

Comparison of Variables Derived from SPI/PV, Video and Sediment Grabs

Seafloor Characterisation				
Category	Variables	SPI/PV	Video	Grabs
Characterisation of General Sediment Type can be applied to a specified classification scheme (e.g., EUNIS, JNCC, CMECS)	Grain size	Grain size major mode up to Boulder	Low resolution description	Particle distribution from lab analysis up to Pebble
	Percent composition of gravel size classes	up to Boulder includes variability within 10 m area	Low resolution description	up to Pebble constrained to size of sampler (<0.5m²)
	Maximum gravel size	up to Boulder	up to Boulder	up to Pebble
	Minimum gravel size	up to Boulder	up to Boulder	up to Pebble
	Gravel size mode	X	-	-
Characterisation of Mixed Sediment Composition	Spatial distribution (patchiness) of gravel size classes	X	X	-
Seabed Surface Physical & Biogeochemical Properties	Bedforms (e.g., ripples)	X	Low resolution description	-
	Boundary roughness	X	-	-
	Boundary roughness origin	X	-	-
	Organic over-enrichment	X	Low resolution description	-
Subsurface Sediment Physical & Biogeochemical Properties	Relative load bearing capacity	X	-	-
	Layering and/or Deposits Natural or Anthropogenically-influenced	X	-	-
	Oxygenation depth (apparent redox potential discontinuity)	X	-	-
	Sediment oxygen demand	X	-	-
	Organic enrichment	X	-	-
	Presence of methane bubbles	X	-	-
	Presence of hydrocarbons	X	-	-
Integrated Seafloor Habitat Descriptor can be used for biotope classification	Macrohabitat	X	Low resolution description	-
Biological Characterisation				
Category	Variables	SPI/PV	Video	Grabs
Biological community composition can be applied to a specified classification scheme (e.g., EUNIS, JNCC, CMECS)	Species identification to lowest practical taxonomic level	Possible for some taxa	Possible for some taxa	X not captured for taxa attached to gravels > pebble in size
	Species richness	-	-	X not captured for taxa attached to gravels > pebble in size
	Species diversity metrics	-	-	X not captured for taxa attached to gravels > pebble in size
	Biomass (total and/or by taxonomic grouping)	-	-	X not always included in routine lab analyses
Characteristics and Composition by Type	Epifauna - identification of mobile and sessile epifauna taxa	X	Low resolution description	-
	Identification of sensitive taxa (coral)	X	Low resolution description	-
	Identification of potential non-native taxa (e.g., tunicates)	X	Low resolution description	-
	Attached Fauna percent cover	X	Low resolution description	-
	Emergent Fauna percent cover	X	Low resolution description	-
	Presence of seagrass, macroflora	X	Low resolution description	-
Functional Indicators of Benthic Community Composition and Status	Biological mixing depth	X	-	-
	Maximum bioturbation depth	X	-	-
	Infaunal successional stage	X	-	-
	Lebensspuren (tracks, trails, fecal casts)	X	Low resolution description	-
	Presence of tubes	X	Low resolution description	-
	Presence and depth of feeding voids	X	-	-
	Presence of eggs	X	-	-
	Presence of shell fragments / hash	X	Low resolution description	-

X = quantitative measurement or specific categorical definition