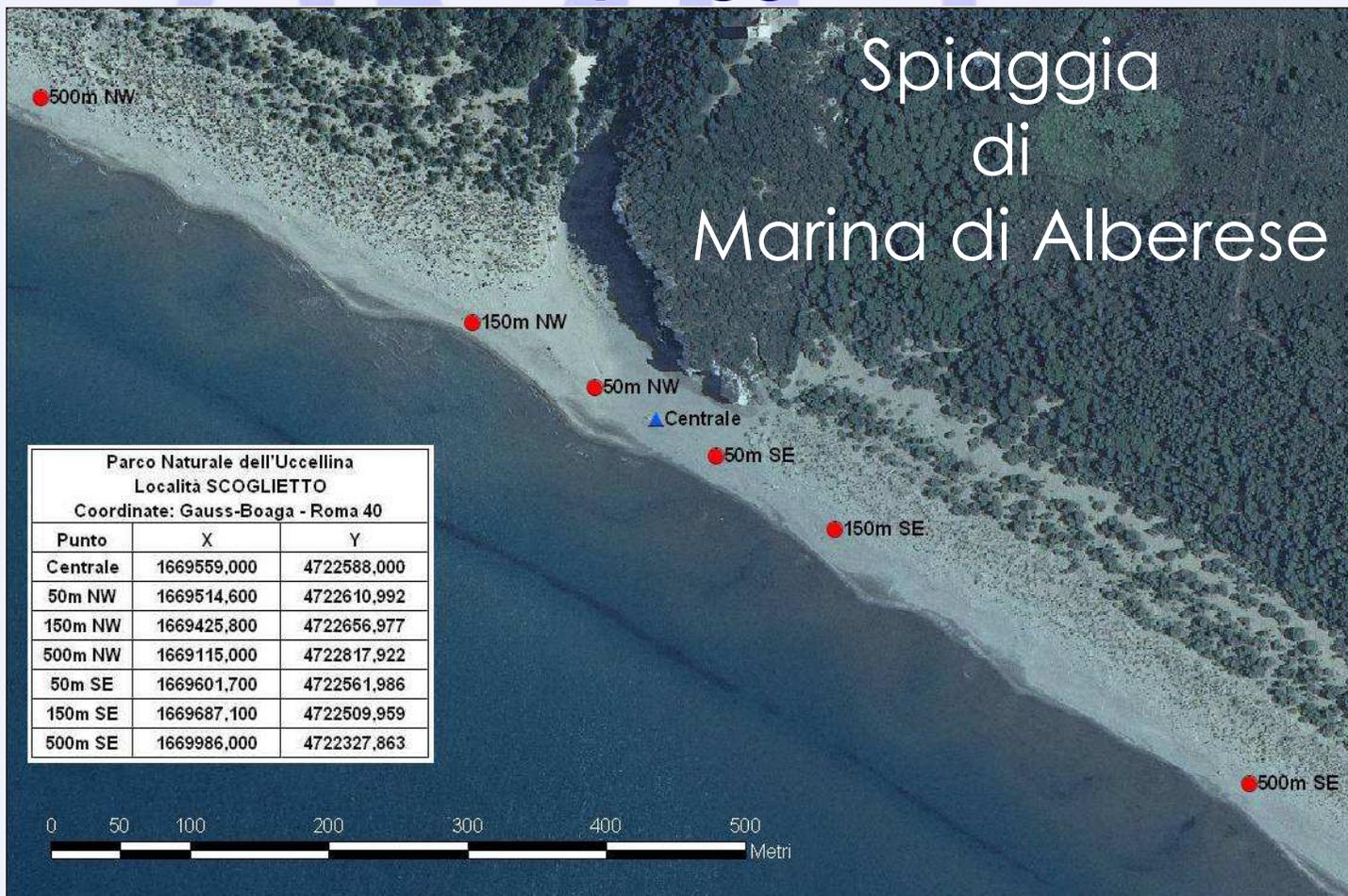




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Rifiuti spiaggiati



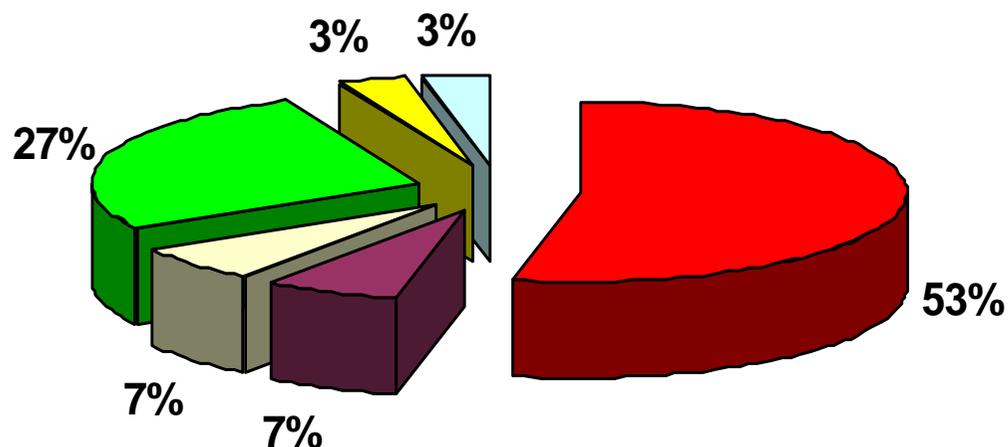


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Rifiuti spiaggiati

Tipologie di rifiuti spiaggiati
Marina di Alberese



■ Plastica ■ Gomma □ Tessuti ■ Legno ■ Metallo □ Vetro

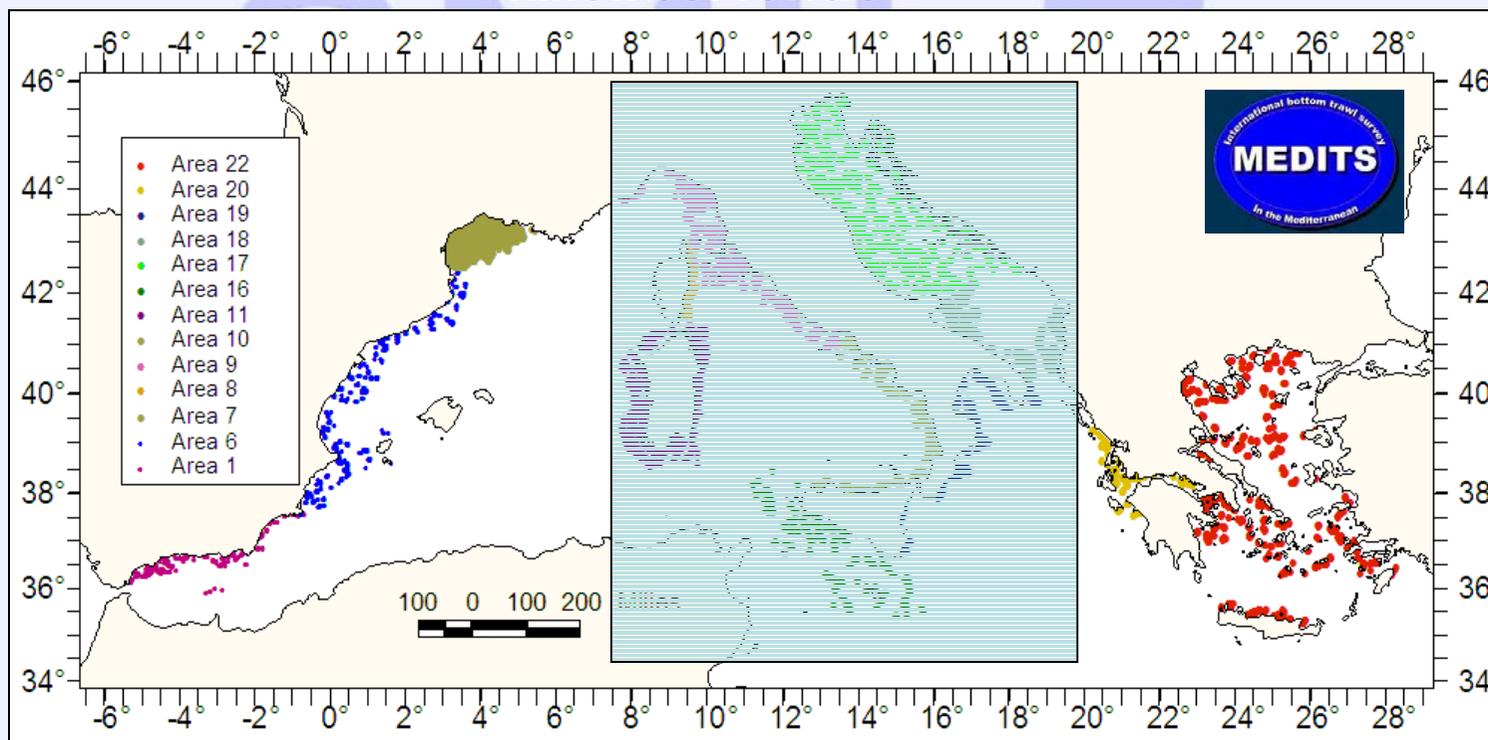




