



ANNUAL REVIEW OF **INSHORE SHELLFISH FISHERIES** 2011/12



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National Snapshot: Inshore Shellfish Fisheries 2011/12

The Government's long-term goal for fisheries is "New Zealanders maximising benefits from the use of fisheries within environmental limits". To support this goal, the Ministry has set out management objectives for all inshore shellfish fisheries in the Draft National Fisheries Plan for Inshore Shellfish (the Shellfish Plan). Performance indicators¹ are used to monitor progress towards meeting the management objectives and to guide management activity. The following is a summary performance report for 2011/12.

Health of our Inshore Shellfish Fisheries

Healthy Inshore Shellfish Stocks

Fishstocks must be healthy if they are to support high-quality fisheries. New Zealand fishstocks are considered healthy when their biomass (stock size) is at or above the level that would produce the maximum sustainable yield. It is not possible or cost effective to estimate biomasses for all stocks therefore a range of best available information is used to indicate stock health.

Figures 1 and 2 summarise stock performance against the stock sustainability performance indicators set out in the Shellfish Plan¹. Performance indicators vary by stock group.² Stock groups generally reflect different levels of desirability and biological vulnerability, and different levels of available information on stock health.

Figure 1: Percentage of QMS shellfish stocks meeting stock sustainability performance indicators

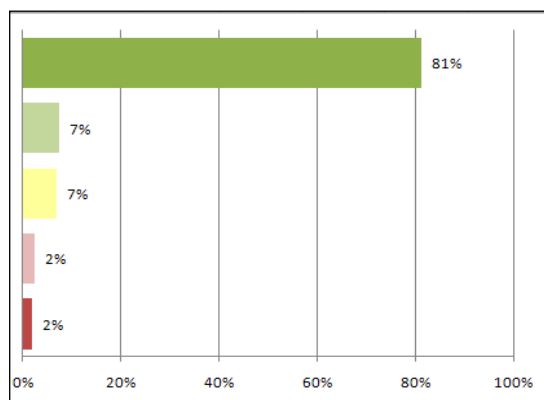
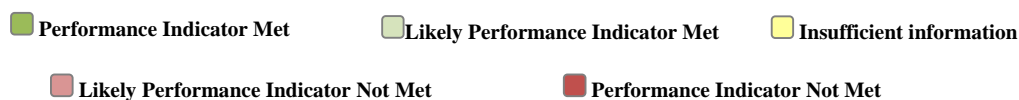
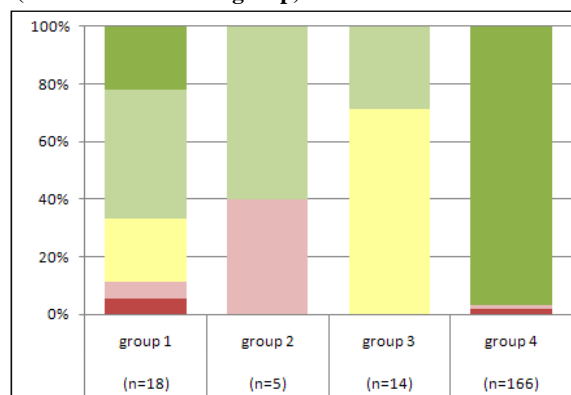


Figure 2: Percentage of QMS stocks meeting stock sustainability performance indicators by Group (number of stocks in group)



Eight stocks are rated as performance indicator not met or likely not met. For some of these stocks the stock health indicators are of low quality and can be "triggered" by factors not related to stock health. The stock health indicators for other stocks are uncertain. Further investigation of fishery and research information will occur in 2012/13 to determine whether and/or what management action is required. Work will also continue to improve information where current information is insufficient to assess stock health.

¹ Refer Appendix 1 for a description of the performance indicators used in this document.

² Refer Section 2 for stock groupings.

Healthy Inshore Shellfish Environments

A healthy aquatic environment provides the basis for healthy fisheries. Habitats important to shellfish fisheries can be negatively affected by a range of factors, including some fishing methods, pollution, sedimentation, sand mining, and nutrient run-off.

Information to consistently identify and monitor habitats important to shellfish is not yet available. Work is currently being undertaken to support identification of such habitats. Where appropriate, some habitats known to be important to shellfish have already been protected from fishing activity. The Ministry is also working to grow strong peer networks with other agencies responsible for coastal management to facilitate information sharing on the management of non-fishing activities on shellfish.

Benefits realised from Inshore Shellfish Fisheries

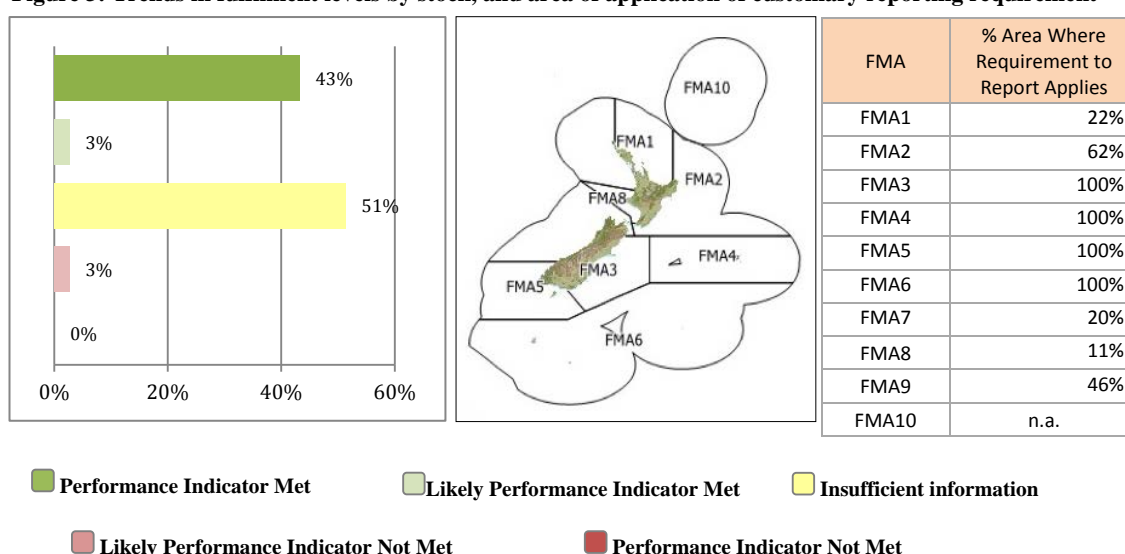
Fisheries resources provide economic, social, cultural and intrinsic benefits to New Zealand. At this time there is no accepted way of estimating a single benefit measure for fisheries, therefore benefits are monitored using the following available datasets:

- > Customary Maori benefits – Fulfilment of customary Maori harvest authorisations
- > Recreational sector benefits – Recreational participation rates
- > Commercial sector benefits – Quota share value
- > Intrinsic benefits – Stock health indicators (refer to the previous section).

Customary Maori Benefits

Shellfish are an important traditional food source for many iwi, hapu and whānau. Tangata whenua also have special relationships with taonga fish species and places of customary food gathering importance. Trends in fulfilment of customary Maori authorisations (Figure 3) provide an indication of whether customary fishing needs are being met.

Figure 3: Trends in fulfilment levels by stock, and area of application of customary reporting requirement



As reflected in the figures above, data is insufficient in many fisheries to assess trends in fulfilment because the requirement to report customary catch is not yet in place nationwide. Where customary reporting is in place, data quality varies. A key focus for future work is extending the customary reporting coverage and improving data quality. Discussions with iwi about stocks where the data suggests fulfilment rates are declining will inform decisions about whether and what management action is required.

Recreational Sector Benefits

Recreational fishing is one of New Zealand's most popular recreational activities. A Sport and Recreation survey from 2007/08 indicates approximately 725,000 New Zealanders participate in marine and saltwater fishing (including harvesting shellfish) at least once per year. This level of participation makes marine fishing the seventh most popular recreational activity.

No direct information on the benefits realised from recreational fishing is available at this time. Therefore, recreational fishing participation rates are used as a proxy for benefit; an increase in participation may indicate more recreational benefits are being realised and vice versa.

General and stock-specific participation information is available in a number of surveys; however, the information is either highly uncertain or not directly comparable and therefore no trend information is available at this time. There is a general impression that participation levels have increased during the last decade. Work is currently underway to improve the quality of recreational fishing information, and the Ministry is in the process of conducting a large scale-multi species survey of recreational catch.

Commercial Sector Benefits

The price paid for shellfish quota shares gives a market-based estimate of commercial benefit. The total quota share value of shellfish fisheries in 2009³ was \$1135 million. This compares to \$1014 million in 2005.

The two most commercially valuable shellfish species are rock lobster and paua. The total value of rock lobster quota increased from \$584 to \$770 million between 2005 and 2009. Paua quota value dropped from \$378 to \$304 million over the same period.

