Fisheries New Zealand
Tini a Tangaroa

Example register entries of Potential Habitat of Particular Significance for Fisheries Management identified using best available information

HABITAT	Biogenic reef at Chetwode Banks – outer Marlborough Sounds
Fish Species/Stock	**Blue cod (BCO 7)**
Attributes of habitat	• Patches of bryozoan fields and horse mussel bed • Complex biogenic habitat structure in low silt conditions.
Reasons for particular significance	• Juvenile nursery area (meeting nursery habitat definition) • Benthic feeders (diet of juveniles differs from that of adults) • Structure important • One of the few known remaining areas of healthy bryozoan habitat in the northern South Island
Risks/potential adverse effects of fishing	• Fishing using bottom-contact methods across the habitat (commercial and amateur scallop fishery currently closed) • Resuspension of sediment by bottom-contact fishing
Risks/potential adverse effects of other activities	• Sedimentation from land-based practices • Nutrient enrichment and chemical pollutants from land-based practices • Nutrient enrichment from aquaculture
Evidence	• Carbines, 2004 • Anderson, et al., 2019 • Jones et al., 2016 • Morrison pers coms – juvenile bottlenecks programme
Confidence	• High confidence there is a juvenile nursery area in this location

HABITAT	Mosaic of HoS within Kaipara Harbour
Fish Species/Stock	**Grey mullet (GMU 1), Rig/spotted dogfish (SPO 8), Snapper (SNA 8)**
Attributes of habitat	Grey mullet: • High level of connectivity to freshwater environment • Large, muddy estuaries Rig/spotted dogfish: • Muddy substrata in shallow turbid parts of harbours which have a significant freshwater component • High shellfish density Snapper: • Biogenic habitat – e.g., subtidal seagrass beds, Asian date mussel hummocks, red algal meadows

Reasons for particular significance	• Nursery area for Grey Mullet, Rig/Spotted Dogfish, and Snapper
	  ○ Grey Mullet:
	  ▪ Connected to large adult populations
	  ○ Rig/spotted dogfish
	  ▪ One of two known nursery areas
	  ▪ Spend first 6-8 months in estuaries and harbours until autumn or winter
	  ○ Snapper
	  ▪ Supports a high proportion of SNA 8 recruits
	  ▪ Provides refugia (e.g., from predation, currents) and feeding opportunities
	  ▪ Likely that recruitment failure would majorly decrease stock productivity (the stock may already be depressed because of a recruitment bottleneck)
	• Supports other juvenile fish (e.g., Trevally)

Risks/potential adverse effects of fishing	• Commercial fishing using bottom-contact methods across the habitat (trawl/seine and scallop dredge are currently banned from the harbours) • Amateur scallop dredging (recreational scallop fishery currently closed
Risks/potential adverse effects of other activities	• Chemical pollution from land or marine discharges • Sedimentation from land-based practices • Eutrophication from land-based practices and finfish farming • Infrastructure installation (e.g., electricity generating turbines)

	• Additional aquaculture facilities over seagrass (NB: oyster BST racks over subtidal seagrass have been shown to have no adverse effects on seagrass) • Land reclamation; marina development
Evidence	• Francis et al., 2012 • Getzlaff, 2012 • Nurhazwan., 2013 • Morrison et al., 2014a, b, c • Morrison et al., 2016 • Morrison pers coms • Jones et al., 2016 • Clinton Duffy pers coms.
Confidence	• High

Fish Species/Stock	Green lipped mussels (GLM 9)
HABITAT	Intertidal and subtidal mussel reef and macroalgal bed, Ahipara/90 mile beach[2]
Attributes of habitat	• Rocky intertidal reefs • Subtidal mussel beds to a depth of 25m • Subtidal macroalgal beds, sponges, bryozoans and hydroids
Reasons for particular significance	• Reef supports the source of spat which ensures the sustainability of an important customary fishery • Evidence suggests could be important for supporting sustainability of mussel stocks in the wider area. • Supports adult populations of mussels which are an important source of mussel spat for wild Te Hiku (90 Mile Beach) seaweed/spat fishery and associated mussel farms around New Zealand
Risks/potential adverse effects of fishing	• Resuspension of sediment from bottom contact fishing • Bottom contact fishing methods (trawling/dredging)
Risks/potential adverse effects of other activities	• Land-based sources of sedimentation • Parasites and viral disease • Invasive species • Algal blooms • Chemical pollution from land or marine discharges • Sand extraction
Evidence	• Alfaro et al., 2011 • Auckland University Technology study • The Moana project
Confidence	• High/medium