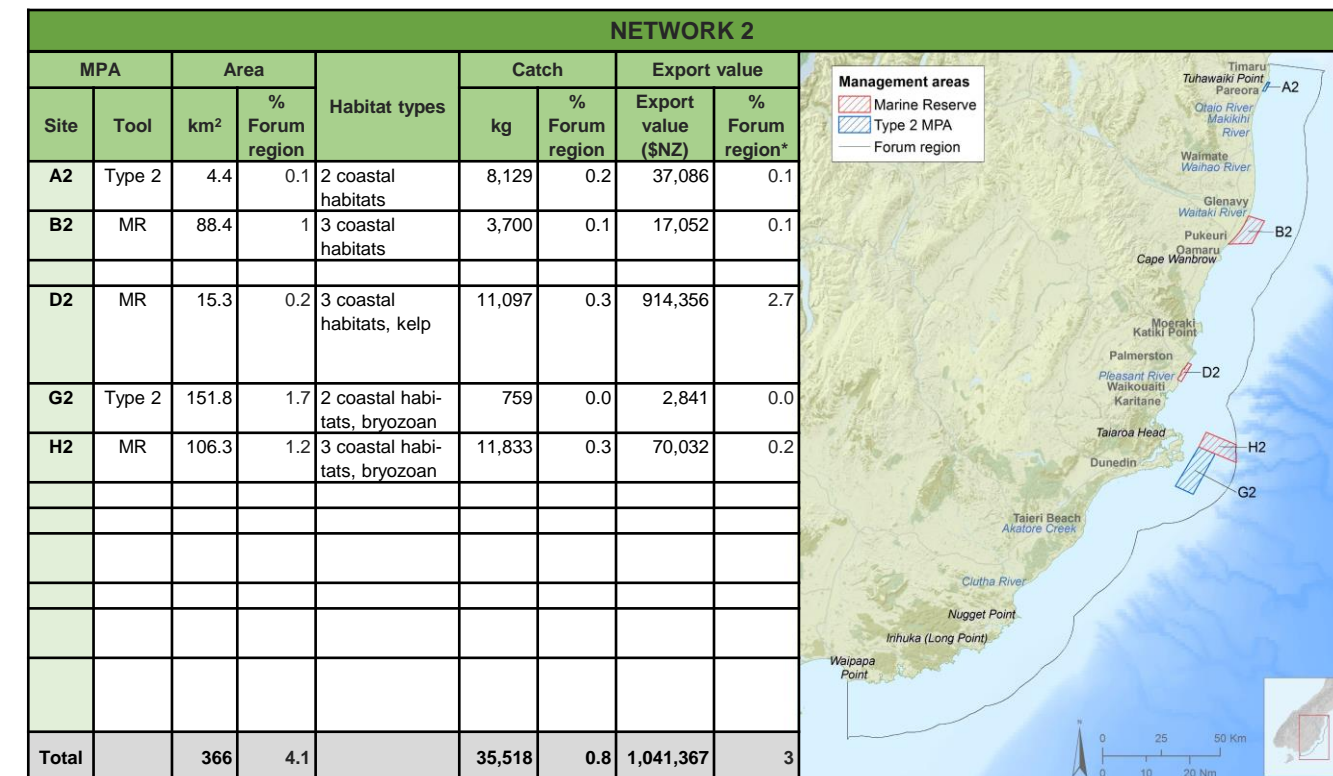
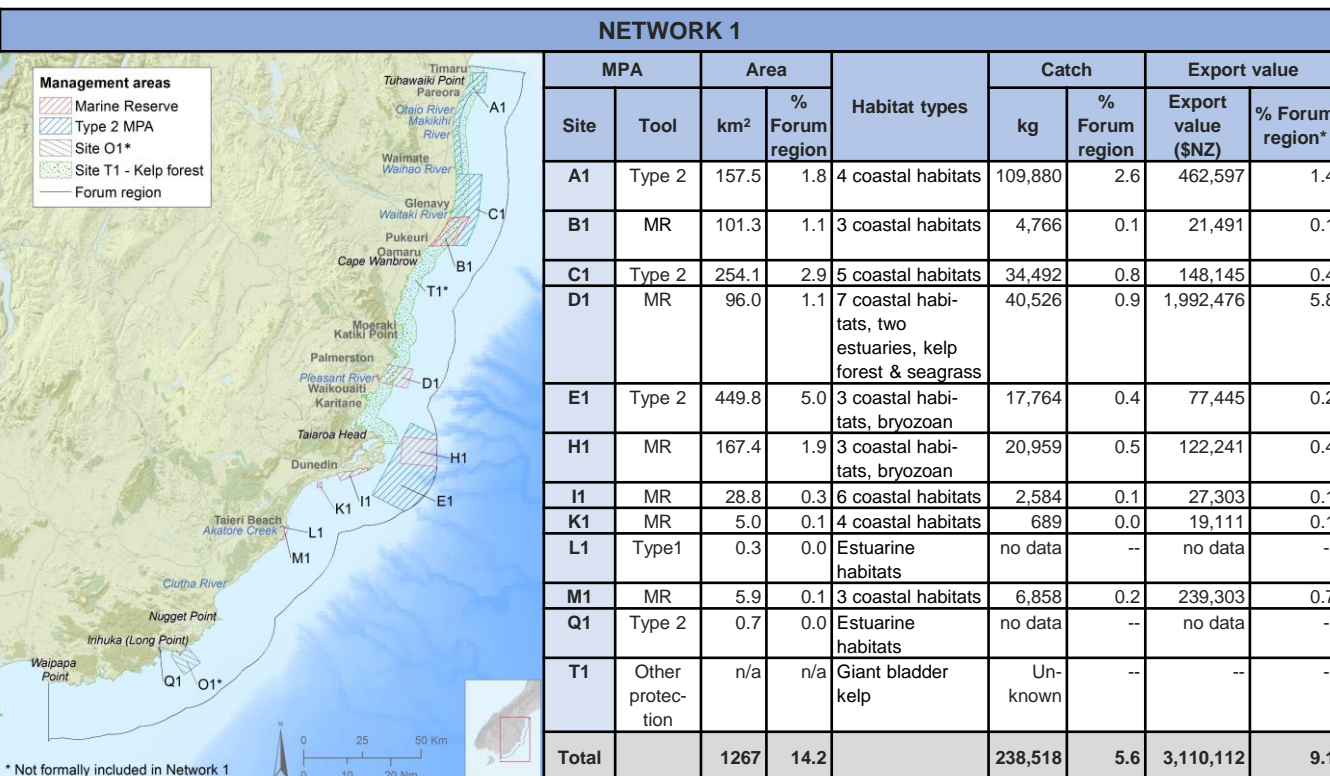