Figure 4: Trends in quota value of shellfish stocks

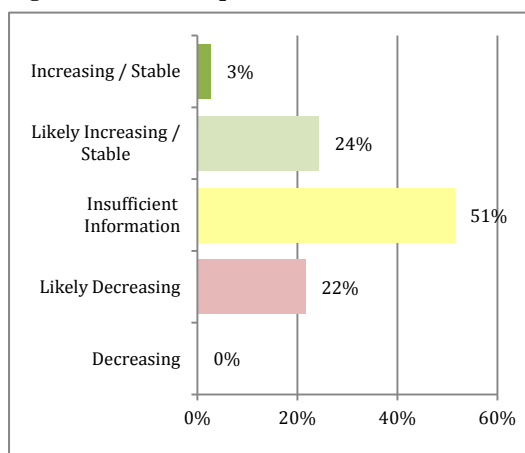
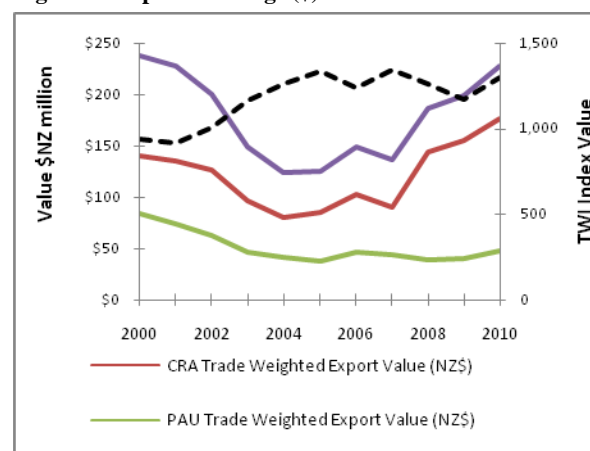


Figure 5: Export Earnings (\$) and TWI



³ This information will be updated as new information becomes available.

Key drivers of the changes in quota share value (Figure 4) have been the price paid on the export market and the value of the NZ dollar, which is represented by the Trade Weighted Index (TWI) (Figure 5). Key management focus areas are reducing illegal fishing, scanning and removing regulations that unnecessarily constrain benefits, supporting industry value-add initiatives, and facilitating sustainable development.

Management Costs

High management costs can reduce overall benefits to fishers. It is not possible to estimate total management costs for each shellfish stock. However, costs recovered from annual catch entitlement (ACE) holders are available. Total costs recovered for the past three years, as well as trends in recovered costs relative to the value of ACE, are illustrated in Figures 6 and 7.

Figure 6: Trends in costs recovered relative to value of Annual Catch Entitlement

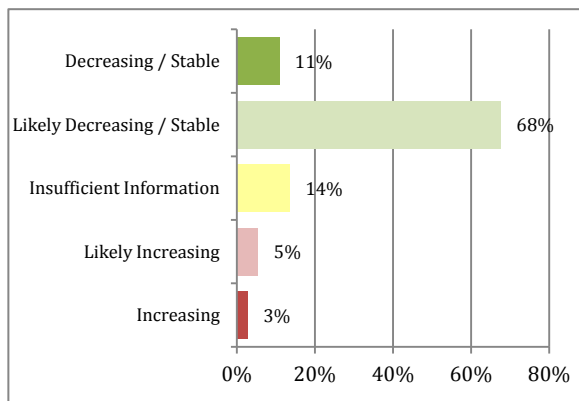
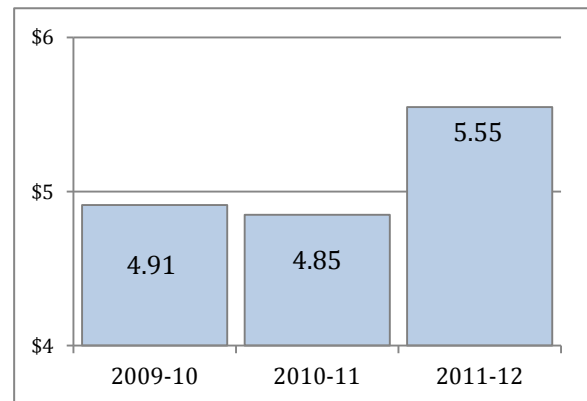


Figure 7: Total costs recovered for shellfish management (\$ million)



The management costs associated with stocks that have increasing costs relative to ACE value will be reviewed to determine whether the costs are appropriate and beneficial.

Environmental effects of fishing

Fishing methods can adversely affect the environment through adverse impacts with the benthos or protected species or by reducing biodiversity.

Benthic Impacts

Most shellfish are taken by hand-gathering, diving or potting. These methods are considered to have few adverse effects on the benthos. Dredging is used to gather some shellfish species found on soft sediments. The nature and permanency of dredging effects on these environments is not well understood. Further research is scheduled for 2013 to establish more clearly the impacts of dredging and other methods that interact with the benthos.

The size of the “dredging footprint” is not known. Overall dredge fishing effort declined over the period 2007-2011 but the correlation between dredging effort and dredging footprint is unknown.

Protected Species Interactions

Shellfish harvesting methods result in relatively few interactions with protected species – marine mammals and birds. Large marine mammals occasionally become entangled in, but are usually released alive from, potting gear. Other information suggests some shags may occasionally become trapped by potting gear.

Biodiversity

Determining risks to biodiversity arising from individual inshore shellfish fisheries is difficult. The Ministry is working on developing a network of Marine Protected Areas that are representative of New Zealand’s marine habitats and ecosystems.

1. Introduction

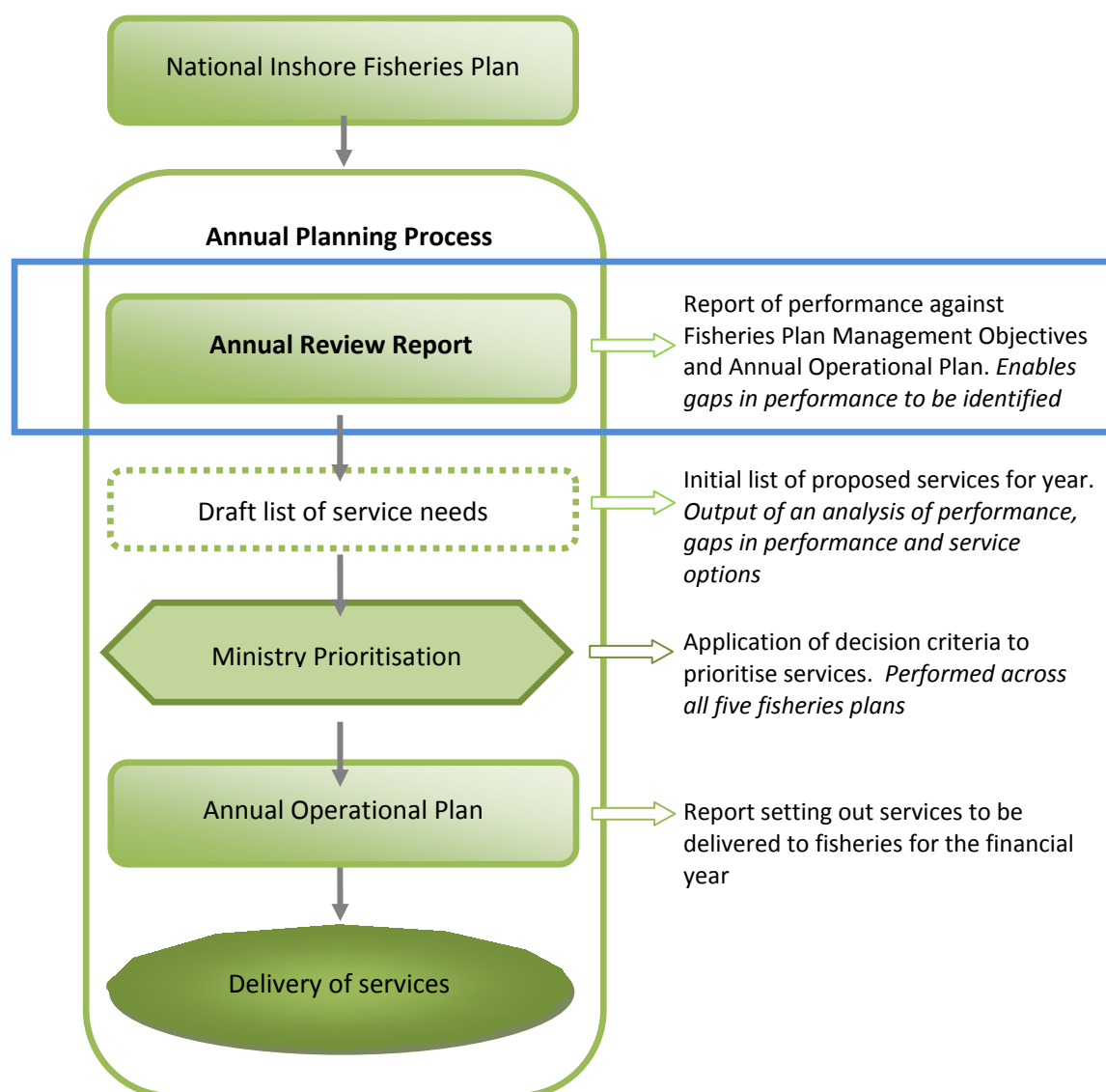
1.1 Purpose

This Annual Review Report presents performance information relating to fisheries managed under the National Fisheries Plan for Inshore Shellfish (the Shellfish Plan) up to the end of the 2011/12 fishing year. The information is used to monitor performance against the management objectives set out in the Shellfish Plan and to plan fisheries management activities in the next financial year. The information in this Annual Review Report will inform the development of the 2013/14 Annual Operational Plan.

