

37. *Zostera* beds

Sensitivity Assessment

Sensitivity scores for *Zostera marina* beds and *Nanozostera noltei* beds were obtained from MarLIN website (www.marlin.ac.uk). See case report (Appendix 10) for details of biotopes used to assess this feature. The resistance, resilience and sensitivity scores for each pressure comprise those scores for the biotope(s) most sensitive to that pressure.

Table A11.37. Sensitivity assessment for *Zostera* beds. 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		Associat ed sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classificatio n	Pressure type		Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C		
Physical	Physical loss (to land or freshwater habitat)	O	N	H	H	H	VL	H	H	H	H	H	H	H	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Physical change (to another seabed type)	O, F	N	H	H	H	VL	H	H	H	H	H	H	H	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classification	Pressure type		Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C		
	Physical change (to another sediment type)	O, F	L	H	H	H	VL	H	H	H	H	H	H	H	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Habitat structure change-removal of substratum (extraction)	O	N	H	H	H	VL	H	M	M	H	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Abrasion/disturbance of substratum surface or seabed	O, F	L	H	H	M	M	H	M	M	M	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
Physical	Penetration or disturbance of substratum subsurface	O, F	N	H	M	M	L	H	M	M	H	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classification	Pressure type		Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	Score	QoE	AoE	DoC		
	Changes in suspended solids (water clarity)	O, F	L	H	H	H	L	H	M	M	H	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Smothering and siltation changes (light)	O	L	M	M	M	M	H	H	H	M	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Smothering and siltation changes (heavy)	O	N	H	H	H	VL	M	M	M	H	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Underwater noise	O, F, S	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Electromagnetic energy	O	NEv	NR	NR	NR	NR	NR	NR	NR	NEv	NR	NR	NR	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classification	Pressure type		Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C		
	Barrier to species movement	O, F	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Death or injury by collision	O, F, S	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
Hydrological	Water flow changes	O	M	M	M	M	M	M	M	M	M	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
Chemical	Transition elements & organo-metal contamination	O, F, S	H	H	M	M	H	H	H	H	NS	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
Chemical	Hydrocarbon & PAH contamination	O, F, S	L	H	M	L	M	H	M	L	M	H	M	L	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classification	Pressure type		Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C		
	Synthetic compound contamination	O, F, S	N	H	M	M	VL	H	M	M	H	H	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Introduction of other substances	O, F, S	NEv	NR	NR	NR	NR	NR	NR	NR	NEv	NR	NR	NR	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Deoxygenation	O	H	M	M	M	H	H	M	M	NS	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Organic enrichment	O	M	M	M	M	M	H	M	M	M	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
Biological	Introduction or spread of invasive non-indigenous species	O, F, S	L	M	M	M	L	H	M	M	H	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

Pressures		Associat ed sector(s)	Resistance				Resilience				Sensitivity				Group or species associated with score	Refs
Classificatio n	Pressure type		Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C	Score	Qo E	Ao E	Do C		
	Removal of target species	F	N	M	M	M	M	H	M	M	M	M	M	M	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2
	Removal of non- target species	F	N	L	L	NR	L	H	M	M	H	L	L	L	<i>N. noltei</i> beds <i>Z. marina</i> beds	1, 2

References for *Zostera* beds sensitivity assessment

1. d'Avack, E.A.S., Tyler-Walters, H., Wilding, C.M. & Garrard, S.L. (2022a). *Zostera* (*Zostera*) *marina* beds on lower shore or infralittoral clean or muddy sand. In Tyler-Walters, H., & Hiscock, K. (eds) Marine Life Information Network: Biology and Sensitivity Key Information Reviews, [on-line]. Plymouth: Marine Biological Association of the United Kingdom. [cited 13-02-2024]. Available from: <https://www.marlin.ac.uk/habitats/detail/257>
2. d'Avack, E.A.S., Tyler-Walters, H., Wilding, C.M. & Garrard, S.L., (2022b). *Zostera* (*Zosterella*) *noletii* beds in littoral muddy sand. In Tyler-Walters, H., & Hiscock, K. (eds) Marine Life Information Network: Biology and Sensitivity Key Information Reviews, [on-line]. Plymouth: Marine Biological Association of the United Kingdom. [cited 14-02-2024]. Available from: <https://www.marlin.ac.uk/habitats/detail/318>