South-East Marine Protection Forum

Summary of proposed MPA networks

Overview

	Area (km ²)	% of Forum region area	No. of marine reserves	No. of Type 2 MPAs
Network 1	1,267	14.2	6 (4.5%)	5 (9.7%)
Network 2	366	4.1	3 (2.4%)	2 (1.7%)



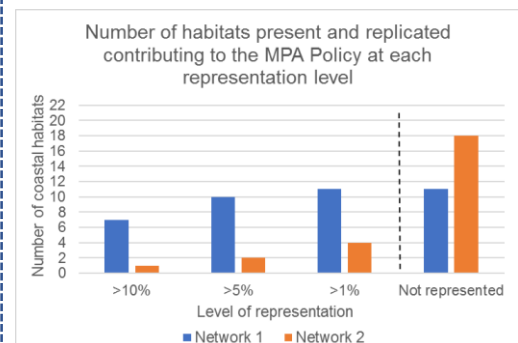
* Over the total of \$ND 34.3 million export value for the Forum region based on 2017 FOB export prices.

Representation, viability & replication

To be considered representative and contributing towards the MPA network the habitat must be viable, i.e. of sufficient extent and quality to enable the maintenance and/or recovery of the habitat and associated biological communities in a healthy functioning state at the habitat and ecosystem level. Replication requires the protection of the same habitat type across two or more sites within an MPA network, and at least in one marine reserve. In absence of a requirement for how much of each habitat should be protected to be considered 'representative', different levels of percentage of the total area of coastal habitats in the Forum region are used for reference.

