

The following supplement accompanies the article

Biodiversity data requirements for systematic conservation planning in the Mediterranean Sea

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Supplement. Additional data

Table S1. Marine habitat classifications used in the European Union (Sources given in the table below)

NATURA2000	OSPAR	MSFD	EUNIS	Chart No. 1	
	(not covering the Mediterranean Sea)				
http://ec.europa.eu/environment/nature/natura2000/	www.ospar.org	http://ec.europa.eu/environment/marine/	http://eunis.eea.europa.eu/	National Oceanic and Atmospheric Administration, 1997	
Marine and coastal habitats (general)	Deep-sea sponge aggregations	Upper bathyal rock and biogenic reef	Deep-sea bed	Type of the seabed (labels shown on map):	
Habitat code in parenthesis: sandbanks which are slightly covered by sea water all the time (1110); <i>Posidonia oceanica</i> beds (1120); estuaries (1130); mudflats and sandflats not covered by seawater at low tide (1140); coastal lagoons (1150); large shallow inlets and bays (1160); reefs (1170); submarine structures made by leaking gases (1180); and submerged or partially submerged sea caves (8330)	Oceanic ridges with hydrothermal vents/fields	Upper bathyal sediment		Sand (S), Mud (M), Clay (C), Silt (Si), Stones (St), Gravel (G), Pebbles (P), Cobbles (Cb), Rock (Rk), Rocky (Rky), Coral and coralline algae (Co), Shells (Sh), Weed (Wd) (including kelp), mobile bottom (sand waves), freshwater springs in seabed	
		Lower bathyal rock and biogenic reef			
		Lower bathyal sediment			
		Abyssal rock and biogenic reef			
		Abyssal sediment			
	Littoral chalk communities	Littoral rock and biogenic reef	Littoral rock and other hard substrata		Littoral rock and other hard substrata
		Littoral sediment	Littoral sediment		
		Shallow sublittoral rock and biogenic reef	Infralittoral rock and other hard substrata		
		Shallow sublittoral coarse sediment	Circalittoral rock and other hard substrata		Nature of the seabed (labels shown on map):
		Shallow sublittoral sand	Sublittoral sediment		
		Shallow sublittoral mud	Mosaics of mobile and non-mobile substrata in the littoral zone	Fine, medium, coarse, broken, sticky, soft, stiff, volcanic, calcareous, hard	
		Shallow sublittoral mixed sediment	Mosaics of mobile and non-mobile substrata in the infralittoral zone		
		Shelf sublittoral rock and biogenic reef	Mosaics of mobile and non-mobile substrata in the circalittoral zone		
		Shelf sublittoral coarse sediment			
Shelf sublittoral sand					
Shelf sublittoral mud					
Shelf sublittoral mixed sediment					

	Carbonate mounds			
	<i>Lophelia pertusa</i> reefs, <i>Zostera</i> beds		<i>Lophelia pertusa</i> reefs	
	<i>Ostrea edulis</i> beds			
	Seamounts		Benthopelagic habitats	
	Sea-pen and burrowing megafauna communities			
		Marine water: coastal		
		Marine water: shelf	Pelagic water column	
		Marine water: oceanic		
			Ice-associated marine habitats	
			Sea walls	
			Hard-surfaced areas of ports	
			Highly artificial non-saline standing waters	
			Ponds and lakes with completely man-made substrate	
			Intensively managed fish ponds	
			Anchihaline caves	
Marine areas, Sea inlets				
Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons	Intertidal mudflats	Variable salinity (estuarine) water	Estuaries	Marsh, swamp, mangrove, lagoon
		Reduced salinity water	Saline coastal lagoons Brackish coastal lagoons	
				Foreshore; Strand (in general); Stones; Shingle; Gravel; Mud; Sand
				Intertidal areas: Area with stones, gravel or Shingle; Rocky area, which covers and uncovers; Coral reef, which covers and uncovers

Salt marshes, Salt pastures, Salt steppes			Highly artificial saline and brackish standing waters	
			Saltworks	
			Saline and brackish industrial lagoons and canals	
			Highly artificial saline and brackish running waters	
Coastal sand dunes, Sand beaches, Machair			Coastal dunes and sandy shores	Sandy shore, dunes, stony shore, flat coast
Shingle, Sea cliffs, Islets			Coastal shingle	Shingly shore, cliffs
			Rock cliffs, ledges and shores, including the supralittoral	

Table S2. Minimum Standards for Hydrographic Surveys (Table 1 in SP-44; IHO 2008)

Order of the survey	Special	1a	1b	2
Description of areas	Areas where under-keel clearance is critical	Areas shallower than 100 m where under-keel clearance is less critical but <i>features</i> of concern to surface shipping may exist.	Areas shallower than 100 m where under-keel clearance is not considered to be an issue for the type of surface shipping expected to transit the area.	Areas generally deeper than 100 m where a general description of the sea floor is considered adequate.
Maximum allowable Total Horizontal Uncertainty 95% Confidence level	2 m	5 m + 5% of depth	5 m + 5% of depth	20 m + 10% of depth
Maximum allowable Total Vertical Uncertainty 95% Confidence level	a = 0.25 m b = 0.0075	a = 0.5 m b = 0.013	a = 0.5 m b = 0.013	a = 1.0 m b = 0.023
Full Sea floor Search	Required	Required	Not required	Not required
Feature Detection	Cubic <i>features</i> > 1 m	Cubic <i>features</i> > 2 m, in depths up to 40 m; 10% of depth beyond 40 m	Not Applicable	Not Applicable
Recommended maximum Line Spacing	Not defined as <i>full sea floor search</i> is required	Not defined as <i>full sea floor search</i> is required	3 x average depth or 25 m, whichever is greater For bathymetric LiDAR a spot spacing of 5 x 5 m	4 x average depth
Positioning of fixed aids to navigation and topography significant to navigation. (95% Confidence level)	2 m	2 m	2 m	5 m

Positioning of the Coastline and topography less significant to navigation (95% Confidence level)	10 m	20 m	20 m	20 m
Mean position of floating aids to navigation (95% Confidence level)	10 m	10 m	10 m	20 m

Note: Recognising that there are both constant and depth dependent uncertainties that affect the uncertainty of the depths, the formula below is to be used to compute, at the 95% confidence level, the maximum allowable total vertical uncertainty (TVU). The parameters ‘a’ and ‘b’ for each Order, as given in the Table, together with the depth ‘d’ have to be introduced into the formula in order to calculate the maximum allowable TVU for a specific depth:

$$\pm \sqrt{a^2 + (b \times d)^2}$$

Where:

a represents that portion of the uncertainty that does not vary with depth

b is a coefficient which represents that portion of the uncertainty that varies with depth

d is the depth

b x d represents that portion of the uncertainty that varies with depth