

Table 1: UK-IMON Core Variables identified by partners as essential measurements with for monitoring ecosystem structure and function in UK waters

		Weather & climate	Marine operations	Natural hazards	National security	Public health	UK vision				Sustained resources
							Clean & safe	Healthy & biologically diverse	Productive	Ocean processes	
Physical	Salinity	✓	✓	✓	✓	✓				✓	✓
	Temperature	✓	✓		✓	✓		✓		✓	✓
	Bathymetry	✓	✓	✓	✓	✓				✓	✓
	Sea level	✓	✓	✓	✓	✓				✓	✓
	Surface waves	✓	✓	✓	✓	✓				✓	✓
	Surface currents	✓	✓	✓	✓	✓				✓	✓
	Optical properties (e.g. CDOM & SPM)				✓	✓	✓	✓		✓	✓
	Heat flux	✓								✓	✓
	Ocean colour	✓	✓			✓				✓	✓
	Benthic habitats		✓					✓		✓	✓
	Wind speed & direction	✓	✓							✓	✓
	Surface air temperature	✓	✓							✓	✓
	Tidal stream flow	✓		✓						✓	✓
	Chemical	Contaminants				✓	✓	✓			✓
Dissolved nutrients						✓	✓			✓	✓
Dissolved oxygen						✓	✓		✓	✓	✓
CO ₂ partial pressure						✓	✓		✓	✓	✓
pH acidity						✓	✓		✓	✓	✓
Biological	Pathogens				✓	✓	✓			✓	✓
	Phytoplankton (including chlorophyll)	✓	✓		✓	✓	✓			✓	✓
	Zooplankton						✓			✓	✓
	Fish						✓	✓	✓	✓	✓
	Benthos						✓		✓	✓	✓
	Mammals						✓		✓	✓	✓
	Seabirds						✓		✓	✓	✓