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Rifiuti sul fondo



1976 Progetto Finalizzato Oceanografia e Fondi Marini



1985 GRUND (GRUppto Nazionale risorse Demersali)



1994 Data Collection Framework (MEDITS-MEDIterranean Trawl Survey)



COMUNE DI PIETRA LIGURE



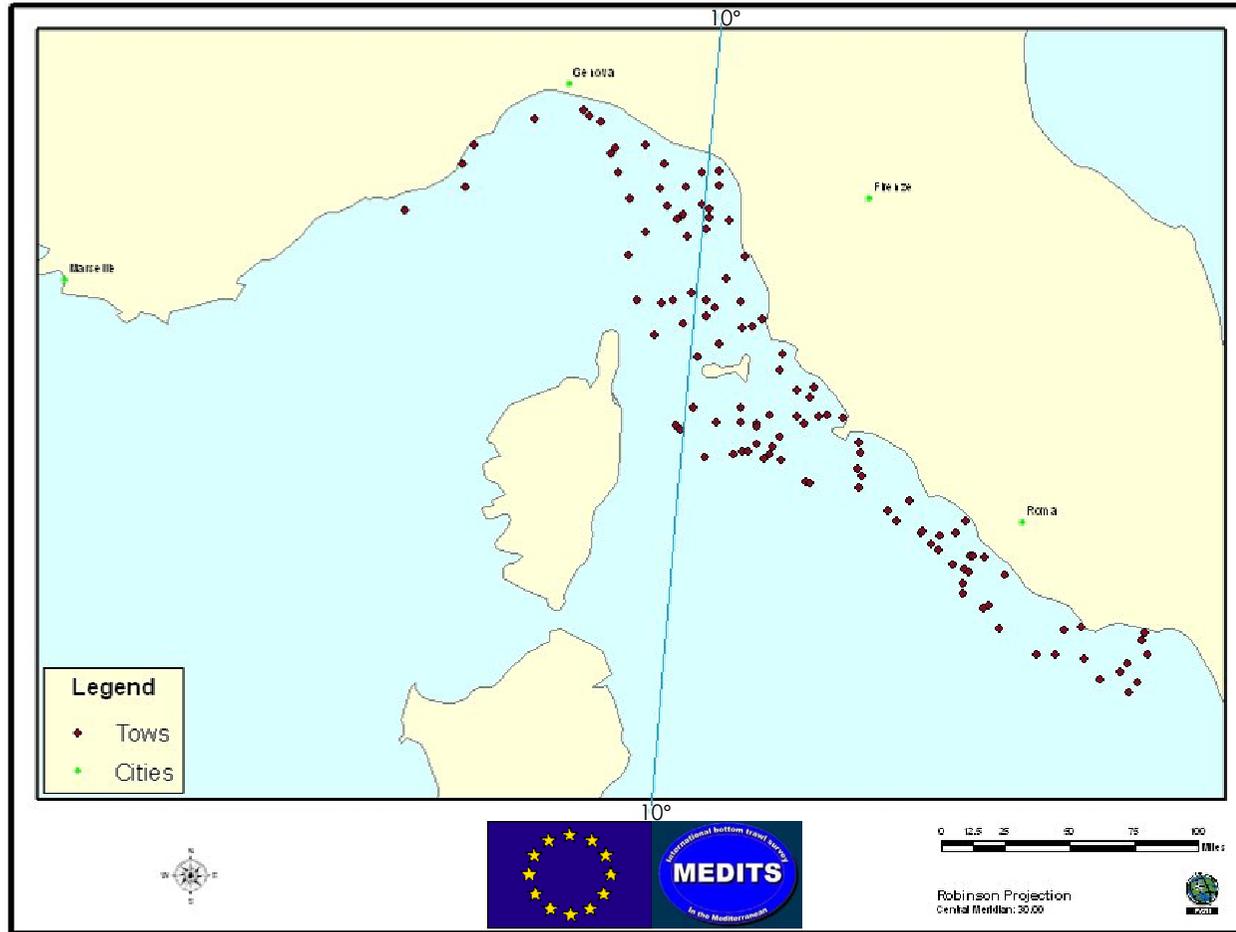


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Rifiuti sul fondo

Le cale della GSA 9 campagna 2013

