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WESTERN AUSTRALIA ABALONE FISHERY

1st Surveillance Audit Report

CERTIFICATE NUMBER: F-SCS-0102

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Glossary

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EEZ	Exclusive Economic Zone
ETP	Endangered, Threatened or Protected species
FAO	Food and Agriculture Organization of the United Nations
FCM	Fisheries Certification Methodology
IFQ	Individual Fishing Quota
ITQ	Individual Transferable Quota
kg	kilogram
lb.	Pound, equivalent to roughly 2.2 kg
LOA	Length Over-All
Μ	Million (lbs.)
MSC	Marine Stewardship Council
MSE	Management Strategy Evaluation
nm	nautical mile
OFL	Over-Fishing Level
PRI	Point of Recruitment Impairment
SCS	SCS Global Services
SSB	Spawning Stock Biomass
t and mt	metric ton
TAC	Total Allowable Catch
WWF	World Wildlife Fund

1 General Information

Fishery name	Western Australian Abalone Fishery					
Unit(s) of assessment	UoA Species & Stock:					
	1. Greenlip abalone (<i>Haliotis laevigata</i>);					
	2. Brownlip abalone (Haliotis conicopora)					
	Both in coastal waters on the west and south coast of WA.					
	3. Roe's abalone (<i>Haliotis roei</i>) in V	NA coastal waters from South				
	Australian border to Moore River.					
	UoA Gear Type: Hand Collection					
	UoA vessels: 30 vessels					
	(12 are used to fish for Roe's and	Greenlip/Brownlip abalone, 10				
	used to fish for Roe's abalone only	/ and 8 used to fish for				
	Greenlip/Brownlip only)					
Date certified	28 April 2017 Date of ex	piry 27 April 2022				
Surveillance level and type	A level 6 surveillance program is s	uggested for this fishery following				
	the first surveillance audit. During	the initial certification period an				
	onsite audit for all surveillance au	dits (FCR 7.23.1-7.23.4).				
Date of surveillance audit	25 October 2019					
	25 October 2018	the and 20 days after the				
Justification	This review was conducted 5 mon	the and 28 days after the				
	coloct the successful proposal for	Government tender process to				
	select the successful proposal for	the 1 st surveillance audit be				
Surveillance stage (tick one)	1st Surveillance	X				
Surveillance stage (tiek one)	2nd Surveillance					
	3rd Surveillance					
	4th Surveillance					
	Other (expedited etc)					
Surveillance team	Lead assessor: Dr. Sabine Daume					
	Assessor(s): Mr. Alexander Moriso	in				
CAB name	SCS Global Services					
CAB contact details	Address	2000 Powell St. Ste.600				
		Emeryville CA 94608, USA				
	Phone/Fax	+1.510-452-8000 main				
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	Email msc@scsglobalservices.com					
	Contact name(s) Dr. Sabine Daume					
Client contact details	Address	PO Box 1160 Booragoon WA				
		6954, Australia				
	Phone/Fax	+61 (0)408 933 874				
	Email	eo@abalonewa.com.au				
	Contact name(s) Peter Rickerby					

2 Executive Summary & Conclusion

This report summarizes the findings from the 2018 first surveillance audit of the Western Australian abalone fishery. The fishery was first certified to the MSC requirements in 2017 using the default assessment tree MSC Fisheries Certification Requirements and Guidance v 2.0 (October, 2014).

The first annual surveillance audit focused on any changes since the full assessment and monitoring continued compliance with the MSC Principles and Criteria. The fishery originally received three conditions in the full assessment, all pertained to Principle 1 requirements and related to 1.1.1 (both Greenlip and Brownlip abalone) and 1.2.1 for Brownlip abalone only.

In the 2018 first annual surveillance audit, the assessment team reviewed updates on all aspects of the fishery and evaluated expected outcomes of open conditions against the milestones.

Roe's abalone continues to meet all the requirements for certification.

The status of Greenlip abalone has continued to decline and the team concluded that the progress for Condition 1 was **behind target** but that a **new condition** was also required for PI 1.1.1 scoring issue a. The rationale for this PI has been revised and the score reduced to 60.

Brownlip abalone stocks have continued to rebuild towards target levels, so the team has concluded that catches are being appropriately constrained and that the HCR is operating as intended. Conditions 2 and 3 are therefore considered to be **on target**.

It is SCS's view that the Western Australian abalone fishery continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification'. SCS recommends the continued use of the MSC certificate through to the end of this certificate cycle when conditions are expected to close.

