

Addenda Report to:

The West Coast Marine and Coastal Environment

An Initial Report for the West Coast Marine Protection Forum

Insertions and amendments requested by the Forum, in response to submissions received.



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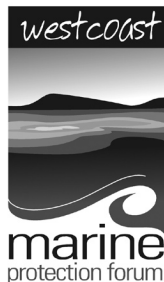
The West Coast Marine and Coastal Environment

An Initial Report for the West Coast Marine Protection Forum

Insertions and amendments requested by the Forum,
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Cover images from top:

Blue cod, South Westland. *Photo: P Ryan, DOC collection.*

Children playing with a reef star at Rapahoe beach. *Photo: S. Nimmo*

Fishing vessel leaving the Greymouth Harbour. *Photo: S. Nimmo*

Sandy beach and Karamea-Otumahana Estuary on the Karamea coast. *Photo: T. Hume, NIWA*

Introduction

The West Coast Marine Protection Forum has been established with people from the West Coast community and other stakeholders, to make recommendations on areas for marine protection, in accordance with the government's Marine Protected Areas (MPA) Policy.

This 'Addenda Report' provides information for the Forum to consider, in addition to that provided in the 'Initial Report'¹. The information is derived from written submissions provided by individuals and groups in response to the Forum's request for corrections and alterations to the Initial Report. The Addenda Report has been reviewed and approved by the Forum.

This Addenda Report needs to be read in conjunction with the Initial Report, of which a limited number of printed copies are in circulation. An electronic pdf of the Initial Report is available on CD from the Dept of Conservation in Hokitika, and also on the Forum's website, www.westmarine.org.nz.

¹ Neale D.M., Pindur N.B., Reedy M.C., Watson B.N. Molloy L.F (2007) The West Coast Marine and Coastal Environment: An Initial Report for the West Coast Marine Protection Forum. WCMPPF, Hokitika, 236p.

Addenda

The following changes are made to the Initial Report.

Additions and corrections are given in underlined italics. Existing text is in normal font. Footnote numbering is in sequence for this Addenda Report and so does not match the Initial Report's numbering.

P8 paragraph 7 (s1.2) Insert:

"The Forum aims to:

- Understand the social, biological, physical, recreational and commercial characteristics and dynamics of the West Coast marine and coastal environment;..."

P9 paragraph 8 (s1.4) Amend:

"...the upper limits of which are defined by the Regional Coastal Plan for the West Coast². Throughout the report this area is referred to as the 'West Coast coastal marine area'..."

[note: this amendment should be made throughout the report. However, it does not change the substance of the report, and so is not done in this Addenda Report].

P13 paragraph 2 (s2.2) Insert:

"Other distinguishing physical features include: the pronounced effects of sedimentation (including glacial sediments and sand scour and shoreline instability, its dynamic shelf and river hydrology,..."

P16 paragraph 6 (s2.3.1) Amend:

"The West Coast of the South Island is one of the wettest regions in the world, with in excess of 2400 mm of rain annually in coastal areas (characterised by summer peaks and winter lows³, and annual precipitation as high as an extraordinary 17,000 mm measured in parts of the mountainous hinterland). Consequently,..."

P18 footnote (s2.3.3) Insert:

"24 Jones 1994, Todd 2002"

2 WCRC 2000

3 Benn 2005

P21 paragraph 2 (s2.3.6) Insert & amend:

“...The basement rocks of the West Coast were formed from ocean sediments of the ancient Gondwana ‘supercontinent’ between 300 million and 540 million years ago, and from other geological sources⁴. Basement rocks occur in coastal exposures especially in the Karamea Granite Formation of Kahurangi – Heaphy, the Paparoa Granite Formation near Kongahu Point, the Constant Gneiss Formation on the Foulwind-Paparoa coasts, and the Tuhua Group Granites/ Intrusives on the Paparoa coast⁵.”

P23 paragraph 1 (s2.3.6) Amend:

“The effects of sediments depend on a variety of factors: the size of the sediment particles (and other textural properties of the sediments such as shape and sorting), the nature of the seabed, and the ability, timing and frequency of currents to move them.”