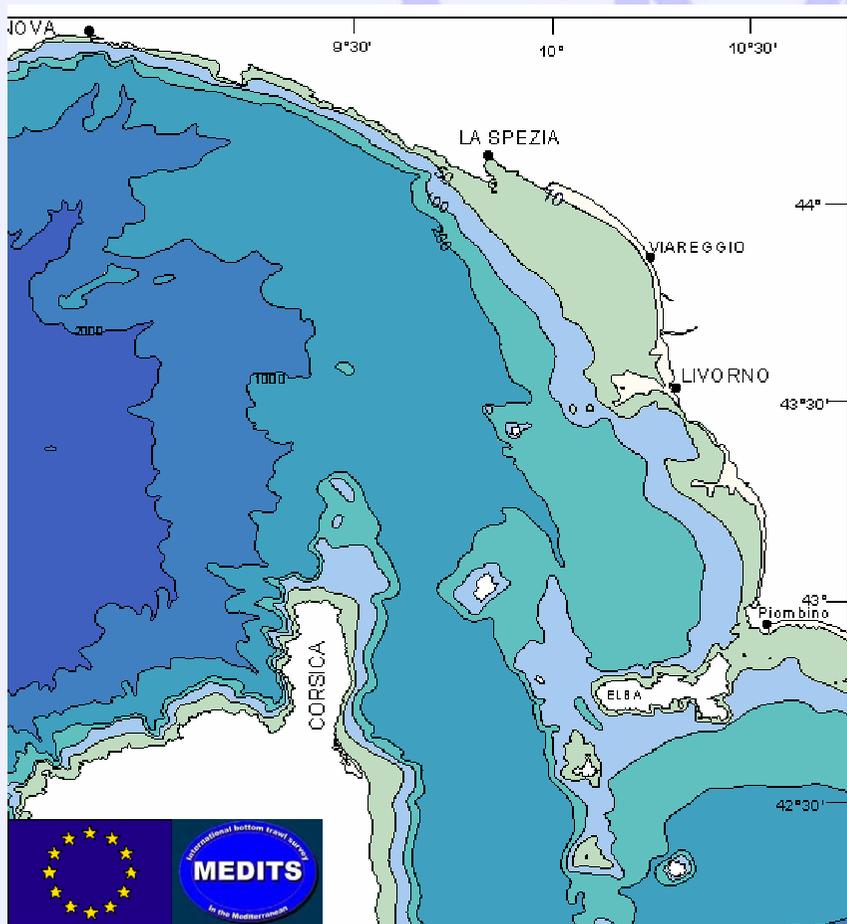




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Rifiuti sul fondo



Disegno di campionamento random stratificato su cinque strati batimetrici

A	Da 0 a 50 m
B	Fino a 100 m
C	Fino a 200 m
D	Fino a 500 m
E	Fino a 800 m



BIOMART fino a 2000 m

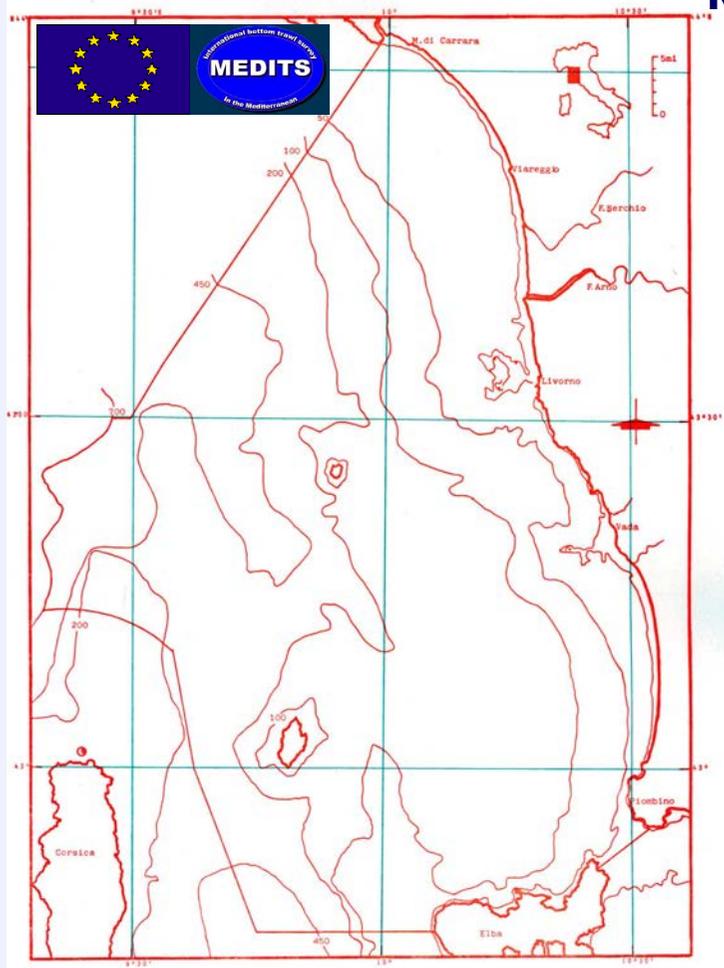




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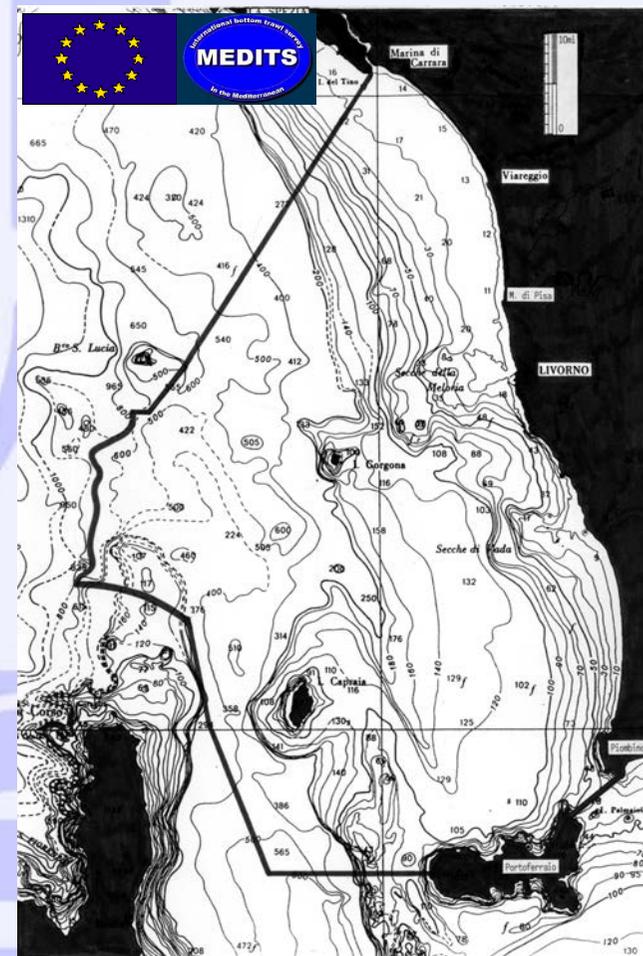