TACC	Year	2017	Amount	74 t
UoA share of TACC	Year	2017	Amount	74 t
UoC share of TACC	Year	2017	Amount	74 t
Total whole weight catch by UoC	Year (most	2017	Amount	48.21 t
	recent)			
	Year (second	2016	Amount	48.68 t
	most recent)			

Table 1A: TACC and Catch Data Roe's abalone (all zones, whole weight)

ТАСС	Year	2017	Amount	10 t
UoA share of TACC	Year	2017	Amount	10 t
UoC share of TACC	Year	2017	Amount	10 t
Total whole weight catch by UoC	Year (most	2017	Amount	8.99 t
	recent)			

Year (second	2016	Amount	8.83t
most recent)			

Table 1C: TACC and Catch Data Greenlip abalone (all zones, meat weight)

ТАСС	Year	2017	Amount	42.5 t
UoA share of TAC	Year	2017	Amount	42.5 t
UoC share of TAC	Year	2017	Amount	42.5 t
Total whole weight catch by UoC	Year (most	2017	Amount	28.41 t
	recent)			
	Year (second	2016	Amount	36.75 t
	most recent)			

Table 2. Summary of Assessment Conditions

Condition number	Performance indicator (PI)	Status	PI original score	PI revised score
1	1.1.1 (greenlip abalone)	Behind target/ New condition	70	60
2	1.1.1 (brownlip abalone)	On target	70	N/A
3	1.2.1 (brownlip abalone)	On target	70	N/A

3 Background

3.1 Stock Status Update

The stock status updates for each unit of certification are taken from Strain et al. (2018) and the sections used are reproduced below without amendment. Additional comments and the conclusions that the assessment team have drawn from these updates have been added at the end of each section.

3.1.1 Unit of Certification – Roe's abalone (Haliotis roei)

The Performance Indicator has always been above the target reference level specified for each management area and this has continued for the 2016 and 2017 seasons (Figure 1, Figure 2, Figure 3, and Figure 4). The decline in Standardized Catch per Unit Effort (SCPUE) in all management areas post 2011 has been attributed to adverse environmental conditions, namely the 2011 marine heatwave and the subsequent years of above average sea surface temperature (SST). However, the severity of the decline in SCPUE varied between management areas, but all areas have shown some level of recovery over the last 2 to 4 seasons as a result of cooler water temperatures. The effect of the marine heatwave ranged from the catastrophic mortality event in Area 8 and the closure of this fishery, to the sub-lethal effects such as growth stunting and recruitment impairment in Area 7 (Hart et al. 2018). In Area 7 these effects have been managed through a stock prediction model (Figure 5), which uses a recruitment index (Age 1+) along with an environmental factor (annual summer SST) to predict the density of harvest size animals (71+ mm) and subsequently set the Total Allowable Catch (TAC). The TAC is then separated into the TACC (commercial) and TARC (recreational) by using the available biomass in each habitat and both sectors pattern of usage (DoF 2017).

Catches of Roe's abalone have been below the TACC in Area 2, 5 and 6 for both the 2016 and 2017 season (Table 3). The commercial Industry has attributed the reduced catch in recent years to several economic and accessibility issues rather than stock biomass levels. These issues include a decline in beach price and overall economic value during the last decade, market competition with hatchery-produced abalone given the similar sized animals, increasing costs of accessing the remote regions, and the prevailing weather conditions. Overall, the Roe's abalone stock status in WA is considered sustainable (above the point at which fishing may cause recruitment impairment).

Table 3: Total Allowable Commercial Catch (TACC; kg, whole weight), catch (kg, whole weight) and the percentage of TACC caught (% Catch) for Roe's abalone during the 2016 and 2017 season in each Management Area.

		2016			2017	
	TACC (kg)	Catch (kg)	% Catch	TACC (kg)	Catch (kg)	% Catch
Area 2	18,000	1,6225.0	90	18,000	13,142.8	73
Area 5	20,000	7,451.4	37	20,000	6,933.3	35
Area 6	12,000	1,484.5	12	12,000	4,458.5	37
Area 7	32,000	23,521.4	74	24,000	23,680.6	99
Area 8	0	0		0	0	

Note, a voluntary Industry in season quota of 24,000 kg was applied to Area 7 in 2016.



Figure 1: The annual standardised CPUE (kg.hr⁻¹) for Roe's abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 2.



Figure 2: The annual standardised CPUE (kg.hr⁻¹) for Roe's abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 5.