1.2 Context

The Shellfish Plan provides the overarching framework for management of New Zealand's inshore shellfish fisheries and is implemented through an annual planning and service delivery cycle (refer to Figure 8).

Figure 8: Annual Planning and Service Delivery Cycle



The Shellfish Plan drives the annual cycle by establishing the management objectives for inshore shellfish fisheries. The annual cycle begins with an Annual Review Report, which reports performance on:

1. the status of shellfish fisheries relative to the performance indicators set out in the Shellfish Plan (and any associated stock-specific performance indicators)
2. delivery of management actions and services specified in the previous year's Annual Operational Plan

Annual Review Report information is analysed and discussed with tangata whenua and stakeholders to determine what, if any, management actions and services are required to address any gaps in performance indicated, or to maintain or enhance performance in the fisheries. Potential management actions and services are captured in a draft Annual Operational Plan.

The demand for the Ministry's management services is frequently greater than can be delivered. An internal prioritisation process across draft Annual Operational Plans from the five National Fisheries Plans (Deepwater, Highly Migratory, Inshore Finfish, Inshore Shellfish, and Freshwater) seeks to address competing interests. Discussions with tangata whenua and stakeholders also provide opportunities to identify where these groups can provide needed or desired services.

1.3 Structure

The Annual Review Report is set out in the following sections:

Chapter 2: **Measuring Performance**

Describes the stock groups' management objectives and performance indicators established by the Plan.

Chapter 3: **Assessment**

Reports on the assessment against the performance indicators at the stock level. This section is organised by Fisheries Management Areas (FMAs) and cover the stocks that align with, or cover a portion of, an FMA.

Chapter 4: **Performance of the Annual Operational Plan**

This section examines delivery of specified management actions and services.

Appendix: **Appendix 1 - Performance Indicators**

Provides a detailed description of the methodology used to assess stocks against the performance indicators.

2. Measuring Performance

2.1 Stock Groups

This Annual Review Report provides information on the performance of each stock against the performance indicators set out in the Shellfish Plan.

The Shellfish Plan groups stocks to facilitate multi-stock objective-setting and service delivery and performance indicators are established at the group level. The stock groups are as follows:

QMS stocks	Group 1	
	Spiny rock lobster (CRA 1, 2, 3, 4, 5, 6, 7, 8, 9)	Dredge oyster (OYU 5)
	Paua (PAU 1, 2, 3, 4, 5A, 5B, 5D, 7)	
	Group 2	
	Green-lipped mussel (GLM 7A, 9)	Scallops (SCA 1, 7, CS)
	Group 3	
	Cockles (COC 1A, 1B, 1C, 3)	Kina (SUR 1A, 1B)
	Deepwater tuatua (PDO 3)	Pipi (PPI 1A, 1B, 1C)
	Dredge oyster (OYS 1)	Tuatua (TUA 1A, 1B)
	Green-lipped mussel (GLM 1)	
	Group 4	
	Attached bladder kelp (KBB 3G, 4G)	Paddle crab (PAD 1, 2, 3, 4, 5, 6, 7, 8, 9)
	Cockles (COC 2, 3B, 4, 5, 7A, 7B, 7C, 8, 9)	Paua (PAU 6)
	Deepwater clam (geoduck) (PZL 1, 2, 3, 4, 5, 7, 8, 9)	Pipi (PPI 2, 3, 4, 5, 7, 8, 9)
	Deepwater tuatua (PDO 1, 2, 4, 5, 7-9)	Queen scallop (QSC 3)
	Dredge oysters (OYS 2A, 3, 4, 5A, 7, 7A, 7B, 7C, 8A, 9)	Ringed Dosinia clam (DAN 1, 2, 3, 4, 5, 7, 8, 9)
	Friiled venus shell clam (BYA 1, 2, 3, 4, 5, 7, 8, 9)	Scallops (SCA 1A, 2A, 3, 4, 5, 7A, 7B, 7C, 8A, 9A)
	Green-lipped mussel (GLM 2, 3, 7B, 8)	Sea cucumber (SCC 1A, 1B, 2A, 2B, 3, 4, 5A, 5B, 6, 7A, 7B, 7D, 8, 9)
	Horse mussel (HOR 1, 2, 3, 4, 5, 6, 7, 8, 9)	Silky Dosinia clam (DSU 1, 2, 3, 4, 5, 7, 8, 9)
	Kina (SUR 2A, 2B, 3, 4, 5, 7A, 7B, 8, 9)	Trough shell clam (MDI 1, 2, 3, 4, 5, 7, 8, 9)
	Knobbed whelk (KWH 1, 2, 3, 4, 5, 6, 7A, 7B, 8, 9)	Triangle shell clam (SAE 1, 2, 3, 4, 5, 7, 8, 9)
	Large trough shell clam (MMI 1, 2, 3, 4, 5, 7, 8, 9)	Tuatua (TUA 2, 3, 4, 5, 7, 8, 9)
	Packhorse lobster (PHC 1)	
Group 5		
Non-QMS stocks	All other inshore shellfish (for example, toheroa), plus octopus and seaweed species.	

2.2 Performance Indicators

The Management Objectives, followed by the associated Performance Indicators, for each stock group are set out in the table below.

Group 1	
USE OBJECTIVE:	Maximise the overall social, economic, and cultural benefit obtained from each stock.
<ol style="list-style-type: none"> Trends in: <ul style="list-style-type: none"> fulfilment of customary permits amateur participation rates real quota value, and overall benefits, where these can be determined cost effectively are stable or increasing. Rolling 5-yr average Cost Recovery Levies (CRL)/Annual Catch Entitlement (ACE) value is not increasing. 	
ENVIRONMENT OBJECTIVE (Stock Sustainability):	Maintain biomass of each stock at or above B_{MSY} (or accepted proxy).
<ol style="list-style-type: none"> Stock size is at or above the established target biomass with at least 50% probability 	

Group 2	
USE OBJECTIVE:	Maximise social, economic and cultural benefits obtained from each stock by enabling annual yield to be maximised.
<ol style="list-style-type: none"> Trends in: <ul style="list-style-type: none"> fulfilment of customary permits amateur participation rates real quota value, and are stable or increasing. Rolling 5-yr average CRL/ACE value is not increasing. 	
ENVIRONMENT OBJECTIVE (Stock Sustainability):	Maintain stock size at or above an established minimum reference level.
<ol style="list-style-type: none"> Stock size is at or above the established minimum reference level with at least 50% probability. 	

Group 3

USE OBJECTIVE:	Secure social, cultural and economic benefits from each stock.
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1. Trends in:
 - fulfilment of customary permits
 - amateur participation rates
 - real quota value, andare stable or increasing.
2. Rolling 5-yr average CRL/ACE value is not increasing.

ENVIRONMENT

OBJECTIVE

(Stock Sustainability):

Maintain stock size at or above target reference level.

3. Stock size is at or above an established target reference level with at least a 50% probability.

Group 4

USE OBJECTIVE:	Enable utilisation of each stock.
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1. Rolling 5-yr average Cost Recovery Levies (CRL)/Annual Catch Entitlement (ACE) value is not increasing.

ENVIRONMENT

OBJECTIVE

(Stock Sustainability):

Ensure catch is at a level that is sustainable.

2. Catch is stable or fluctuates without trend.

Group 5

USE OBJECTIVE:	Enable utilisation of each stock.
-----------------------	-----------------------------------

1. Management costs are stable or decreasing

ENVIRONMENT

OBJECTIVE

(Stock Sustainability):

Ensure catch is at a level that is sustainable.

2. Catch is stable or fluctuates without trend
3. Catch does not exceed or fluctuate beyond the QMS Introduction Process Standard thresholds.

All Groups	
ENVIRONMENT OBJECTIVE (Stock Sustainability):	Protect, maintain and enhance habitats of significance for fisheries management.
ENVIRONMENT OBJECTIVE (Effects of Fishing):	Minimise adverse effects of fishing on the aquatic environment, including on biological diversity.
<ol style="list-style-type: none"> 1. Policy objectives for habitats of significance for fisheries management are met. 2. Where there are no policy objectives, fishing effects on identified habitats of significance for fisheries management are not increasing. 3. Relevant resource management policy and planning documents include objectives, policies, and rules that protect habitats of significance for fisheries management. 	
<ol style="list-style-type: none"> 4. Policy objectives for managing fishing effects on the aquatic environment and biodiversity are met. 5. Where there are no policy objectives, interactions with the benthos and protected species are not increasing. 	






The datasets and approaches used to assess each stock against the performance indicator are described in Appendix 1.

3. Assessment

3.1 Assessment against performance indicators

The stock-level performance assessments are set out in the following tables. Stocks are organised first by Fisheries Management Area to facilitate engagement with tangata whenua and stakeholders, and secondly by stock group.

The assessments are brief summaries. A symbol has been used to indicate performance relative to the performance indicator and, where useful, a brief description is provided. The key purpose of this section is to support discussion with stakeholders on priority stocks for management action. The Ministry expects to improve the quality of performance indicators and analyses over time.