Rifiuti sul fondo



Le
batimetriche

Area di studio
(circa **10 mila km²**) Toscana
nord



COMUNE
DI PIETRA LIGURE

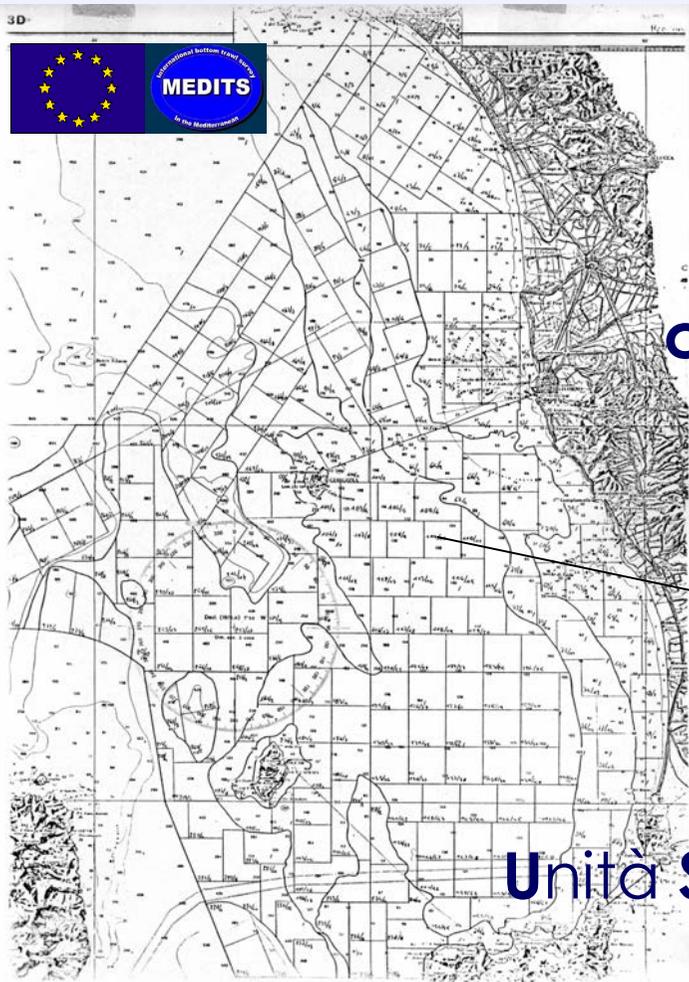




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Rifiuti sul fondo



Disegno di campionamento

276 ESU

3nm x 3nm

Unità Statistiche Elementari



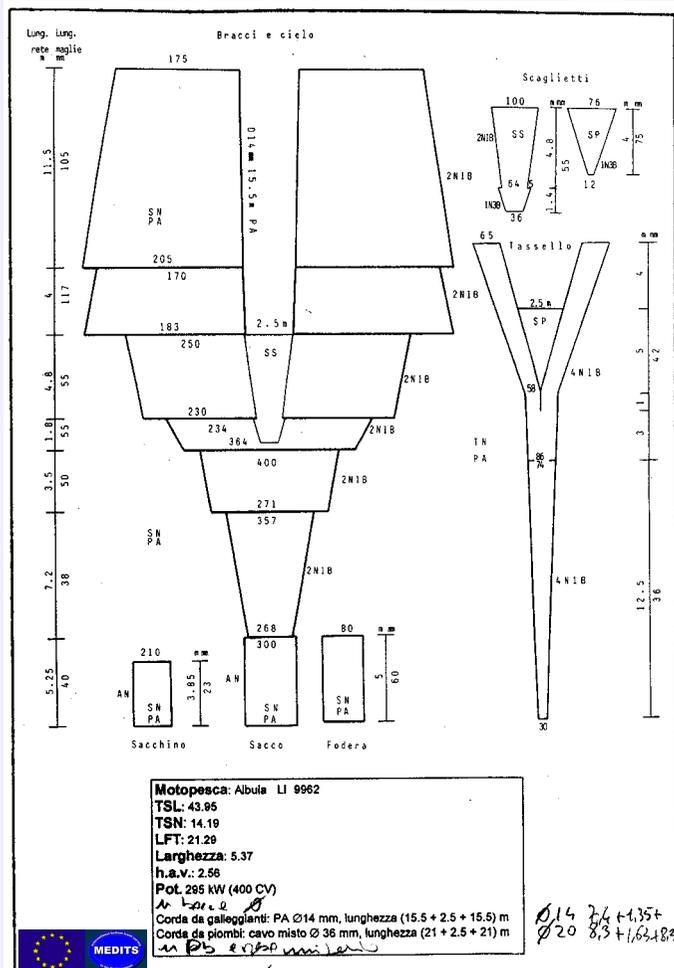


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Rifiuti sul fondo

Lo Strumento campionatore





