Porbeagle shark, *Lamna nasus*

Sensitivity Assessment

Table 1. Sensitivity assessment for the porbeagle shark (*Lamna nasus*). NR = not relevant, NA = not assessed, NEv = no evidence, H = high, M = medium, L = low, NS = not sensitive.

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				References
Classification	Pressure type		Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	
Physical	**Physical loss (to land or freshwater habitat)**	**O**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Physical change (to another seabed type)	**O, F**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Physical change (to another sediment type)	**O, F**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Habitat structure change-removal of substratum (extraction)	**O**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Abrasion/disturbance of substratum surface or seabed	**O, F**	NEv	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Penetration or disturbance of substratum subsurface	**O, F**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-

Table 1. cont. **Sensitivity assessment for the porbeagle shark (*Lamna nasus*).** Associated sectors include activities related to offshore renewable energy (O), Fishing (F), or shipping (S).

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				References
Classification	Pressure type		Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	
Physical	**Changes in suspended solids (water clarity)**	**O, F**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Smothering and siltation changes (light)	**O**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Smothering and siltation changes (heavy)	**O**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
	Underwater noise	**O, F, S**	H	L	M	L	H	L	L	L	NS	L	NR	NR	-
	Electromagnetic energy	**O**	H	L	M	L	H	L	M	L	NS	L	NR	NR	-
	Barrier to species movement	**O, F**	NEv	NR	NR	NR	NEv	NR	NR	NR	NA	NR	NR	NR	-
	Death or injury by collision	**O, F, S**	NA	L	M	M	NA	L	M	M	NA	NR	NR	NR	-
Hydrological	**Water flow changes**	**O**	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	-
Chemical	**Transition elements & organo-metal contamination**	**O, F, S**	NEv	M	H	M	NEv	M	M	H	Sensitive	M	M	M	14, 15

Table 1. cont. Sensitivity assessment for the porbeagle shark (*Lamna nasus*).

Pressures		Associated sector(s)	Resistance				Resilience				Sensitivity				References
Classification	Pressure type		Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	Score	QoE	AoE	DoC	
Chemical	Hydrocarbon & PAH contamination	O, F, S	NA	NR	NR	NR	NA	NR	NR	NR	NA	NR	NR	NR	23
	Synthetic compound contamination	O, F, S	NEv	H	H	L	NA	H	H	NR	NA	H	H	L	20
	Introduction of other substances	O, F, S	NA	NR	NA	NR	NR	NA	NR	NR	NR	NA	NR	NR	-
	Deoxygenation	O	NEv	NR	NEv	NR	NR	NEv	NR	NR	NR	NA	NR	NR	-
	Organic enrichment	O	NA	NR	NA	NR	NR	NA	NR	NR	NR	NA	NR	NR	-
Biological	Introduction or spread of invasive non-indigenous species	O, F, S	NR	NR	NR	NR	NR	NR	NR	NR	NA	NR	NR	NR	-
	Removal of target species	F	L	H	H	H	L	H	H	H	H	H	H	H	1, 3, 6, 8, 9 – 13, 21, 24, 25, 30, 31, 37
	Removal of non-target species	F	L	H	H	H	L	H	H	H	H	H	H	H	3 – 5, 7, 8 – 10, 12 – 19, 25 - 30, 33, 35 - 37

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Literature search

Web of Science search terms

AB=("Porbeagle*" OR “bottle-nose shark*” OR “bluedog” OR “Atlantic mackerel shark” OR “Beaumaris shark” OR “Lamna nasus” OR “L. nasus” OR “maraîche” OR “Mackerel shark”) AND AB=("angl*" OR “beam” OR "bottom trawl*" OR "by-catch" OR "dredge*" OR "fish*" OR “gear” OR "gillnet*" OR "hook*" OR “injury” OR "net*" OR "otter trawl*" OR “remov*” OR "aggregate*" OR "anchor*" OR "ballast" OR "barrier*"OR "beach*" OR "launch*" OR "moor*" OR "noise" OR “ship*” OR "steaming" OR "collision*" OR "construction" OR "electro*" OR "turbine*"OR "renewable*" OR "wave" OR "wind" OR "wind farm*" OR "anoxia" OR "copper" OR "current*" OR “deoxy*” OR "disease*" OR "disturbance" OR "endocrine disru*" OR "eutrophication" OR “exposure” OR "heavy metals" OR "hydrocarbon" OR "hypoxia" OR “litter*” OR “non-native*” OR "nitrate*" OR "nitrite*" OR "noise" OR “radionuclide” OR "nutrient*" OR "oil" OR "PAH*" OR "PCB*" OR “regime” OR "sedimentation" OR "silt*" OR "tributyltin" OR “turbid*”)

Database

ISI Web of Science

Search date

8th March 2024 – 76 results

https://www.webofscience.com/wos/woscc/summary/8df005e4-c99b-4d74-aaba-e92a0eb7c02d-d2d3dcd0/relevance/1

Search output and screening process

Abstracts screened for relevance i.e. must describe tope sharks and mention of one of the listed sectors and/or pressures from MARESA. Workflow follows the Rapid Evidence Assessment approach. The title and all auxiliary information (including abstract) were downloaded from ISI Web of Science in a .ris and excel format. In Excel, abstracts were read and listed to either pass or fail the initial screening process with a reason provided.

Outcome from screening

52 (68%) abstracts passed initial screening. Of these, 9 (17%) did not pass secondary screening (i.e., on further reading were determined as not relevant, 4 (8%) could not be accessed and therefore applicability could not be determined, and 39 (75%) passed secondary screening and were accessible, Sensitivity assessments were therefore made based on evidence provided by the resultant 39 papers.