P28 paragraph 4 (s2.4.2) Amend:

“They include (from largest to smallest size range, based on the intermediate axis diameter of each particle according to the ‘Wentworth’ scale⁶)

- cobble, particles from 64 to 256 mm diameter, such as the platy stones that are found in many West Coast beaches.
- Gravel, comprising particles of 1–64 mm in size.
- Sand, comprising particles of 0.0625–1 mm in size.
- Silt and mud, comprising the finest range of sediments.”

P29 paragraph 2 (s2.4.2) insert:

“Substrate types can vary widely according to:

- Texture (including size range, shape and sorting) and mobility of their constituent parts;...”

P29 paragraph 3 (s2.4.2) Insert:

“There is some information on where these different sediment types occur on the bathymetric data on the regional map in Figure 2.13 later in this chapter and on the more detailed maps shown in Chapter 5. The dynamic and high-energy nature of the West Coast marine and coastal environment means that the sediment type and other features of the substrate at a given location can change over time, in estuaries⁷, beaches⁸ and nearshore/ continental shelf areas⁹. However, it is assumed here that the broad patterns and dominance of sediment sizes and substrate composition remain generally the same over time at the scale of the mapping used in this report.”

4 Benn pers comm 2007

5 Grindley 1961, Bowen 1964, Morton 2004

6 Wentworth 1922

7 e.g. Neale 1998a

8 e.g. Benn & Neale 1992, Hall pers comm 2007, Stenhouse pers comm 2007

9 e.g. Thomson pers comm 2007

P33 footnote (s2.5.2) Insert:

"51 Griffiths & Glasby 1985, Hicks & Shankar 2003"

P37 footnote (s3.2) Insert:

"8 Hughes 2005, Blyth et al 2006, Elwell-Sutton pers comm 2007"

P52 paragraph 4 (s3.4.3) Insert:

"Some sites are used for scientific (e.g. biological and geological) studies including:

- Physical monitoring sites such as the NIWA sea level recorders at Constant Bay and Jackson Bay, and DOC and local authority beach profile monitoring sites at numerous coastal locations."

P59 caption (s3.5.3) Amend:

"SCUBA diving occurs mostly in shallow subtidal rocky areas"

P61 footnote (s3.6) Insert:

"70 Cox_2005"

p76 paragraph 4 (s4.3) Insert:

"...and that marine fish stocks and marine fishing activity have changed over time.

The West Coast marine environment is very exposed to the weather which influences how often and where people can go fishing. Narayan (1991) suggests that conditions are suitable for commercial fishing for no more than 150 days a year¹⁰. Anecdotal reports suggest that recreational fishers typically fish for about 20–30 days per year¹¹, but this can undoubtedly vary a lot from person to person depending also on such things as their lifestyles, residences and fishing methods. The weather restricts people's access and influences the types of fishing methods that can be used by both commercial and recreational fishers. Changes that can be seen due to the weather include floods in estuaries, high surf conditions on surf beaches, storm conditions at sea and river mouth bars being difficult and dangerous to cross. It is considered by some people that the weather and sea conditions provide natural protection on the West Coast¹² (e.g. by limiting the number of days people can fish, therefore reducing the impacts fishing gear may have on the seafloor).

10 e.g. Narayan 1991

11 e.g. Harris pers comm 2007, Nelson pers comm 2007, Crowley pers comm 2007, Todd pers comm 2007, Toseland pers comm 2007.

12 e.g. McNamara pers comm 2007, Crowley pers comm 2007, Stenhouse pers comm 2007, Todd pers comm 2007, Colligan pers comm 2007, Toseland pers comm 2007,

There are seasonal and spatial patterns to many fisheries, dependant on the distribution and abundance of target fish species, spawning and aggregation patterns, weather and sea conditions and other factors. For example, trawl fishers have reported that they are often unable to operate very close inshore due to surf and bottom conditions, whereas diving for rock lobsters occurs only on rocky areas.

Because the nature and extent of each environmental domain varies throughout the region, so too does the extent of sites available for the different types of fishing associated with each domain. For instance, some parts of the region have limited areas for rocky reef fishing and diving¹³, while other parts have only small areas of estuarine environments.

The rest of this section contains information..."

P83 paragraph 3 (s4.3.2) Insert:

"...Further offshore in the deep subtidal areas and beyond, recreational boats are sometimes taken to catch deeper water species such as groper, ling and tuna.