Symbol	Description
	Performance indicator met. <i>Information directly relevant to the performance indicator is available and confirms the performance indicator is met.</i>
	Likely performance indicator met. <i>Information directly relevant to the performance indicator is not available but other information indicates the performance indicator is likely to be met.</i>
	Insufficient data. <i>Available information is insufficient to make an assessment relative to the performance indicator.</i>
	Unlikely performance indicator met. <i>Information directly relevant to the performance indicator is not available but other information indicates performance is unlikely to be met.</i>
	Performance indicator not met. <i>Information directly relevant to the performance indicator is available and confirms the performance indicator is not being met.</i>



3.2 FMA 1 AUCKLAND EAST FISHERY MANAGEMENT AREA













FMA 1 includes the area from the eastern most point of the North Cape west to the eastern border of Cape Runaway.









Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	CRA1 (Rock lobster)	✓ 1.35%, Increase in quota value (estimated values used)	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ Decreasing	✓ Stock biomass was above the target level in 2002. CPUE increased from 2002-2008 but has since decreased. The stock is assumed to still be above the target biomass.
	CRA2 (Rock lobster)	✓ 9.06%, Increase in quota value (estimated values used)	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ Decreasing	? Stock biomass was above the target level in 2002. CPUE increased from 2002-2007 but has since decreased back to below the 2002 level. It is unknown if the stock is still above the target biomass.
	PAU1 (Paua)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but trend in CRL/tonne has remained stable	? Stock size against established target biomass is unknown. No surveys or assessments have been undertaken. There is insufficient information to assess stock performance.
2	SCA CS (Scallops)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	✓ No minimum reference level has been established due to the high variability of stock growth and recruitment. Management is based on CAY estimates. Biomass levels very likely to be at or above target levels. Overfishing is unlikely to be occurring.





Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
2	SCA1 (Scallops)	? Insufficient information to complete evaluation	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	✗ No minimum reference level has been established. Estimates of current biomass, which are available up to 2007, show some fluctuations including a decrease in the estimated biomass from previously high levels in 2005 and 2006. Catch in 2010-11 was the lowest on record.
3	COC1A (Cockles)	? Insufficient information to complete evaluation	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	✓ Reference levels have not been defined but B_{msy} is assumed. Stock about as likely as not (40-60% probability) to be at or above the target level and is unlikely to be below both the soft and hard limits.
	COC1B (Cockles)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	? Insufficient data to inform a trend	? No estimates of reference or current biomass are available. Unknown whether the stock is at, above, or below a level that can produce MSY.
	COC1C (Cockles)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	? No estimates of reference or current biomass are available. Unknown whether the stock is at, above, or below a level that can produce MSY.
	GLM1 (Green-lipped mussels)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	? No estimates of reference or current biomass are available. Unknown whether the stock is at, above, or below a level that can produce MSY.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
3	OYS1 (Dredge Oysters)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✓ No ACE prices reported for some years but average CRL/tonne has decreased	? No estimates of reference or current biomass are available. Unknown whether the stock is at, above, or below a level that can produce MSY.
	PPI1A (Pipi)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✗ No ACE prices reported for some years but average CRL/tonne has increased	✓ Stock about as likely as not (60% probability) to be at or above the default target level of 40% B0 and is unlikely to be below both the soft and hard limits.
	PPI1B (Pipi)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	? Insufficient data to inform a trend	? No target reference level has been established. Introduced into the QMS in October 2005. Stock status is unknown.
	PPI1C (Pipi)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	✓ No ACE prices reported for some years but average CRL/tonne has decreased	? No target reference level has been established. Introduced into the QMS in October 2005. Stock status is unknown.
	SUR1A (Kina)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	✓ No ACE prices reported for some years but CRL/tonne has remained stable	? No target reference level has been established. Unknown if current catch levels or TACCs are sustainable, or if they are at levels which will allow the stocks to move towards a size that will support sustainable yields.
	SUR1B (Kina)	✗ -10.04% decrease in quota value (estimated values used)	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	✗ Increasing. Research costs are increasing, but remain low.	? No target reference level has been established. Unknown if current catch levels or TACCs are sustainable, or if they are at levels which will allow the stocks to move towards a size that will support sustainable yields.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
3	TUA1A (Tuatua)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	? Insufficient data to inform a trend	? No target reference level has been established. No estimates of MCY or CAY. Stock status is unknown.
	TUA1B (Tuatua)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage	? Insufficient data to inform a trend	? No target reference level has been established. No estimates of MCY or CAY. Stock status is unknown.
4	BYA1 (Fried Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	DAN1 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 7 tonne TACC
	DSU1 (Silky Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	HOR1 (Horse Mussel)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 4 tonne TACC
	KWH1 (Knobbed Whelk)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable (721kg in 2011/12), 1 tonne TACC

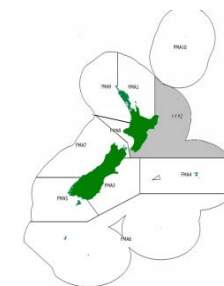
Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	MDI1 (Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	MMI1 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 2 tonne TACC
	PAD1 (Paddle Crab)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch has fluctuated (2007/808-2011/12). ~33% net decline in catch
	PDO1 (Deepwater Tuatua)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	PHC1 (Packhorse Rock Lobster)	-	-	-	 ACE price information is not available for all years, but average CRL/tonne has increased	 Catch is stable. Between 78-80% of TACC caught in the last 5 years.
	PZL1 (Deepwater King Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1.2 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	SAE1 (Triangle Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 9 tonne TACC
	SCA1A (Scallop)	-	-	-	 No ACE prices reported for some years but CRL/tonne has decreased	 No catch, 1 tonne TACC
	SCC1A (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is increasing. TACC of 2 tonne. Trend is in response to developing nature of the fishery
	SCC1B (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend. 100% of 2 tonne TACC caught twice in the last 5 years

Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT1 (Octopus)	 Levies are stable	 Species has triggered the 20 tonne threshold
	TOH1 (Toheroa)	 Levies are stable	 No catch, 0 tonne TACC

3.3 FMA 2 CENTRAL FISHERY MANAGEMENT AREA













FMA 2 includes the area south of Titahi Bay, at the coordinates 41°06'S, 174°50'E, around the Wellington and Kapiti coastline, and north to the western border of Cape Runaway.



Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	CRA3 (Rock Lobster)	✓ 39.60% Increase in quota value (estimated values used)	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2006 and 2011 (average 58%).	✓ Stable	✓ Stock biomass in 2008 was below the target level. However, standardised CPUE has steadily increased since 2008. This suggests biomass could now be above the target level. A Management Procedure and rebuilding strategy is in place.
	CRA4 (Rock Lobster)	✓ 42.03%, Increase in quota value	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2006 and 2012 (average 53%).	✓ Stable	✓ Stock biomass was 1.7 times the target level in 2010. CPUE has steadily increased since 2009. Management Procedure in place
	PAU2 (Paua)	✗ -7.03% decrease in quota value, (estimated values used)	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2006 and 2012 (average 68%).	✓ Stable (estimated values used)	✓ No target biomass has been established. Stock is unlikely to be below the hard limit (10% B ₀). Standardised CPUE increased between 1992 and 2000 and has since remained fairly stable.
4	BYA2 (Fried Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC

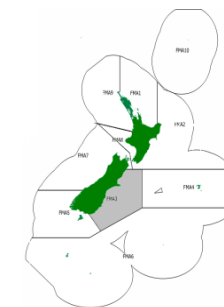
Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	COC2 (Cockles)	-	-	-	? No ACE prices or CRL values reported	✓ No catch, 0 tonne TACC
4	DAN2 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 61 tonne TACC
	DSU2 (Silky Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	GLM2 (Green-lipped Mussels)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 10 tonne TACC
	HOR2 (Horse Mussel)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable, 2 tonne TACC
	KWH2 (Knobbed Whelk)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Minimal catch (70kg), 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	MDI2 (Large Trough Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch. TACC of 63 tonnes
4	MMI2 (Trough Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 3 tonne TACC
	OYS2A (Dredge Oysters)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	PAD2 (Paddle Crab)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch increasing since 2008/09. 36% of 110 tonne TACC caught in 2011/12
	PDO2 (Deepwater Tuatua)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch. TACC of 466 tonnes
	PPI2 (Pipi)	-	-	-	? No ACE prices or CRL values reported	✓ No catch, 0 tonne TACC
	PZL2 (King Clam)	-	-	--	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1.2 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	SAE2 (Triangle Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. TACC of 125 tonnes
4	SCA2A (Scallops)	-	-	-	 No ACE prices reported for some years but CRL/tonne has decreased	 No catch, 1 tonne TACC
	SCC2A (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 2 tonne TACC
	SCC2B (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch fluctuating without trend. 5 tonne TACC
	SUR2A (Kina)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend. 80 tonne TACC
	SUR2B (Kina)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch (106kg in 2011-12). 30 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	TUA2 (Tuatua)	-	-	-	? No ACE prices or CRL values reported	✓ No catch, 0 tonne TACC

Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT2 (Octopus)	✓ Levies are stable	✗ Species has triggered the 20 tonne threshold
	TOH2 (Toheroa)	✓ Levies are stable	✓ No catch, 0 tonne TACC

















3.4 FMA 3 SOUTHEAST FISHERY MANAGEMENT AREA

FMA 3 includes the area south of the mouth of the Clarence River to the northern border of Slope Point.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	CRA5 (Rock Lobster)	✓ 28.62% increase in quota value (estimated values used)	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2007 and 2011 (average 78%)	✓ Stable	✓ Stock biomass in 2009 was about three times the target level. CPUE dropped 1% in 2010 and 3% in 2011 from 2009, the highest level observed in the 33 year series. Management Procedure in place
	CRA7 (Rock Lobster)	✓ 6.69%, Increase in quota value (estimated values used)	? Insufficient data to inform a trend	✓ Increasing trend between 2007 and 2012.	✗ CRL/ACE trend is increasing (Estimated values used)	✗ Stock biomass in 2011 was just below the target level (by 3%). New Management Procedure proposed for use from April 2013.
	PAU3 (Paua)	✗ -5.29% decrease in quota value (estimated values used)	? Insufficient data to inform a trend	✓ Increasing trend between 2006 and 2011.	✗ CRL/ACE trend is increasing (Estimated values used)	✓ Target reference points have not been established. Stock is unlikely to be below the hard limit (10% B ₀). Standardised CPUE increased between 1992 and 2000 and has since remained fairly stable.
3	COC3 (Cockles)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2007 and 2012 (average 96%)	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No target reference level was defined, but B _{msy} assumed. Stock size is likely to be at or above the target and unlikely to be below both soft and hard limits.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
3	PDO3 (Deepwater Tuatua)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	✓ No authorisations issued yet >75% coverage of customary fishing regulations in FMA's coastline	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No target reference level was defined, but B_{msy} assumed. Because of relatively low levels of exploitation, it is likely that all stocks are still effectively in a virgin state, therefore they are very likely to be at or above the target level (in this case B_{msy}).
4	BYA3 (Frimled Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	COC3B (Cockles)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch 1 tonne TACC
	DAN3 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch fluctuating without trend. 52 tonne TACC
	DSU3 (Silky Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	GLM3 (Green-lipped mussels)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 10 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	HOR3 (Horse Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 2 tonne TACC
	KBB3G (Attached bladder kelp)	-	-	-	 Insufficient information to inform a trend. The stock entered the QMS in October 2010	 Catch is stable. 1236.8 tonne TACC
	KWH3 (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch (88kg), 3 tonne TACC
	MDI3 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 1 tonne TACC
	MMI3 (Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch affected by water quality related to Canterbury earthquakes. Catch steadily decreasing since 2007-2008, with no recorded catch in the 2011-2012 fishing year. 62 tonne TACC.
	OYS3 (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 2 tonne TACC
	PAD3 (Paddle Crab)	-	-	-	 CRL/ACE is increasing	 Catch stable. 100 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	PPI3 (Pipi)	-	-	-	? Insufficient information to inform a trend.	✓ Catch is stable, 0 tonne TACC
	PZL3 (King Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Minimal catch (36kg in 2011-12). 1.2 tonne TACC
	QSC3 (Queen Scallop)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable. 380 tonne TACC.
	SAE3 (Triangle Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch fluctuating without trend. 459 tonne TACC.
	SCA3 (Scallops)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has decreased	✓ No catch, 1 tonne TACC
	SCC3 (Sea Cucumber)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✗ The trend in catch is increasing. 2 tonne TACC exceeded in 2011-12 fishing year.
	SUR3 (Kina)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable. TACC of 21 tonnes.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	TUA3 (Tuatua)	-	-	-	? Insufficient information to inform a trend.	✓ No catch, 0 tonne TACC













Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT3 (Octopus)	✓ Levies are stable	✗ Species has triggered the 20 tonne threshold
	TOH3 (Toheroa)	✓ Levies are stable	✓ No catch, 0 tonne TACC























3.5 FMA 4 SOUTHEAST CHATHAM RISE





FMA 4 includes the Chatham Islands area.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	PAU4 (Paua)	✗ -6.04% decrease in quota value, estimated values used	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2010 and 2012 (average 97%)	✓ Stable	✓ No target biomass has been established. However, CPUE is high compared to all other paua stocks
	CRA6 (Rock Lobster)	✓ 9.25% increase in quota value, Estimated values used	? Insufficient data to inform a trend	✗ Decreasing trend between 2010 and 2012.	✓ Stable	? Stock biomass against established target level is unknown. Last assessed in 1996.
4	BYA4 (Frimled Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch 1 tonne TACC
	COC4 (Cockles)	-	-	-	? No ACE prices or CRL reported	✓ No catch 0 tonne TACC
	DAN4 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	DSU4 (Silky Dosinia Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch 1 tonne TACC
	HOR4 (Horse Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch 1 tonne TACC
	KBB4G (Attached bladder kelp)	-	-	-	 Insufficient information to inform a trend. The stock entered the QMS in October 2010	 No catch. 272.8 tonne TACC.
	KWH4 (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 6 tonne TACC
	MDI4 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 1 tonne TACC
	MMI4 (Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 1 tonne TACC

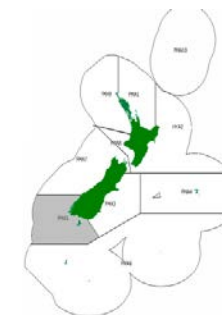
Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	OYS4 (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 15 tonne TACC.
	PAD4 (Paddle Crab)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch (405kg in 2011-12). 25 tonne TACC
	PDO4 (Deepwater Tuatua)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	PPI4 (Pipi)	-	-	-	 No ACE prices or CRL values reported	 No catch, 0 tonne TACC
	PZL4 (Queen Scallop)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1.2 tonne TACC
	SAE4 (Triangle Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	SCA4 (Scallops)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 23 tonne TACC
	SCC4 (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch, 2 tonne TACC
	SUR4 (Kina)	-	-	-	 Stable	 Catch fluctuating without trend. 225 tonne TACC
	TUA4 (Tuatua)	-	-	-	 No ACE prices or CRL values reported.	 No catch, 0 tonne TACC
















Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT4 (Octopus)	 Levies are stable	 Species has triggered the 20 tonne threshold
	TOH4 (Toheroa)	 Levies are stable	 No catch, 0 tonne TACC













3.6 FMA 5 SOUTHLAND FISHERY MANAGEMENT AREA

FMA 5 includes the area west of Slope Point, Fiordland and north to the southern border of Awarua Point.



Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	CRA8 (Rock Lobster)	✓ 18.15% increase in quota value, estimated values used	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2006 and 2011 (average 95%)	✓ Stable	✓ Stock biomass in 2011 was about 1.7 times the target level. New Management Procedure proposed for use from April 2013
	OYU5 (Dredge Oysters)	✓ -2.18% decrease in quota value, estimated values used	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2006 and 2012 (average 97%).	✓ Stable	✓ No target biomass has been established. Projections show stock size is continuing to grow.
	PAU5A (Paua)	✗ -10.59% decrease in quota value, estimated values used	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2008 and 2011 (average 98%)	✓ Stable (estimated values used)	✓ The target for both the northern and southern zones in PAU 5A has been set at 40% B ₀ with soft and hard limits or 20% and 10% B ₀ respectively. SSB in the southern area is very unlikely (<10%) to be below the soft or hard limits and SSB in the northern area is unlikely (<40%) to be below the soft limit and very unlikely to be below the hard limit.
	PAU5B (Paua)	✗ -11.33% decrease in quota value, estimated values used	? Insufficient data to inform a trend	✓ Stable fulfilment trend between 2007 and 2011 (average 91%)	✓ Stable (estimated values used)	✓ No target biomass has been established. However, 2007 assessment suggested spawning biomass more likely to increase than decrease under current levels of catch. Recruited biomass showed a tendency to decrease.

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	PAU5D (Paua)	 -15.08%, decrease in quota value, estimated values used	 Insufficient data to inform a trend	 Stable fulfilment trend 2006 and 2011 (average 90%)	 Stable	 Stock size against established target biomass is unknown. Standardised CPUE generally declined until the early 2000s followed by a steady increase until 2006 and has remained relatively flat until 2008.
4	BYA5 (Frieded Venus Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	COC5 (Cockles)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch 2 tonne TACC
	DAN5 (Ringed Dosinia)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch 1 tonne TACC
	DSU5 (Silky Dosinia Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	HOR5 (Horse Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	KWH5 (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 2 tonne TACC
	MDI5 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 14 tonne TACC
	MMI5 (Trough Shell Surf Clam)		-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 1 tonne TACC
	OYS5A (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 3 tonne TACC.
	PAD5 (Paddle Crab)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend. Minimal catch (121kg in 2011-12). 50 tonne TACC
	PDO5 (Deepwater Tuatua)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	PPI5 (Pipi)	-	-	-	? Insufficient data to inform a trend	✓ No catch, 0 tonne TACC
	PZL5 (King Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1.2 tonne TACC
	SAE5 (Triangle Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 3 tonne TACC
	SCA5 (Scallops)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	SCC5A (Sea Cucumber)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch fluctuates without trend. 2 tonne TACC
	SCC5B (Sea Cucumber)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable, 2 tonne TACC
	SUR5 (Kina)	-	-	-	✗ CRL/ACE trend is increasing	✓ Catch increasing. 445 tonne TACC. Catch still within bounds of TACC and growth is indicative of the developing nature of the fishery

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	TUA5 (Tuatua)	-	-	-	? No ACE prices or CRL values reported	✓ No catch, 0 tonne TACC

Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT5 (Octopus)	✓ Levies are stable	✗ Species has triggered the 20 tonne threshold
	TOH5 (Toheroa)	✓ Levies are stable	✓ No catch, 0 tonne TACC



3.7 FMA 6 SUB-ANTARCTIC FISHERY MANAGEMENT AREA

FMA 6 includes the area south and east of FMAs 5 and 3, respectively, and extends out to the exclusive economic zone boundary.















Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	HOR6 (Horse Mussel)	-	-	-	<input checked="" type="checkbox"/> No ACE prices reported for some years but CRL/tonne has remained stable	<input checked="" type="checkbox"/> No catch, 1 tonne TACC
	KWH6 (Knobbed Whelk)	-	-	-	<input checked="" type="checkbox"/> No ACE prices reported for some years but CRL/tonne has remained stable	<input checked="" type="checkbox"/> No catch, 2 tonne TACC
	PAD6 (Paddle Crab)	-	-	-	<input type="checkbox"/> No ACE prices or CRL values reported	<input checked="" type="checkbox"/> No catch, 0 Tonne TACC
	SCC6 (Sea Cucumber)	-	-	-	<input type="checkbox"/> No ACE prices or CRL values reported	<input checked="" type="checkbox"/> No catch, 0 tonne TACC



























3.8 FMA 7 CHALLENGER FISHERY MANAGEMENT AREA















FMA 7 includes the area north of Awarua Point, the West Coast of the South Island, Tasman and Marlborough, and east from Marlborough to the north of the Clarence River mouth.









Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	PAU7 (Paua)	✗ -7.14% decrease in quota value, estimated values	? Insufficient data to inform a trend	✓ Insufficient customary fishing authorisations to inform a trend. 52% and 100% fulfilment in 2011 and 2012 respectively.	✗ Increasing (estimated values used)	✗ The interim target for PAU 7 has been set at 33.6% B_0 and the stock is very unlikely (<10%) to be at or above the interim target and with a SSB of 22% B_0 the stock is only slightly above the soft limit. In response a voluntary rebuilding strategy is in place to improve the rate of a rebuild of the spawning stock biomass.
2	GLM7A (Green-lipped Mussel)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	✓ No authorisations issued yet >75% coverage of customary fishing regulations in FMA's coastline	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No minimum reference level has been established However, fluctuating stock abundance and low level of exploitation suggest performance indicator is likely to be met.
	SCA7 (Scallops)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	✓ No authorisations issued yet >75% coverage of customary fishing regulations in FMA's coastline	✗ No ACE prices reported for some years but CRL/tonne trend is increasing	✗ Marlborough Sounds stock likely below fishing mortality target (at or below $F_{0.1}$). Golden Bay and Tasman Bay very unlikely to be at or above BMSY and likely to be below biomass hard limit (10% B_0)
4	BYA7 (Fried Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No reported catch, 9 tonne TACC





Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	COC7A (Cockles)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable, 1390 tonne TACC
	COC7B (Cockles)	-	-	-	 Insufficient information to inform a trend.	 No catch 0 tonne TACC
	COC7C (Cockles)	-	-	-	 Insufficient information to inform a trend.	 No catch 0 tonne TACC
	DAN7 (Ringed Dosinia Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch increasing. 15 tonne TACC. Trend is in response to developing nature of the fishery
	DSU7 (Silky Dosinia Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable, 1 tonne TACC, bycatch of surf clam dredging
	GLM7B (Green-lipped Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 10 tonne TACC
	HOR7 (Horse Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable, 16 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	KWH7A (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch has fluctuated without trend. 50 tonne TACC.
	KWH7B (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch. 1 tonne TACC
	MDI7 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch (106kg in 2011-12). 26 tonne TACC
	MMI7 (Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend. 61 TACC. Trend is in response to the developing nature of the fishery
	OYS7 (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch has fluctuated without trend. 505 tonne TACC. However, the target for OYS 7 is currently 40% B ₀ . The stock is unlikely (<40%) to be at or above the target and likely (>60%) to be below the soft limit of 20% B ₀ .
	OYS7A (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	OYS7B (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	OYS7C (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne trend is increasing	 Catch is stable. TACC of 63 tonnes
	PAD7 (Paddle Crab)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch steadily declining since 2007/08. ~42% decrease in the amount of TACC caught. 50 tonne TACC
	PAU6 (Paua)	-	-	-	 No ACE prices reported for some years but CRL/tonne is decreasing	 Catch is stable, 1 tonne TACC
	PDO7 (Deepwater Tuatua)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend, within 50 tonne TACC
	PPI7 (Pipi)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	PZL7 (King Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable, 23.1 tonne TACC. Developing fishery.
	SAE7 (Triangle Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch rapidly increasing since 2009-2011 fishing years. Catches still within TACC so performance indicator is deemed to be met. Trend is in response to the developing nature of the fishery
	SCA7A (Scallops)	-	-	-	 No ACE prices reported but CRL/tonne trend is increasing	 No catch, 1 tonne TACC
	SCA7B (Scallops)	-	-	-	 No ACE prices reported but CRL/tonne trend is increasing	 No catch, 1 tonne TACC
	SCA7C (Scallops)	-	-	-	 No ACE prices reported but CRL/tonne trend is increasing	 No catch, 1 tonne TACC
	SCC7A (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch is stable. TACC of 5 tonnes.
	SCC7B (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch has steady increased since 2009/10. 5 tonne TACC. Trend is in response to the developing nature of the fishery

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	SCC7D (Sea Cucumber)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch of > 2tonnes in 2011/12 compare to no/minimal catch in previous years. 2 tonne TACC. Trend is in response to the developing nature of the fishery. Over catch suggests performance indicator not met
	SUR7A (Kina)	-	-	-	 Stable	 Catch is stable. 135 tonne TACC
	SUR7B (Kina)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Catch fluctuating without trend. 10 tonne TACC
	TUA7 (Tuatua)	-	-	-	 Insufficient information to inform a trend.	 No catch, 0 tonne TACC

Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT7 (Octopus)	 Levies are stable	 Species has triggered the 20 tonne threshold
	TOH7 (Toheroa)	 Levies are stable	 No catch, 0 tonne TACC



3.9 FMA 8 CENTRAL FISHERY MANAGEMENT AREA

FMA 8 includes the area south of Tirua Point to a point north of Titahi Bay, at the coordinates of 41°06'S, 174°50'E

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	BYA8 (Frilled Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	COC8 (Cockles)	-	-	-	? Insufficient information to inform a trend	✓ No catch, 0 tonne TACC
	DAN8 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 33 tonne TACC
	DSU8 (Silky Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	GLM8 (Green-lipped Mussel)	-	-	-	? Insufficient information to inform a trend	✓ No catch, 0 tonne TACC
	HOR8 (Horse Mussel)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	KWH8 (Knobbed Whelk)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
4	MDI8 (Large Trough Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 27 tonne TACC
	MMI8 (Trough Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 25 tonne TACC
	OYS8A (Dredge Oysters)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	PAD8 (Paddle Crab)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch is stable. 60 tonne TACC
	PDO8 (Deepwater Tuatua)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	PPI8 (Pipi)	-	-	-	? Insufficient information to inform a trend	✓ No catch, 0 tonne TACC
	PZL8 (King Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1.2 tonne TACC

Group	Stock	Trend in quota value	Trend in amateur participation	Trend in customary permit fulfilment	Trend in CRL/ACE value	Management action flag
	SAE8 (Triangle Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 8 tonne TACC
4	SCA8A (Scallops)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne is decreasing	✓ No catch, 1 tonne TACC
	SCC8 (Sea Cucumber)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Minimal catch (221kg in 2011-12). 2 tonne TACC
	SUR8 (Kina)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	TUA8 (Tuatua)	-	-	-	? Insufficient information to inform a trend	✓ No catch, 0 tonne TACC

















Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT8 (Octopus)	✓ Levies are stable	✗ Species has triggered the 20 tonne threshold
	TOH8 (Toheroa)	✓ Levies are stable	✓ No catch, 0 tonne TACC







3.10 FMA 9 AUCKLAND WEST FISHERY MANAGEMENT AREA

FMA 9 includes the area west from Cape Runway southwest to the northern border of Tirua Point