Figure 3: The annual standardised CPUE (kg.hr⁻¹) for Roe's abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 6.



Figure 4: The annual standardised CPUE (kg.hr⁻¹) for Roe's abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 7.



Figure 5: Density and stock prediction model (y axis = density and expected catch of 71+mm abalone in year n, x axis = density of Age 1+ (17 - 32 mm) at year n - 4, e.g. 15 = density of Age 1+ in 2011) with mean summer SST during the 4 year period (years n - 3 to n).

Assessment team comments:

The information provided contains good evidence that the Roe's abalone stocks remain above target levels, that catches are being appropriately constrained, and that the HCR is operating as intended.

The assessment team concluded that the UoC remains compliant with requirements for a pass for Principle 1 PIs.

3.1.2 Unit of Certification – Greenlip abalone (Haliotis laevigata)

The annual SCPUE has declined to record low levels in both Area 2 and Area 3 in 2017 (Figure 6 and Figure 7). Both management areas were experiencing an increase in SCPUE towards the target reference level until 2010. The effect of the 2011 marine heatwave and the subsequent years of above average SST is evident in the SCPUE's continual decline over the last 5 to 7 seasons. Reductions in TACC's in response to the declining PI occurred in 2015 and 2016 in Area 2 and between 2014 and 2017 in Area 3. Both management areas are aligned with the harvest control rule in 2017 (Area 2 at 60% and Area 3 at 70% of long-term sustainable harvest level, Table 4). In 2017 Industry imposed a voluntary in-season quota reduction to 12 t in Area 2 and 16 t in Area 3. Overall, the Greenlip abalone stock status in WA is considered sustainable (above the point at which fishing may cause recruitment impairment).

As part of the quota setting process for the 2018 season, Industry requested the voluntary quota of 12 t from 2017 be reduced to 9 t and set as the TACC for 2018 in Area 2, which was supported by the Department. In Area 3, given the annual SCPUE has gone below the limit and the PI is close to the limit reference level, a precautionary approach was taken by the Department and Industry when setting the 2018 TACC. Consequently, the TACC in Area 3 was reduced to 23% of the long-term sustainable harvest level for 2018 (8t).

Table 4: Total Allowable Commercial Catch (TACC; kg, meat weight), catch (kg, meat weight) and the percentage of TACC caught (% Catch) for Greenlip abalone during the 2016 and 2017 season in each Management Area.

	2016			2017		
	TACC (kg)	Catch (kg)	% Catch	TACC (kg)	Catch (kg)	% Catch
Area 2	18,000	17601.9	98	18,000	11999.1	67
Area 3	25,600	19153.0	75	24,500	16407.7	67

Note, a voluntary Industry in season quota of 12,000 kg was applied to Area 2 in 2017.



Figure 6: The annual standardised CPUE (kg.hr⁻¹) for Greenlip abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 2.



Figure 7: The annual standardised CPUE (kg.hr⁻¹) for Greenlip abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 3.

Assessment team comments:

The trend in SCPUE indicates that the status of Greenlip abalone has continued to decline in both areas of the fishery. The indicator currently in use for the harvest control rule is the 3-year average running mean of SCPUE for each of the main areas of the fishery. This average remained clearly above the LRP in Area 2 but was only slightly above the LRP for Area 3 and in this area the point for the most recent year was below the LRP. For Area 3, a review of other indicators in a weight-of-evidence approach was also used with the conclusion that the sub-area analysis of raw catch rate, mean meat weight per individual and length-frequency distributions from catch sampling, support the decline seen in the SCPUE trend (Strain et al. 2018).

In addition to the text and figures shown above, Strain et al. (2018) also reported that a bootstrap analysis suggested that there was greater than an 80% likelihood that the mean SCPUE for Area 3 remains above the LRP. This analysis, however, does not account for all the uncertainty in the assessment including whether a 3 year running average is a robust estimate of stock abundance. Concern over the applicability of this metric, particularly when a stock was in decline, led to a Recommendation in the original assessment to review its use.

The assessment team concluded that it is no longer highly likely that the stocks of Greenlip abalone are above the Point of Recruitment Impairment (PRI) and therefore the scoring issue does not continue to be met at the SG80 level. In reaching this conclusion we acknowledge that the indicators in both areas are technically above the LRP. Nevertheless, we have considered the following points as collectively supporting our conclusion:

- the three year running average dampens the signal of a decline and slows the response to a declining trend,
- there has been a declining trend in SCPUE in both areas over 7 years,
- for Area 3 the most recent point is below the LRP, and
- a range of other indicators also support the conclusion of a stock decline.