It appears that most recreational fishing on the West Coast is done informally by individuals; but fishing clubs, charter boats and competitions also provide organised opportunities for recreational fishers. Some individuals use their boats for charter boat operations, as well as private recreational fishing. There are many reasons why people engage in recreational fishing, including for simple enjoyment, 'to catch a feed', for sport, for income (e.g. charter boat operators), as a social or traditional activity, and for subsistence¹⁴. An unknown number of recreational commercial charter boats operate on the West Coast..."

P85 paragraph 3 (s4.3.2) Insert:

"sea-run salmon can be expected around most of the major river mouths south of the Taramakau. Notable breeding areas for sea-run salmon occur in the catchments of Okarito Lagoon (MacDonald's Creek) and Paringa River (the Windbag)¹⁵."

13 e.g. Stenhouse pers comm 2007

14 e.g. Millard pers comm 2007, Holden pers comm 2007, Stenhouse pers comm 2007, Teasdale pers comm 2007, Colligan pers comm 2007, Toseland pers comm 2007

15 Hall, pers comm 2007, Watson pers comm 2007

P87 paragraph 2 (s4.4.1) Insert:

"...the major ones being:

- Saltwater Beach;
- Okarito Lagoon;
- Five Mile Beach; and
- Gillespie Beach¹⁶.

May (1962) noted that the richest coastal black-sand diggings were at Greymouth's Cobden and South Beaches, and from Arahura River to Waimea Creek, but that "the whole thirty miles of sea-beach between Hokitika and Point Elizabeth was worked by the 'blacksanders'".

P89 paragraph 3 (s4.4.3) Insert:

"Areas recently experiencing coastal erosion and flooding hazards on beaches include: Karamea, Granity, Westport, Woodpecker bay, Punakaiki, Rapahoe, Greymouth, Hokitika, Okarito and Bruce Bay. Erosion rates and other coastal stability trends at these and other sites have been tabulated by several authors¹⁶."

P95 paragraph 1 (s4.6) Insert:

"...

- sea level monitoring at permanent stations at Charleston and Jackson Bay/Okahu (NIWA)
- Beach profile monitoring at various locations (WCRC, DOC and others)
- Fur seal monitoring..."

P108 paragraph 2 (s5.1.4) Insert:

"The coastline is difficult for recreational fishers to access, but some probably visit by helicopter or by boat out of Nelson, Westhaven, Little Wanganui¹⁷ and Westport..."

P112 paragraph 3 (s5.2.2) Amend:

"Coastal erosion and other land movements such as slumping and subsidence exacerbated by the 1929 Murchison earthquake, are a feature of this southern part of the Karamea coastal segment (see Henderson 1937) and as far north as Oparara¹⁸."

P112 paragraph 7 (s5.2.2) Amend:

"Karamea-Otumahana Estuary (400ha and Oparara Estuary (110ha) are considered...
...These estuaries are fed by the Karamea River and Granite and Blackwater Creeks (Karamea-Otumahana Estuary), and by the Oparara River (Oparara Estuary), and are surrounded mostly by grazed pasture."

¹⁶ e.g. Gibb 1978, Benn & Neale 1992, Benn 2006

¹⁷ Franken pers comm. 2007

¹⁸ Benn 1993

P113 paragraph 2 (s5.2.2) Amend:

“Small patches of the exotic cord grass (*Spartina* sp.) have been controlled in the Oparara Estuary since the 1980s.”

P115 paragraph 4 (s5.2.3) Amend:

“There is extensive evidence of early Maori occupation at numerous coastal archaeological sites on the Karamea sand plain, but beach erosion following the 1929 Murchison earthquake has destroyed some of these sites.”

P115 paragraph 5 (s5.2.4) Insert:

“Recreational fishing occurs throughout the Karamea segment and includes surfcasting and rod fishing (at any accessible location), setnetting (especially at accessible locations within and south of the Karamea-Otumahana Estuary¹⁹), and whitebaiting...”

P116 paragraph 5 (s5.2.5) Delete:

“A dairy factory at Karamea that is presently closed for operation has an effluent discharge pipe on the Karamea beach.”

Map 2 ‘People and Use’ (after p118) Delete:

The ‘walking route near coastal marine area’ (dotted black line) marked one to two km south of Little Wanganui River (this is a private route only).

