Appendix 2. Assessment criteria of selected hazardous substances in sediments, taken from the CEMP data assessment (OSPAR, 2012).

Group	Substance	SEDIMENT (µg/kg dry weight)						MUSSELS (M) AND OYSTERS (O) (µg/kg dry weight except EC for metals: wet weight (ww))				FISH (µg/kg wet weight, except: $EAC^{passive}$ for CB: lipid weight (lw))			
		Background/low concentrations		Blue (T_0)		Green (T_1)			Blue (T_0)	Green (T_1)			Blue (T_0)	Green (T_1)	Amber (T_1)
		BC	LC Spain	< BAC	< BAC Spain	< EAC	< ERL	BC/LC	< BAC	< EAC	< EC	BC/LC	< BAC	< EAC passive	< EC max. food limit
	Cd	200	86	310	129		1200	M-600 O-1800	M-960 O-3000		M-1000 O-1000	a	26		1000 (bivalve. tissue)
	Hg	50	53	70	91		150	M-50 O-100	M-90 O-180		M-500 O-500	a	35		500
	Pb	25000	15500	38000	22400		47000	M-800 O-800	M-1300 O-1300		M-1500 O-1500	a	26		1500 (bivalve. tissue)
	As	15000		25000			---								
	Cr	60000		81000			81000								
	Cu	20000		27000			34000		6000						
	Ni	30000		36000			---								
	Zn	90000		122000			150000		63000						
	TBT	---		---		---		1.0	5.0	12.0					
	Naphthalene	5	---	8	---		160	---	---	340					
	C1-naphthalene						155[2]								
	C2-naphthalene						150								
	Phenanthrene	17	4.0	32	7.3		240	4.0	11.0	1700					
	C1-phenanthrene						170								
	C2-phenanthrene						200								
	Anthracene	3	1.0	5	1.8		85	---	---	290					
	Dibenzothiophene (DBT)	0.6	---	---	---		190	---	---	---					
	C1-dibenzothiophene						85								
	Fluoranthene	20	7.5	39	14.4		600	5.5	12.2	110					
	Pyrene	13	6.0	24	11.3		665	4.0	9.0	100					
	Benz[a]anthracene	9	3.5	16	7.1		261	1.0	2.5	80					
	Chrysene (Triphenylene)	11	4.0	20	8.0		384	4.0	8.1	---					
	Benzo[a]pyrene	15	4.0	30	8.2		430	0.5	1.4	600					
	Benzo[ghi]perylene	45	3.5	80	6.9		85	1.5	2.5	110					
	Indeno[1,2,3-cd]pyrene	50	4.0	103	8.3		240	1.0	2.4	---					
	CB28	0.0/0.05		0.22		1.7		0.0/0.25	0.75	3.2		0.0/0.05	0.10	64 lw	
	CB52	0.0/0.05		0.12		2.7		0.0/0.25	0.75	5.4		0.0/0.05	0.08	108 lw	
	CB101	0.0/0.05		0.14		3.0		0.0/0.25	0.70	6.0		0.0/0.05	0.08	120 lw	

[2] Sum of 1-methyl naphthalene and 2-methyl naphthalene

Group	Substance	SEDIMENT (µg/kg dry weight)						MUSSELS (M) AND OYSTERS (O) (µg/kg dry weight except EC for metals: wet weight (ww))				FISH (µg/kg wet weight, except: $EAC^{passive}$ for CB: lipid weight (lw))			
		Background/low concentrations		Blue (T_0)		Green (T_1)			Blue (T_0)	Green (T_1)			Blue (T_0)	Green (T_1)	Amber (T_1)
		BC	LC Spain	< BAC	< BAC Spain	< EAC	< ERL	BC/LC	< BAC	< EAC	< EC	BC/LC	< BAC	< EAC passive	< EC max. food limit
	CB105	---		---		---		0.0/0.25	0.75	---		0.0/0.05	0.08	---	
	CB118	0.0/0.05		0.17		0.6		0.0/0.25	0.60	1.2		0.0/0.05	0.10	24 lw	
	CB138	0.0/0.05		0.15		7.9		0.0/0.25	0.60	15.8		0.0/0.05	0.09	316 lw	
	CB153	0.0/0.05		0.19		40		0.0/0.25	0.60	80		0.0/0.05	0.10	1600 lw	
	CB156	---		---		---		0.0/0.25	0.60	---		0.0/0.05	0.08	---	
	CB180	0.0/0.05		0.10		12		0.0/0.25	0.60	24		0.0/0.05	0.11	480 lw	
Pesticide	γ-HCH	0.0/0.05	0.13				3.0	0.0/0.25	0.97	1.45	---	---	---	11[b]	
Pesticide	α-HCH	---	---				---	0.0/0.25	0.64	---	---	---	---	---	
Pesticide	DDE (p,p')	0.0/0.05	0.09				2.2	0.0/0.25	0.63	---	---	0.0/0.05	0.10	---	
Pesticide	Hexachlorobenzene	0.0/0.05	0.16				20.0	0.0/0.25	0.63	---	---	0.0/0.05	0.09	---	
Pesticide	Dieldrin	0.0/0.05	0.19				2.0	---	---	---	---	---	---	---	

[a] datasets too limited to allow recommendation for BCs for metals in fish; [b] EAC for fish liver derived by applying a conversion factor of 10 on EAC for whole fish

Notes

- No assessment criteria for PBDE.
- Assessment criteria are used to assess contaminant concentrations
  - **B**ackground **A**ssessment **C**oncentration (BAC)
  - **E**nvironmental **A**ssessment **C**riteria (EAC)
  - **E**ffects **R**ange **L**ow (ERL)
  - **E**uropean **C**ommission food standard (EC)
- BACs were developed by the OSPAR Commission (OSPAR) for testing whether concentrations are near background levels. Mean concentrations significantly below the BAC are said to be near background.
- BACs and $EAC^{passive}$s are available for seven CBs.
- EACs were developed by OSPAR and the International Council for the Exploration of the Sea for assessing the ecological significance of sediment concentrations. Concentrations below the EAC should not cause any chronic effects in marine species.
- BACs and / or EACs are available for ten PAHs.
- $EAC^{passive}$s were developed by OSPAR for assessing the ecological significance of sediment concentrations. Concentrations below the $EAC^{passive}$ should cause no chronic effects in marine species.
- ERLs were developed by the United States Environmental Protection Agency for assessing the ecological significance of sediment concentrations. Concentrations below the ERL rarely cause adverse effects in marine organisms. Concentrations *above* the ERM will often cause adverse effects in some marine organisms.
- ECs have been used in the absence of any satisfactory criteria for assessing the ecological significance of biota concentrations. ECs are the maximum acceptable concentrations in food for the protection of public health.