Coastal habitats

- Network 1** represents 17 out of 22 coastal habitats in the Forum region. The requirement of representation and replication is met for 11 out of 22 coastal habitats
- Network 2** represents 9 out of 22 coastal habitats. Representation and replication is met for 4 out of 22.

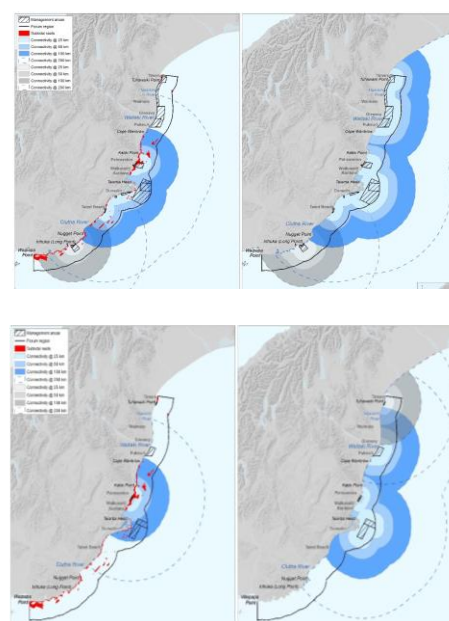


Estuaries and habitats considered to meet the definition of "outstanding, rare, distinctive or internationally or nationally important"

	Network 1		Network 2	
	Representation	Replication	Representation	Replication
Seagrass	✓	✗	✗	✗
Giant kelp	✓	✗	✓	✗
Bryozoan	✓	✓	✓	✓
Estuaries	✓	✓	✗	✗

Connectivity

Connectivity is the extent to which populations in different parts of a species' range are linked by the movement of eggs, larvae, juveniles or adults. Connectivity in the design of a network allows for linkages whereby protected sites benefit from larval and/or species exchanges, and functional linkages from other network sites.



Network 1

- Subtidal rocky reef habitat (top left) appears to be largely connected across the Forum region at the 50-100 km distance level. Gaps to the north and south would exist.
- Areas of soft sediment habitat (top right) are connected across multiple scales between proposed MPAs. A gap remains at the south of the region
- The contribution to the connectivity of rocky reef and soft sediment by Site O1 (to the south) is shown in grey for reference, as it is not considered part of Network 1.

Network 2

- Subtidal rocky reef habitat (bottom left) is only included in one MPA, therefore connectivity between proposed MPAs for rocky reefs is poor.
- For soft-sediments (bottom right) there is good connectivity potential at the 100km distance level, along with some potential connectivity at smaller distances. A gap remains in the south of the region.

Potential for connectivity at different scales between rocky reefs (left) and soft-sediment habitats (right). Different shades of blue indicate different distance scales amongst proposed MPAs that contain rocky reefs or soft-sediment habitats.

Overall, Network 1 has greater potential for regional connectivity than Network 2.

Displacement of commercial fisheries

Displacement of 5 top species by estimated export value (\$NZ), and total for each network.

Fish stock	Estimated Catch (kg)	% of QMA Total	Estimated Export value (\$NZ)
Network 1			
Rock lobster (CRA7)	19,949	23.3	2,068,428
Flatfish (FLA3)	27,838	2.0	177,332
Red gurnard (GUR3)	24,422	2.3	171,691
Elephant fish (ELE3)	31,007	2.8	162,478
Blue cod (BCO3)	7,130	4.2	106,946
Other	128,171		423,126
Total	238,517		3,110,002
Network 2			
Rock lobster (CRA7)	8,418	9.83	872,792
Blue cod (BCO3)	2,556	1.51	38,337
Arrow squid (SQU1T&J)	3,976	0.02	17,014
Paua (PAU5D)	294	0.36	16,106
Elephant fish (ELE3)	2,796	0.26	14,648
Other	17,481		82,470
Total	35,521		1,041,367

Regional variation

Regional variation refers to the inclusion of latitudinal (north-south) and longitudinal (cross-shelf) differences in habitats and ecosystems.

Both Networks are unlikely to represent regional variation for some habitats with few MPAs proposed in the southern part of the region. This is particularly evident for Network 2.