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Rifiuti sul fondo

Metodo dell'area strascicata





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Rifiuti sul fondo



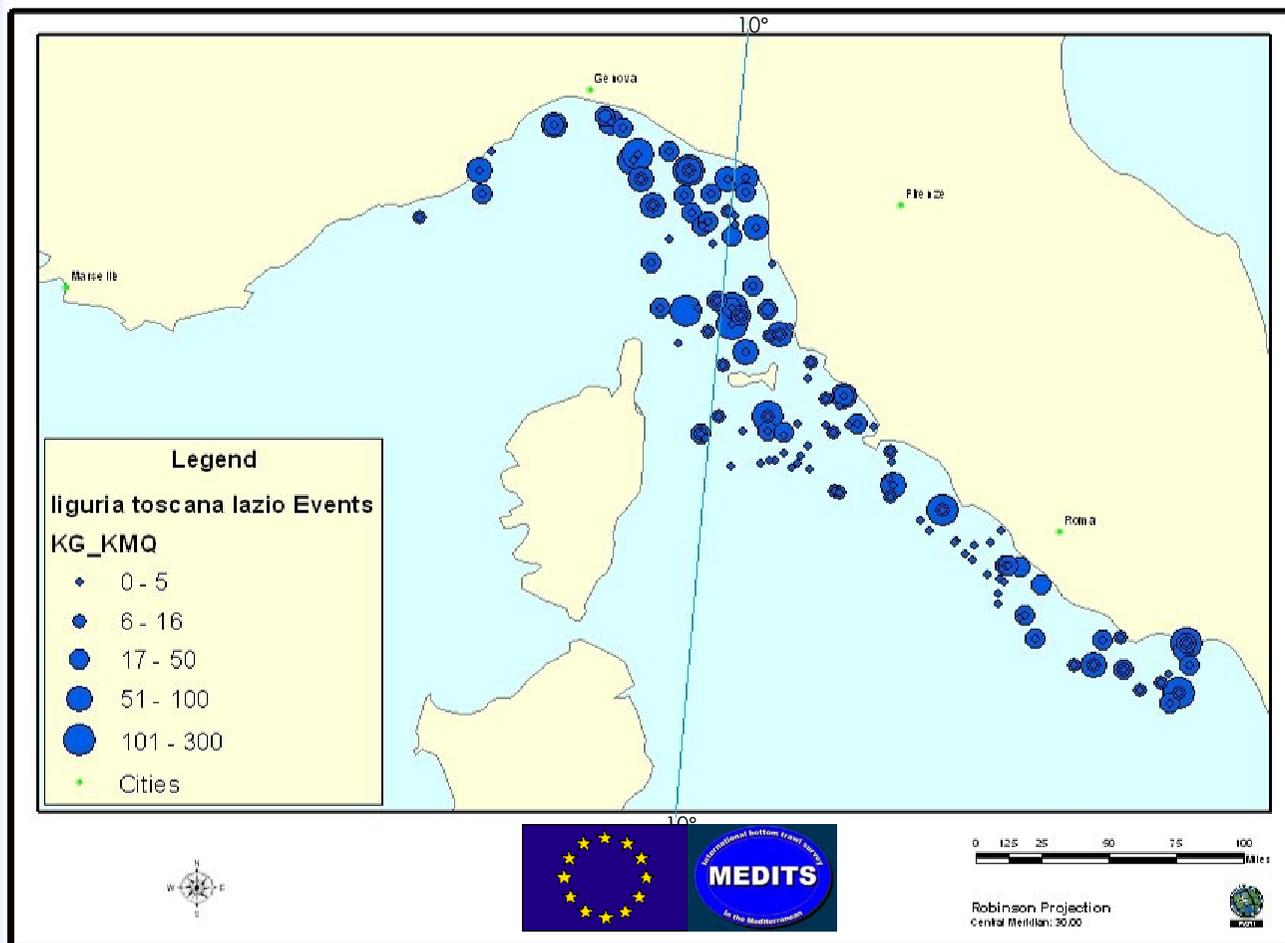


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Rifiuti sul fondo

Quantitativi nella GSA 9 Kg/km²





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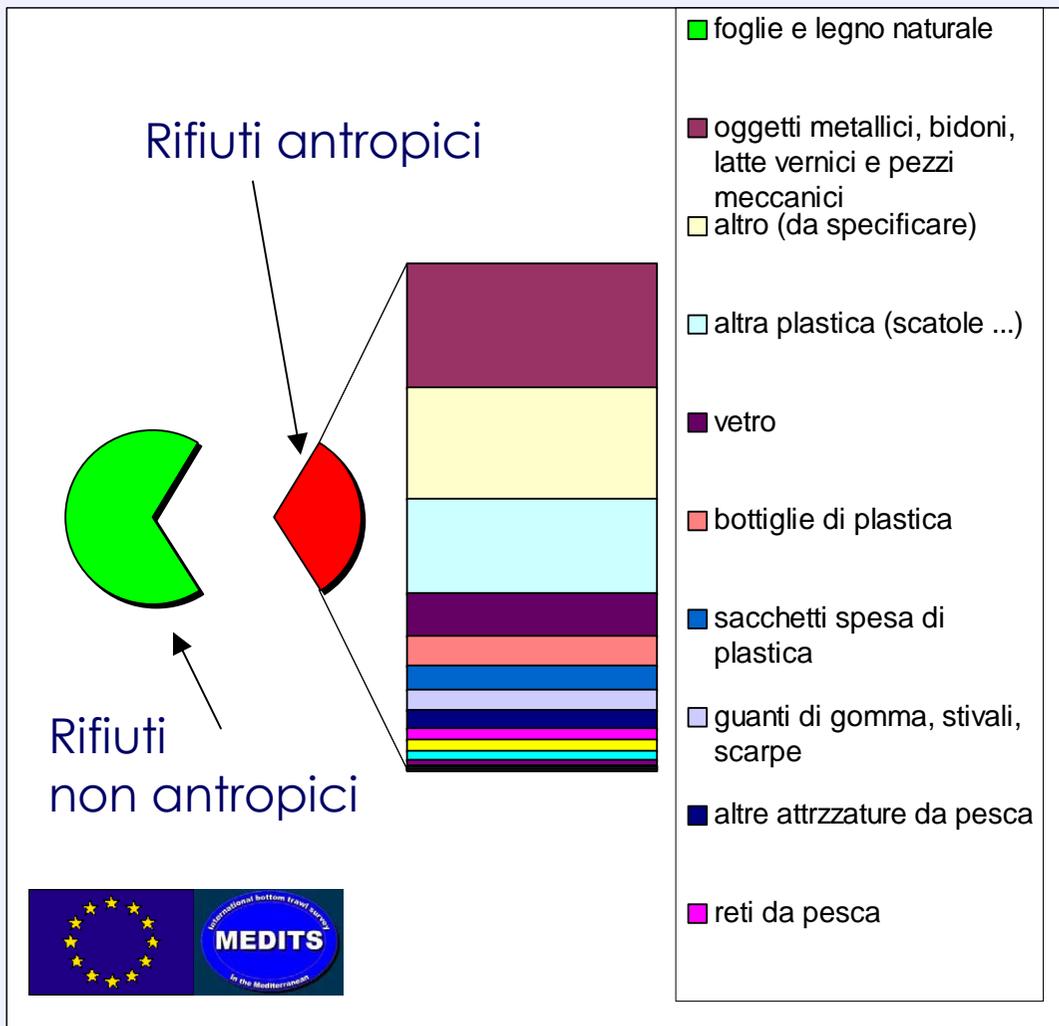
Rifiuti sul fondo

 	ARPAT	CIBM	Univ. Roma	Univ. Genova	Totale
numero di cale	31	32	40	15	118