Group	Stock	Trend in Quota Value	Trend in amateur participation	Trend in Customary permit fulfilment	Trend in CRL/ACE value	Management action flag
1	CRA9 (Rock Lobster)	✓ 29.49% increase in quota value, estimated values used	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulate on coverage to inform a trend	✓ Stable	? No target biomass set. No formal stock assessment has been done for this stock to determine relation between current stock size and the target level. CPUE declined from 2006 to 2008, but has since increased.
3	GLM9 (Green-lipped Mussel)	? Insufficient information to complete analysis	? Insufficient data to inform a trend	? Insufficient information, lack of customary regulation coverage to inform a trend	✗ No ACE prices reported for some years but CRL/tonne has increased	✓ No estimates of reference or current biomass are available. Unknown whether the stock is at, above, or below a level that can produce MSY.
4	BYA9 (Fried Venus Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1 tonne TACC
	COC9 (Cockles)	-	-	-	? Insufficient information to inform a trend	✓ No catch, 0 tonne TACC
	DAN9 (Ringed Dosinia Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 33tonne TACC

Group	Stock	Trend in Quota Value	Trend in amateur participation	Trend in Customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	DSU9 (Silky Dosinia Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	HOR9 (Horse Mussel)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	KWH9 (Knobbed Whelk)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	MDI9 (Large Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 27 tonne TACC
	MMI9 (Trough Shell Surf Clam)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 25 tonne TACC
	OYS9 (Dredge Oysters)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC
	PAD9 (Paddle Crab)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 Minimal catch. 100 tonne TACC.
	PDO9 (Deepwater Tuatua)	-	-	-	 No ACE prices reported for some years but CRL/tonne has remained stable	 No catch, 1 tonne TACC

Group	Stock	Trend in Quota Value	Trend in amateur participation	Trend in Customary permit fulfilment	Trend in CRL/ACE value	Management action flag
4	PPI9 (Pipi)	-	-	-	? Insufficient information to inform a trend.	✓ No catch, 0 tonne TACC
	PZL9 (King Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 1.2 tonne TACC
	SAE9 (Triangle Shell Surf Clam)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ No catch, 8 tonne TACC
	SCA9A (Scallops)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne is decreasing	✓ No catch, 1 tonne TACC
	SCC9 (Sea Cucumber)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Minimal catch (141kg in 2011-12). 2 tonne TACC
4	SUR9 (Kina)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Catch fluctuating without trend. 10 tonne TACC
	TUA9 (Tuatua)	-	-	-	✓ No ACE prices reported for some years but CRL/tonne has remained stable	✓ Minimal catch of ~4 tonne in 2011/12 compared to no catch in the previous 4 years. Trend is in response to the developing nature of the fishery.

Group	Stock	Management costs are stable or decreasing	Catch does not exceed or fluctuate beyond the levels in the QMS Introduction Standard
5	OCT9 (Octopus)	 Levies are stable	 Species has triggered the 20 tonne threshold
	TOH9 (Toheroa)	 Levies are stable	 No catch, 0 tonne TACC

3.11 Environmental Objectives for all Shellfish Stock Groups

	Policy and objectives relating to habitats of significance	Policy and objectives for managing fishing effects on the environment
All shellfish Stocks	<p>?</p> <p>Habitats of significance for shellfish fisheries have not yet been determined</p>	<p>✓</p> <p>Policy objectives for managing fishing effects have not been determined. However benthic interactions have decreased in all of the FMAs over the period. As have reported interactions with protected species</p>

4. Performance of the Annual Operational Plan

The second purpose of the Annual Review Report is to examine delivery of the management actions and services against those specified in the Annual Operational Plan from the previous financial year. This report considers the Management Actions undertaken between July 2011 and June 2012.

The Annual Operational Plan sets out the stock, fishery and across-fishery Management Actions and Services to be provided in a given financial year. The services specified in the Annual Operational Plan are consistent with the high-level service strategies outlined in the Plan and are specified at a level that guides service delivery to individual business groups.

The Annual Operational Plan also describes the ‘maintenance’ and ‘core’ Management Services to be undertaken for each stock or fishery. Completion of the management actions contributes to achievement of the management objectives, outcomes, and goals described in the Plan. Management Services describe the business group services (compliance, research, regulatory, etc) required to deliver the specified management actions.

The Annual Review Report evaluates the progress that has been made over the previous financial year on the delivery of management actions and services. It also identifies any stock needs, which will be subsequently addressed in the following year’s Annual Operational Plan.

4.1 Delivery of Specified Management Actions in 2011/12

Action	Status ⁴	Comment	Next steps
A1. Increase proportion of New Zealand fisheries waters covered by the customary regulations	Ongoing	Multi-year action	
A2. Improve iwi and Tangata tiaki/Kaitiaki understanding of the importance and use of customary permit data and provide for easy reporting of data	Ongoing	Multi-year action	
A3. Complete large-scale multi-species survey to monitor recreational fisheries	Partially completed	Expected to be completed by 1 July 2013	
A4. Continue programmed research to integrate and improve estimates of recreational catch	Ongoing	Multi-year action	
A5. Review and update the medium-term research plan(s) for Group 1–3 shellfish stocks, including supporting establishment of harvest strategies	Ongoing	Multi-year action	More development expected over the next year (including some oyster and cockle stocks)
A6. Develop, and begin implementation of, a plan to establish harvest strategies for all Group 1–3 shellfish stocks	Ongoing	Multi-year action	
A7. Develop an agreed definition of habitats of particular significance for fisheries management	Ongoing	Draft definition has been developed.	
A8. Improve information to identify (locate) habitats of particular significance for	Deferred	Pending the confirmed definition of habitats of particular significance for fisheries	

⁴ Complete, partially completed, ongoing, deferred, business-as-usual, or cancelled.

Action	Status ⁴	Comment	Next steps
fisheries management		management, which will inform research planning and identification of such habitats.	
A9. Develop “peer networks” in natural resource management agencies to share information where non-fishing activities may impact on the health of inshore shellfish fisheries	Ongoing		
A10. Complete nationwide inventory of existing MPAs and gap analysis to support Ministerial decision on next steps	Deferred	MPI and Department of Conservation are undertaking a review of the MPA process to inform next steps.	
A11. Improve information to monitor and manage impacts of shellfish fishing on benthic habitats	Ongoing	Forms a part of research planning. Where gaps or information needs are identified projects are considered and prioritised.	
A12. Review sustainability measures or other management controls for up to 8 shellfish species or stocks in the 1 April and 1 October sustainability rounds	Business-as-usual	1 October round – no suitable candidates identified or reviewed. 1 April round: Reviewed the TAC for 2 rock lobster stocks (one increase, one decrease) and adopted two new management procedures.	
A13. Develop overall information strategy (research and data sets) for non-commercial fisheries	Ongoing	Initial discussions on possible research and information approaches have been undertaken. Next steps on formalising a strategy to be confirmed.	
A14. Scan regulations for opportunities to reduce regulatory costs to commercial sector	Business as usual		
A15. Improve fisher awareness and understanding of fishing laws where current compliance levels are sub-optimal	Ongoing	Multi-year action – looking to improve the discussions and sharing of information between compliance and FM to identify	Continue engagement with compliance on coordinating engagement and sharing of information in the annual fisheries planning

Action	Status ⁴	Comment	Next steps
		opportunities and develop targeted actions	cycle
A16. Increase deterrent activities where emerging or systemic illegal activity (or opportunities for illegal activity) is identified	Ongoing	Multi-year action – looking to improve the discussions and sharing of information between compliance and FM to identify opportunities and develop targeted actions	Continue engagement with compliance on co-ordinating engagement and sharing of information in the annual fisheries planning cycle
A17. Develop a strategy to reduce the risk of localised depletion occurring in shellfish fisheries	Ongoing	Some work started on this, more work expected in 2012-13	Expect to have a draft approach ready by June 2013
A18. Remove PAU stocks from Schedule 5A to allow for carry-over of ACE to the next fishing year	Complete	Regulation implemented 1 October 2011	
A19. Complete development of and operate a CRA 5 management procedure	Complete	Minister agreed to use the new CRA 5 Management Procedure from April 2012 onwards	
A20. Undertake programmed research to improve recreational harvest levels in the CRA 2 fishery to inform harvest strategy development	Partially Completed	Expected project end date April 2013	
A21. Operate the approved CRA 3 Management Procedure	Ongoing	The Minister agreed to use the CRA 3 Management Procedure from April 2010 onwards	
A22. Establish a robust stock monitoring approach for all paua fisheries. (multi-year action)	Ongoing	Research on the use of data loggers is continuing Discussions on various approaches to harvest strategies for each of the paua stocks has begun	
A23. Undertake programmed research to support development of a robust stock	Ongoing	Entering into second year of the data logger research program	

Action	Status ⁴	Comment	Next steps
monitoring approach			
A24. Establish stock-specific harvest strategies for those paua stocks where information is available	Ongoing	Multi-year action Stock-specific harvest strategy set for PAU 7 Default harvest strategies set for PAU 2, 3, 4, 5A, 5B	Stock assessment for PAU 5D to confirm harvest strategy Exploring other harvest strategy approaches for stock where stock assessment are currently not feasible/reliable
A25. Undertake programmed research for PAU 7 to update stock status	Completed		
A26. Establish a stock-specific harvest strategy for OYU 5	Deferred until 2012-13	Will be done in conjunction with review of OYU 5 management plan in early 2013 – after science working group meeting.	
A27. Undertake programmed research for OYU 5 to update stock status	Deferred until 2012-13	Working group meeting in November 2012 to discuss.	
A28. Develop and implement a national compliance strategy for rock lobster	Ongoing	Draft rock lobster compliance strategy document drafted	Undertake a compliance rock lobster risk assessment (likely early-mid 2013)
A29. Complete actions to manage paua shell trade (ie, complete advice on a new special permit purpose to enable a commercial use of any shell where large dumps of shell have been identified).	Pending Ministerial decision		
A30. Develop and implement a national compliance strategy for paua	Ongoing	Initial meeting has been held	Work will continue on identifying the compliance risks and opportunities in various paua QMAs and what actions could/should be taken to address them.
A31. Provide advice on a new ministerial purpose special permit to provide for seafood to be showcased outside normal fishing seasons	Completed		

