34. Kelp forest

Sensitivity Assessment

Sensitivity scores for 12 kelp level 5 biotopes, as described under The Marine Habitat Classification for Britain and Ireland (JNCC, 2022), within the Celtic Sea were obtained from MarLIN website (www.marlin.ac.uk). See case report (Appendix 10) for details of kelp biotopes used to assess this feature. The resistance, resilience and sensitivity scores for each pressure comprise those scores for the kelp biotope(s) most sensitive to that pressure.

Table A11.34. Sensitivity assessment for kelp forest. Associated sectors include activities related to offshore renewable energy (O), Fishing (F), or shipping (S). NR = not relevant, NA = not assessed, NEv = no evidence, H = high, M = medium, L = low, VL = very low, N = none, NS = not sensitive. Refs = References.

Pressures		**Associated sector(s)**	**Resistance**				**Resilience**				**Sensitivity**				**Biotope associated with score**	**Refs**
Classification	**Pressure type**		**Score**	**QoE**	**AoE**	**DoC**	**Score**	**QoE**	**AoE**	**DoC**	**Score**	**QoE**	**AoE**	**DoC**		
Physical	Physical loss (to land or freshwater habitat)	O	N	H	H	H	VL	H	H	H	H	H	H	H	All	1-12
	Physical change (to another seabed type)	O, F	N	H	H	H	VL	H	H	H	H	H	H	H	All	1-12
	Physical change (to another sediment type)	O, F	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12

	Habitat structure change-removal of substratum (extraction)	O	N	H	H	H	M	H	H	H	M	H	H	H	5, 6	3, 11
	Abrasion/disturbance of substratum surface or seabed	O, F	L	H	H	H	M	H	H	H	M	H	H	H	3, 4, 5, 6, 7, 8, 9, 10, 12	3-8, 10-12
	Penetration or disturbance of substratum subsurface	O, F	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12
Physical	Changes in suspended solids (water clarity)	O, F	N	H	H	H	M	H	H	H	M	H	H	H	4, 5, 6, 7, 8, 9	3, 4, 7, 10-12
	Smothering and siltation changes (light)	O	M	L	NR	NR	H	H	L	H	L	L	L	L	9	7
	Smothering and siltation changes (heavy)	O	L	M	H	H	H	H	H	H	L	M	H	H	2, 3, 4, 7, 8, 9, 10, 11, 12	1, 2, 4-8, 10, 12

	Underwater noise	O, F, S	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12
	Electromagnetic energy	O	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12
	Barrier to species movement	O, F	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12
	Death or injury by collision	O, F, S	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	All	1-12
Hydrological	Water flow changes	O	M	L	NR	NR	H	H	L	H	L	L	NR	NR	1	9
Chemical	Transition elements & organo-metal contamination	O, F, S	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	All	1-12
	Hydrocarbon & PAH contamination	O, F, S	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	All	1-12
	Synthetic compound contamination	O, F, S	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	All	1-12

	Introduction of other substances	O, F, S	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	All	1-12
	Deoxygenation	O	M	H	M	H	H	H	M	H	L	H	M	H	2, 5, 6	1, 3, 11
Biological	Introduction or spread of invasive non-indigenous species	O	L	L	NR	NR	VL	H	H	H	H	L	NR	NR	2, 3, 9	1, 7, 8
	Removal of target species	O, F, S	N	H	H	H	M	H	H	H	M	H	H	H	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12	1-7, 9-12
	Removal of non-target species	F	L	H	H	H	M	H	H	H	M	H	H	H	All	1-12

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