numero di items (records)	118	72	122	50	362
somma di kg	92	41	95	113	342
somma di num	482	362	465	487	1796
somma di kg/km ²	1441	668	1424	1452	4985
kg/cala	3,0	1,3	2,4	7,6	2,9





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Rifiuti sul fondo

Due tipologie di rifiuti sul fondo Secondo il protocollo MEDITS:

a) Rifiuti antropici

b) Rifiuti non antropici

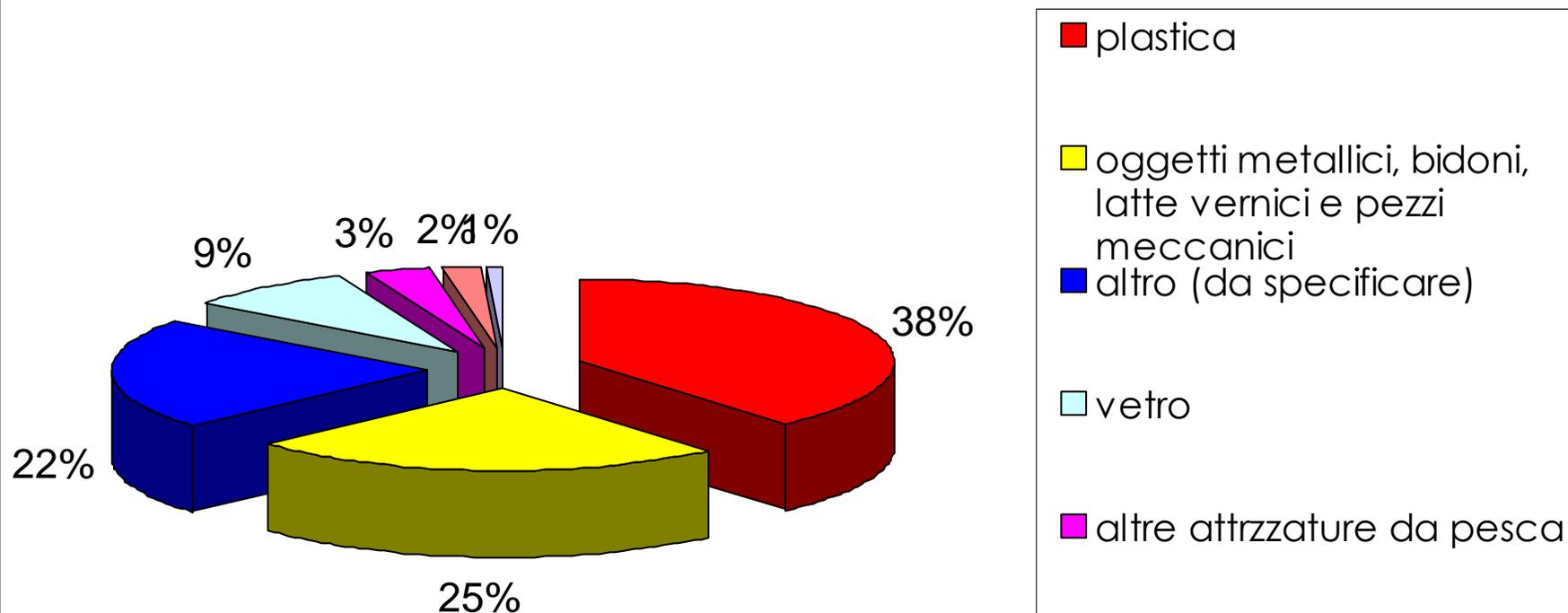




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composizione in peso dei rifiuti antropici