P171 paragraph 4 (s5.9.6) Insert:

“Coastal flooding of buildings and properties sometimes occurs at Okarito, usually as a result of natural blockage of the lagoon outlet causing a backup of water in the lagoon. Records indicate that the frequency of outlet blockages has increased in recent years, perhaps due to changing environmental conditions²⁰.”

Map 9 (after p172) Insert:

A mining permit that was issued on 13.6.06 along approximately seven kilometres of the northern part of Okarito beach, north to Waitahi Bluff.

P176 paragraph 3 (s5.10.4) Insert:

“Recreational fishing occurs in parts of this segment and includes surfcasting (mostly at the more accessible locations such as in the vicinity of Gillespie Beach, Hunts Beach and Bruce Bay),...”

19 Cole pers comm 2007

20 Graham pers comm 2007

P182 paragraph 6 (s5.11.4) Insert:

“Recreational boating activity is mostly associated with fishing activities. Blue cod is a particularly important recreational fish caught by line fishing in this area²¹.

The area has some remote but high quality surfing sites...”

P209 (Appendix 1) Amend:

“Texture – refers to the size range of a sediment particle: a standard measure is the Wentworth scale, which identifies (in decreasing order of size) [bedrock], boulder (>256mm), cobble (>64mm), gravel (>1mm), sand (>0.0625mm), and silt & mud (<0.625mm).”

P224 (Appendix 6) Insert:

Benn J L (1993) Karamea and Arahura catchment flood hazard maps. West Coast Regional Council, Greymouth 8p + maps.

Benn J L (2005) Landslide events on the West Coast, South Island, 1867–2002. New Zealand Geographer, 61:3–13.

Benn J L (2006) Coastal stability database, West Coast Region, South Island. In Living on the edge: coastal sustainability. New Zealand Coastal Society: Kaikoura Conference Proceedings: 2–4.

P225 (Appendix 6) Insert:

Bowen F E (1964) Geological map of New Zealand 1:250000: Sheet 15 Buller. Department of Scientific & Industrial Research, Wellington.

P228 (Appendix 6) Insert:

Grindley G W (1961) Geological map of New Zealand 1:250000: Sheet 13 Golden Bay. Department of Scientific & Industrial Research, Wellington.

P231 (Appendix 6) Insert:

Narayan V (1991) Resource Development Study: Discussion Document on fishery issues and policies for the West Coast. Unpublished report for West Coast Regional Council, Greymouth.

P235 (Appendix 6) Insert:

Todd D (2002) Punakaiki Development Plan: coastal issues. Report by DTec Consulting Ltd (Christchurch) for Glasson, Potts & Fowler Ltd (Christchurch). 22p.

Wentworth C K (1922) A scale of class terms for clastic sediments. Journal of Geology 30: 377–392

²¹ Birchfield pers comm 2007, Cain pers comm 2007

P236 (Appendix 6) Insert:

Benn, John: Coastal consultant & natural hazards researcher, Christchurch

Birchfield, John: recreational fisher, Bruce Bay

Cain, Tex & May: recreational fishers, Bruce Bay

Cole, Jonathan: recreational fisher, Karamea

Colligan, Edward: recreational fisher, Waimangaroa

Crowley, Allen & Shirley: recreational fishers, Hokitika

Elwell-Sutton, Paul: resident, Haast

Franken, H, recreational fisher, Kongahu

Graham, Gar: resident, Okarito (in submission by A Hall)

Hall, Ann: resident, Okarito

Harris, Stephen: recreational fisher, Greymouth

Holden, Michael & Lisa: recreational fishers, Greymouth

MacBeth, Hamish: Conservation Board Chairman & resident, Karamea

McNamara, Ken: recreational fisher & goldminer, Okarito

Millard, Roger: recreational fisher, Karangarua

Nelson, Alan: recreational fisher, Westport

Stenhouse, Craig: recreational fisher, Karamea

Teasdale, Charles: recreational fisher, Paroa

Thomson, Stu: commercial fisher, Greymouth

Todd, Peter: recreational fisher, Westport

Toseland, Michael: recreational fisher, Wangapeka Valley

Watson, Bruce: resident, Hokitika

Additional matters:

- Page numbers of references (on pp224–235) should be inserted where these are missing yet available.
- A photo of Jackson Bay has been used three times (on pp26, 98, 185) and so could perhaps be removed or replaced with others.
- The term 'et al' used in references should be 'et al.'