Action	Status ⁴	Comment	Next steps
A32. Review of rock lobster concession areas	Phase 1 complete. Phase 2 underway.	Phase 1 complete in May 2011. Phase 2 will be completed in the 2013-14 year.	
A33. Update the CRA 4 stock assessment	Complete	Assessment informed CRA 4 Management Procedure development and TAC setting for the 2012/13 April fishing year	
A34. Review and revise the CRA 4 Management Procedure	Complete	Minister agreed to use the new CRA 4 Management Procedure from April 2012 onwards	
A35. Operate the approved CRA 7 Management Procedure	Ongoing	Minister agreed to use the CRA 7 Management Procedure from April 2011 onwards until it is reviewed.	
A36. Operate the approved CRA 8 Management Procedure.	Ongoing	Minister agreed to use the CRA 8 Management Procedure from April 2008 onwards until it is reviewed.	
A37. Undertake in-season TAC review for SCA CS in 2011	Completed		
A38. Undertake research to inform in-season TAC review for SCA CS in 2012, if required	Completed		
A39. Implement an effective stock monitoring framework to support delivery of a harvest strategy in each of SCA 1, SCA CS and SCA 7	SCA CS completed SCA 1 and SCA 7 deferred until 2012-13		
A40. Establish stock-specific harvest strategies for SCA 1, SCA CS and SCA 7	SCA CS completed SCA 1 and SCA 7 deferred until 2012-13		
A41. Support delivery of an industry-led biomass survey in SCA 1 to ensure it	Deferred		

Action	Status ⁴	Comment	Next steps
supports harvest strategy development			
A42. Review stock monitoring strategy for cost-effectiveness and explore alternative management strategy approaches for COC 3	Deferred until 2012-13		
A43. Review Otago Harbour cockle special permit research to provide ministerial advice on options for harvest areas	Deferred until 2012-13	Research expected to become available early 2013 to inform the review	
A44. Establish a stock-specific harvest strategy for COC 3	Deferred until 2012-13		
A45. Support and facilitate development of Group 4 stocks	Ongoing	Meetings held with surf clam industry, assisting in establishing timeframes to support biomass research that could inform a sustainability review	Sustainability review for surf clams dependent on research conducted in 2012/13
A46. Review and align the medium-term research plan(s) for toheroa	Deferred		
A47. Review QMS introduction standard	Deferred until 2012-13		

Appendix 1 - Performance Indicators

Use Performance Indicators

Trends in Real Quota Value are stable or increasing:

The data used were taken from the *Quota Monitoring Reports* for the last month of each of the last five fishing years. Where quota value data were not available, estimated values were calculated from Annual Catch Entitlement (ACE) values. The data were adjusted for inflation using the *Gross National Expenditure Deflator* (GNED).

The trend in real quota value was obtained from the gradient of a trend-line (LINEST) fitted to the data. The percentage change variable comes from converting the trend-line gradient value to a percentage of the baseline quota value (i.e. the 2007-08 fishing year).

Where real quota value was determined to have decreased by more than 5%, the performance indicator was deemed as not met.

Trends in amateur participation:

The Ministry holds data on recreational participation surveys from 1996 and 2000/01. From these surveys, there are only two usable sets of data which is not enough to inform a trend. Work is currently underway to conduct a large scale multi species survey on recreational catch which could provide sufficient data, along with the other surveys to illustrate a trend. This is expected to be completed by 2013.

Trends in Fulfilment of Customary Permits are stable or increasing:

Information is submitted quarterly to the Ministry in relation to customary permits issued under the Fisheries (Kaimoana Customary Fishing) Regulations 1998 or the Fisheries (South Island Customary Fishing) Regulations 1998.

Regulation 27A of the Amateur Fishing Regulations also provides for the authorisation to take fisheries resources for hui or tangi but does not require reporting of the amounts authorised or taken and was not used in this assessment.

The data were used to assess the percentage of what was authorised by the permit and what was actually taken by the permit. This information was totalled for each year and presented as a total percentage of taken and reported as a proportion of total authorised. A trend-line was fitted to indicate the amount of change in % fulfilment. A minimum of three years data was used. Where fulfilment of customary permits was determined to have decreased by more than 5%, the performance indicator was deemed as not met. Where additional information was available that might explain a trend, or lack of, this was included in the comments section. The period of 2007-2012 was used.

This analysis was problematic as the information was not always complete. In many cases a variety of unit types (quantity) were used to report on each stock. This could be individual numbers or kilograms of fish or shellfish, sacks, sugar sacks, buckets of 10 litres or 20 litres and in many cases this part of the return was left blank. Many of the stocks did not have enough complete data to make a comparison. In certain key stocks, however, the customary returns did show reliable data and comparisons could be reliably made.

Rolling 5-Year Average Cost Recovery Levy (CRL)/ACE Value is not increasing:

ACE prices, YTD/tonne, came from the *Quota Monitoring Reports* for the last month of each fishing year. Where ACE prices were unavailable, estimates of the ACE value were derived from quota values, where those values were known.

The average CRL/tonne (total levy/TACC) divided by the ACE value was calculated for both of the 5-year periods 2006-11 and 2007-12. The percentage change between the 2006-11 and 2007-12 ratios was calculated. Where the ratio had increased by more than 5% the performance indicator was deemed as not met.

Management Costs are stable or decreasing:

Analysis of this performance indicator was only applied to non-QMS stocks and was assessed by analysing the cost of any research that was carried out on these stocks in the last 5 year period. Research costs were adjusted for inflation using the GNED, divided by the TACC, and then analysed for trend using a trend-line. A threshold of 5% was used to determine if the performance indicator was met.

Environment Performance Indicators

Stock Sustainability:

The performance indicator used depends on the 'group' that a stock belongs to:

- Group 1: Stock size is at or above the established target biomass with at least 50% probability
- Group 2: Stock size is at or above the minimum reference level with at least 50% probability
- Group 3: Stock size is at or above an established target reference level with at least 50% probability
- Group 4 and 5: Catch is stable or fluctuates without trend.

The data used to assess the stock sustainability performance indicator is predominantly from the most recent stock plenary assessment reports including:

- stock assessments
- probabilities of biomass estimates
- biomass survey relative biomass indices
- CPUE indices
- other abundance indicators
- catch quantities.

Many stocks measured against the performance indicator lack key pieces of information to determine whether or not the performance indicator is met (for example, stock size in relation to the target biomass), or they have not yet been assigned a target/threshold reference level. Whether this is the case or not is set out in the text for each stock.

Where target/ threshold reference levels are not set and/or information on stock size in relation to this level is not available, the best available information was used to establish whether or not there was a sustainability concern with the stock. In these instances, the text will provide an idea as to what information was evaluated to determine whether the stock sustainability performance indicator was met.

Catch is stable or fluctuates without trend:

Data used were catch and TACC information from the most recent four fishing years (2007-2012). Data were obtained from FIS. The percentage catch against TACC was calculated for each year. Variation in the data was checked by calculating the average and the standard deviation. To assess whether catch was stable around the average, a threshold of 20% variation for finfish, and 10% variation for shellfish was set. Trend was established by fitting a trend-line.

Stocks with a TACC of less than 20 tonnes (finfish) or 10 tonnes (shellfish) were deemed to have been lightly fished and to have met this performance indicator unless other information is available that suggests otherwise.

Policy Objectives Relating to Habitats of Significance for Fisheries Management are met:

No formal policies have been set relating to habitats of significance for fisheries management.

Where Policy Objectives are Absent, Fishing Effects on Identified Habitats of Significance for Fisheries Management are not increasing:

Habitats of significance for fisheries management have not yet been formally identified.

Policy Objectives for Managing Fishing Effects on the Aquatic Environment (and Biodiversity) are met:

Policy Objectives are set out in the National Plan of Action for Sharks, the Hector's and Maui Dolphins Threat Management Plan, and the Marine Protected Area Policy. None have objectives that specifically relate to, or require direct monitoring of, individual fisheries stocks.

Where Policy Objectives are Absent, Interactions with the Benthos and Protected Species are not increasing:

The data source for assessment of interactions with the benthos is the Ministry Research Data Management database from trawl catch effort returns (TCER) and catch effort landing returns (CELR) as hours dredged and hours towed for bottom trawling.

For interactions with protected species, data were sourced from the Ministry Non-fish/protected species database and the Department of Conservation's Hector's dolphin incident database as these will be consistent data series into the future. Data were filtered to cover only target species from the Inshore National Fisheries Plans.

Note: More detailed guidelines on the methodology used to assess these performance indicators are available from the Ministry on request.