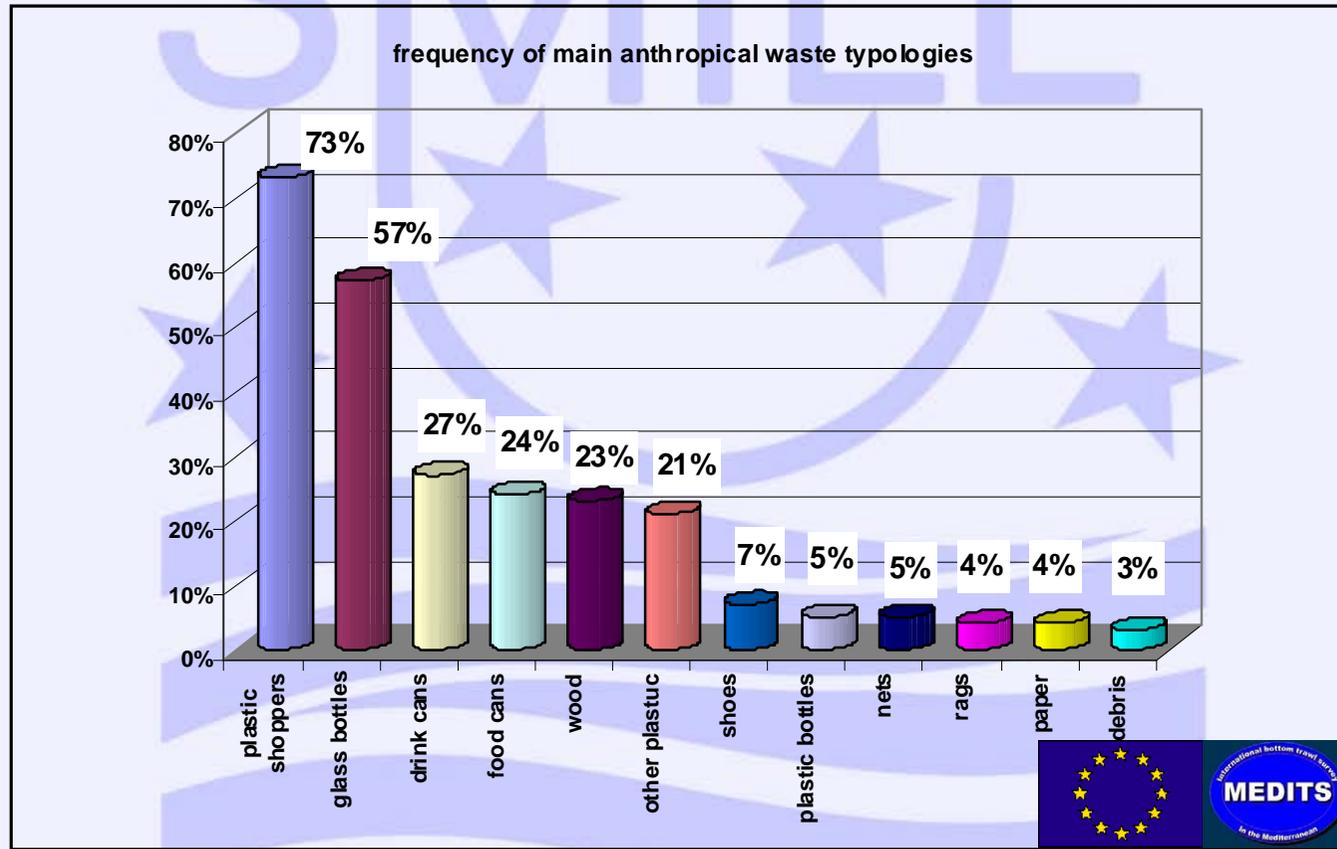




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Frequenza delle principali tipologie di rifiuti antropici nelle acque toscane

