

Significant Ecological Marine Area Assessment Sheet

Name: Matapouri Estuary Shorebird Values

Summary:

Matapouri Estuary as a whole has been given a high ranking of ecological significance for marine values. Towards its entrance, Matapouri Estuary has small areas of sandy tidal flats with shellfish communities and beaches that connect the estuarine habitat sequences with the diverse coastal habitats of Matapouri Bay and the surrounding headlands and shallow rocky reefs. The estuary has shallow channel habitats and significant areas of intact mangrove saltmarsh sequences that in turn have ecological connections with wetland areas and local freshwater streams. Combined these habitat sequences perform important ecological roles as nursery and feeding areas for a wide variety of marine life. These habitats also play a vital role in maintaining water quality and provide connectivity between fresh water ecosystems and the coastal waters.

Aerial photo of Matapouri Estuary Photo Credit: Apple Maps



Description:

Matapouri is a small east coast estuary 35 ha in size, known for its clear water and sandy beaches. Two small catchments feed into the estuary. The southern catchment feeds into the Parangarau stream and the northern catchment into the Te Wairoa stream. The two streams meet near the mouth of the estuary, which opens to Matapouri Bay. The tidal influence is strong, and has an effect into the upper reaches of the estuary. The freshwater inputs are relatively low, unless heavy rain has occurred. The Matapouri

catchment supports very high biodiversity values¹ that reflect a wide range of interconnecting marine habitat types². These habitats include saltmarshes, mangroves, intertidal sand flats, and channels. The entrance to the estuary is bordered on one side with a rocky shore and shallow reefs, with a clean sand beach and bay on the other. Each of these habitats contains distinctive plant and animal communities, all contributing to the ecological values supporting the bird species present.

In the last two decades farming intensity in the catchment has been decreasing in favour of lifestyle blocks, which are growing in number. Local interest and support for improving riparian management and conservation has been increasing.

A 3D aerial image of Matapouri Estuary looking from the sea. Matapouri though small in size has excellent habitat sequences of fringing rocky reef, clean sand tidal flats, seagrass and shellfish in the channels and mangrove and salt marsh in the upper reaches of the estuary. The high proportion of well vegetated riparian margin can also be seen in this photo.



¹ Alfaro, A.C., (2006) Benthic macro-invertebrate community composition within a mangrove/seagrass estuary in northern New Zealand

² Kerr, V.C., 2010. Marine Habitat Map of Northland: Mangawhai to Ahipara Vers. 1. Technical Report, Department of Conservation, Northland Conservancy, Whangarei, New Zealand.

An example of the seagrass bed growing on clean sand shellfish bed in the channel of the west arm of the estuary. Photo Credit: Vince Kerr



Seagrass bed growing on clean sand tidal flat west arm of Estuary. Photo Credit: Vince Kerr



A view from the bridge of the east arm of the estuary looking towards the entrance. Dark areas on the edge of are seagrass. Note the high quality stand of native forest bordering this part of the Estuary. Photo Credit: Vince Kerr



A view looking from the bridge up the estuary of west arm, dark area in foreground is seagrass. Photo Credit: Vince Kerr



Ecological Values

Matapouri is one of the best examples in Northland of a well functioning small estuary. The tidal flats have healthy shellfish beds and benthic invertebrate communities.¹ There are some small beds of intertidal seagrass *Zostera muelleri*, currently coming back in the middle area of the estuary. There has been monitoring of the shellfish beds in Matapouri. In a 2015 report the beds are described as healthy and productive.³ The shellfish beds make a major contribution to the process of enhancing water quality of the estuary. Shellfish are very active filtering plankton and nutrients from the water column with each tide cycle. Matapouri Estuary is a shallow estuarine system with the majority of the volume of the estuary emptying out of the system with each tide. As a result, virtually all the estuary is well flushed with coastal water masses during every tide cycle. The upper reaches of Matapouri estuary are characterised by high quality intact sequences of mangrove forests and saltmarshes and small shallow channels. Much of the upper system has quite good riparian edge environments in native forest adding greatly to the ecological value of the estuary. Matapouri estuary can be expected to play an important localised role as a nursery and feeding area for coastal fishes.⁴

Assessment of Ecological Significance

Table 1 Ranking score of ecological significance of Matapouri Estuary⁵

³ Berkenbusch, K.; Neubauer, P., 2015. Intertidal shellfish monitoring in the northern North Island region, 2014–15. New Zealand Fisheries Assessment Report 2015/59. 110 p.

⁴ Morrison, M.A.; Jones, E.G.; Parsons, D.P.; Grant, C.M., 2014. Habitats and areas of particular significance for coastal finfish fisheries management in New Zealand: A review of concepts and life history knowledge, and suggestions for future research. New Zealand Aquatic Environment and Biodiversity Report No. 125. 202 p.

⁵ Table 1 details the ranking criteria and scoring that was used to determine the overall high ranking given to the ecological significance of this area. The criteria used have been adopted from

Matapouri Estuary Marine Values: Assessment of Ecological Significance			Rank
Overall Ranking		Notes	High
Representation	supports most taxa expected for habitat type	Shellfish beds are typical of this habitat and good examples	M
	large example of its type	Not a large example of its type	L
Rarity and Distinctiveness	supports indigenous species threatened, at risk, or uncommon, nationally or within the relevant ecological scale	Not Assessed	NA
	supports species endemic to the Northland-Auckland region or at distributional limits within the Northland region	Not Assessed	NA
	distinctive of a naturally restricted occurrence	Typical small east coast estuary	M
	developed as a result of unusual environmental factor(s) or is part of an ecological unit that occurs within an originally rare ecosystem	Typical small east coast estuary	M
	identified as nationally or regionally rare habitat(s) in MPA Plan	Not Assessed	NA
Diversity and Pattern	high diversity of indigenous ecosystem or habitat types	Typical community of type	M
	high diversity of indigenous taxa	Typical community of type	M
	its composition reflects the existence of diverse natural features or ecological gradients	Typical community of type	M
	contains intact ecological sequences	Sequences outstanding from estuarine entrance rocky reefs to salt marsh	H
Ecological Context	provides or contributes to ecological linkages, networks, buffering functions	Shellfish beds play very important buffering and ecological role in estuary	H
	supports the natural functioning of freshwater or coastal ecosystems	Shellfish beds play very important buffering and ecological role in estuary	H
	supports life stages of indigenous fauna	Provides important support for various life stages of benthic invertebrates, shorebirds and nursery for coastal fish species	H
Assessed by: Vince Kerr		Date: September 2015	
Information Source(s) <i>see below</i>			1-7
Reliability of Information <i>see below</i>			+++
Rank (overall score) H = high, M = moderate, L =low, DD = data deficient, R = recommended for further investigation			
Information Source(s) 1 = quantitative report, 2 = qualitative report, 3 = habitat map or classification, 4 = expert opinion, 5 = personal communication, 6 = anecdotal information, 7 = visit and observation			
Reliability of Information expressed as a scale of confidence ranging from high (+++) to low confidence (---)			
Criteria Rank - score for each individual criteria) H = high ranking, M = moderate ranking, L = low ranking, DD = data deficient, R = recommended for further investigation, NA = not assessed for this criteria			

Appendix 5 of the Northland Regional Council Proposed Policy Statement. See reference to Methodology report or other council documents to call up