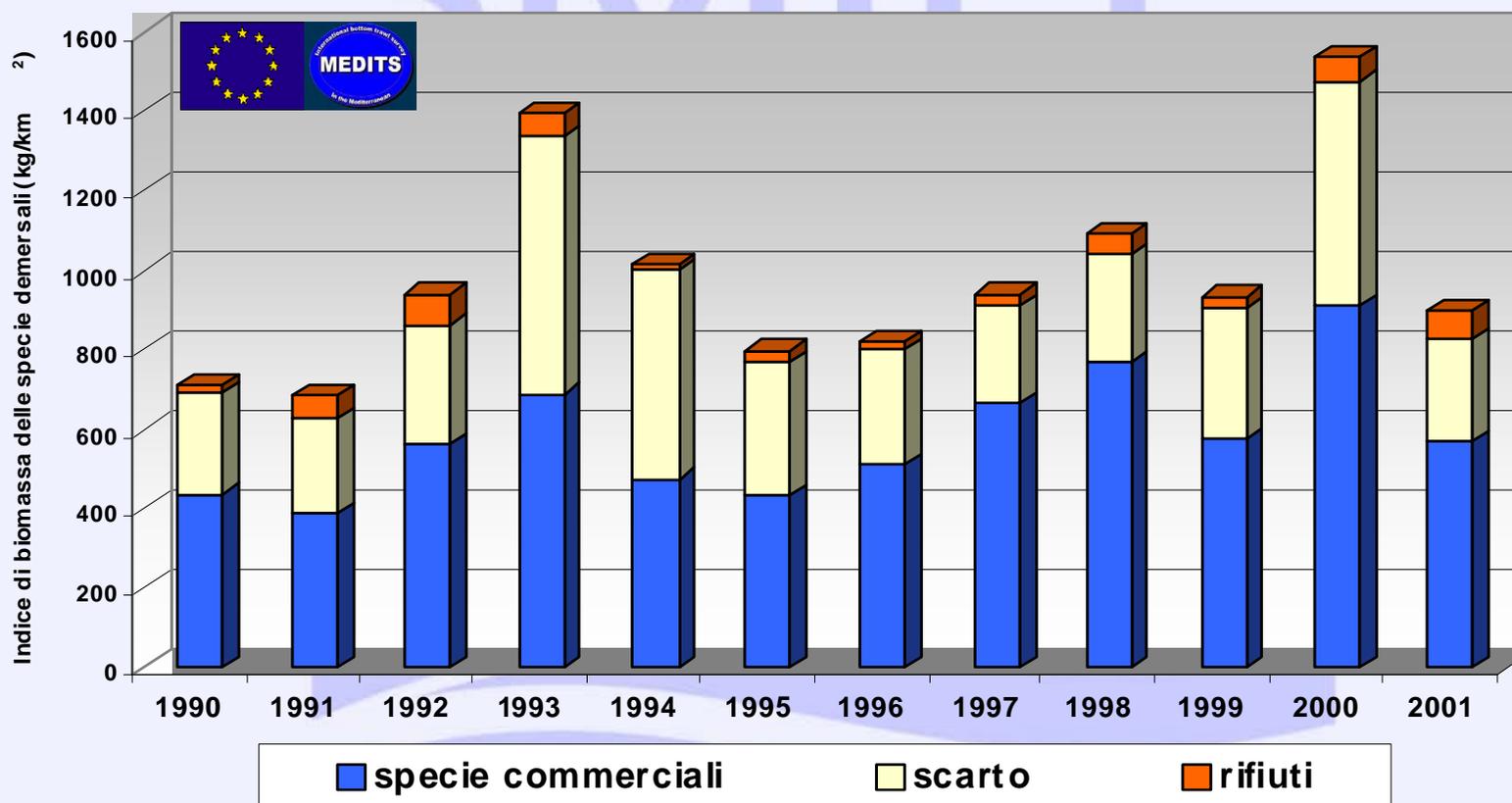




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Quantità di rifiuti antropici (Kg/Km²)
in relazione alle specie commerciali e a quelle scartate





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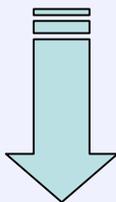
confronto tra i programmi

UE
Data Collection Framework

Protocollo

MEDITS

Peso e Numero



Pesanti
Parti grandi

Categorie
molto diverse

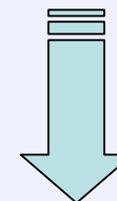


MSFD

Protocollo

OSPAR

numero



Leggeri
Parti piccole

Valutare a parte il legno



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Ogive





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LE Bombe di aereo





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Mine



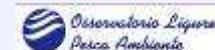


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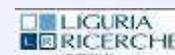
Container Costa di San Vincenzo

127 m di profondità





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EMERGENZE Eurocargo Venezia



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MarineTraffic.com

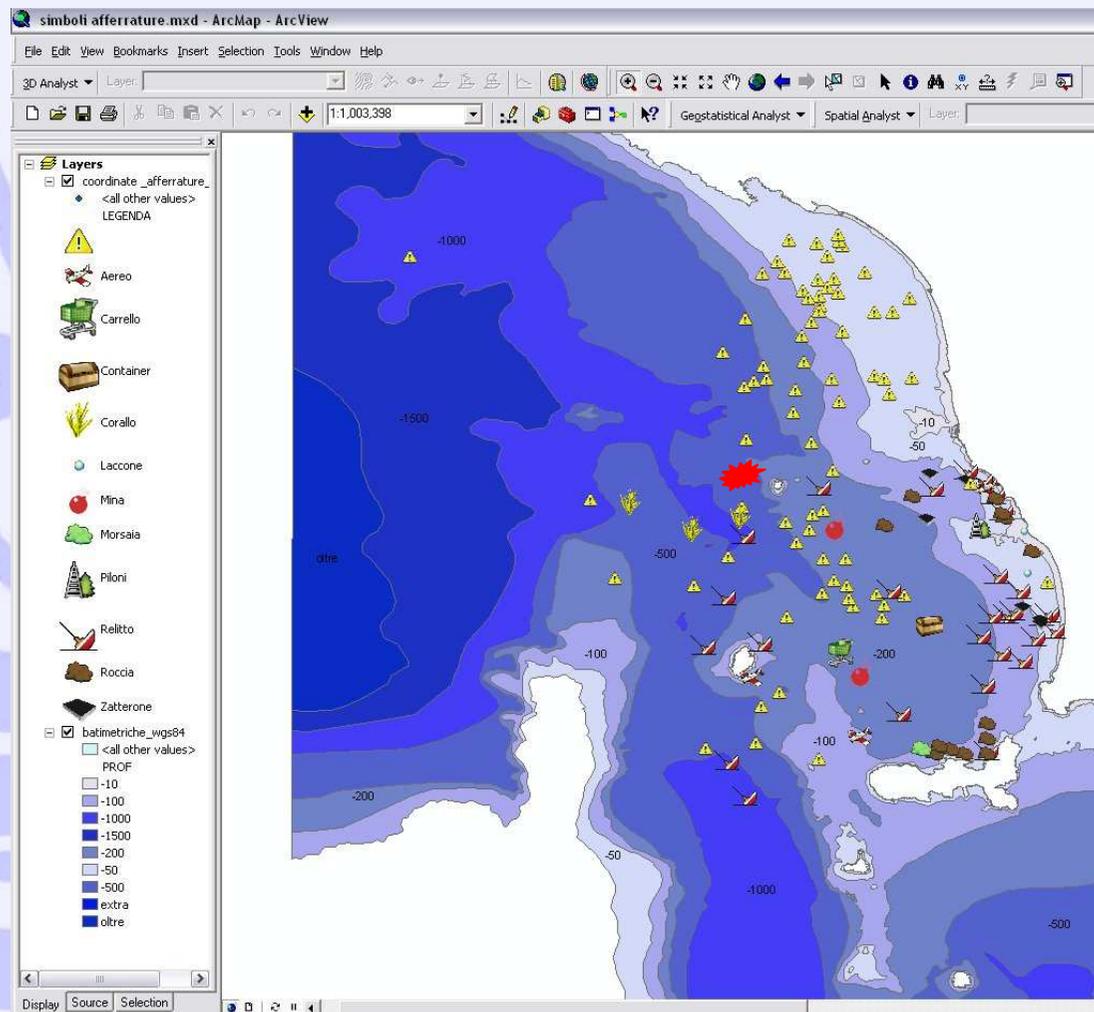




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Georeferenziazione delle afferrature





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Ringraziamenti:

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