3.1.3 Unit of Certification – Brownlip abalone (Haliotis conicopora)

Catches of Brownlip abalone have been close to the TACC in Area 2 (>95%) and below the TACC in Area 3 (78-85%) for both the 2016 and 2017 season (Table 5). The commercial Industry has indicated the reduced catch in Area 3 over the last 2 seasons was due to licencing issues. The annual SCPUE has exhibited a decline post 2011 in both management areas and this has been attributed to adverse environmental conditions. The reductions in TACC for the 2015 season have been maintained for the 2016 and 2017 seasons and are in line with the harvest control rule (Table 5). The main stock indicator (annual SCPUE) has shown a response to the TACC reductions in 2012 and 2015 with the PI below the threshold but above the limit for Area 2 (Figure 8) and at the target reference level for Area 3 (Figure 9) in 2017. An integrated length-based model was fitted to commercial catch and catch rate data, length composition data and modelled growth of Brownlip abalone from Area 2 and Area 3 combined (Strain et al. 2017). The integrated model estimated the ratio of spawning biomass to unfished levels in 2016 as

above the target reference level. Overall, the Brownlip abalone stock status in WA is considered sustainable (above the point at which fishing may cause recruitment impairment).

Table 5: Total Allowable Commercial Catch (TACC; kg, meat weight), catch (kg, meat weight) and the percentage of TACC caught (% Catch) for Brownlip abalone during the 2016 and 2017 season in each Management Area.

		2016		2017		
_	TACC (kg)	Catch (kg)	% Catch	TACC (kg)	Catch (kg)	% Catch
Area 2	5,000	4914.0	98	5,000	4762.0	95
Area 3	5,000	3917.4	78	5,000	4230.6	85



Figure 8: The annual standardised CPUE (kg.day⁻¹) for Brownlip abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 2.



Figure 9: The annual standardised CPUE (kg.day⁻¹) for Brownlip abalone with the performance indicator (3 year running mean), reference levels (target, threshold and limit) and harvest control rule in Management Area 3.

Assessment team comments:

The information provided contains good evidence that the Brownlip abalone stocks have continued to rebuild towards target levels, that catches are being appropriately constrained, and that the HCR is operating as intended.

The assessment team concluded that there are no new stock status issues with the fishery that need to be considered for compliance with the requirements for a current conditional pass for Principle 1 PIs.

3.2 Updates on Scientific base of information

The fishery report provided (Strain et al. 2018) provides the key update on information relevant to the fishery and the main new publications relevant to the fishery (Department of Fisheries 2017; Hart et al. 2018; Strain et al. 2017).

The assessment team were also advised that research to better identify the size at onset of maturity has been initiated for Brownlip abalone in both Area 2 and Area 3, in response to Condition 3.

A publication on the regulation dynamics of *Haliotis roei* populations in response to the marine heatwave was provided to the assessment team (Hart et al. 2018). In addition, a publication covering this climatic event as a driver for range contraction of habitat-forming species (on the Western Australian Coast) by Smale and Wernberg (2013). As well as Wernberg et al (2016) Climate-driven regime shift of a temperate marine ecosystem.

3.3 Updates on the management system and regulations

The legal minimum length (LML) for both Brownlip and Greenlip abalone was raised to 145 mm for the start of the 2018 season in Area 2 on legislated on 12 January 2018. The size limits for both species were increased to 150 mm as of 9th October 2018 in Area 3.

In addition, secondary management arrangements for the recovery of Area 3 of the abalone fishery were implemented using a Memorandum of Understanding (MOU) between WA DPIRD and the license holders of the of the Abalone Managed Fishery Area 3, and nominated operators and nominated divers. It is noted that MOUs are not legally binding. The MOU outlines the change in LML for all Greenlip abalone:

- taken between Starvation Bay and the Area 2/Area 3 border must be no less than 145 millimeters in length
- taken between the Warren River mouth and Starvation Bay must be no less than 150 millimeters in length
- taken from between the Area 3/Area 4 border and the Warren River mouth (Augusta Sub-Area) must be no less than 155 millimeters in length

- 1. season opening and closure dates for Greenlip abalone
 - within waters west of the Warren River Mouth (Augusta Sub-Area) within Area 3, season open on 1 July 2018 and closes on 31 October 2019
 - within waters East of the Warren River Mouth (waters excluding the Augusta Sub-Area) *excluding greenlip abalone landed whole* within Area 3, season open on 16 April 2018 and closes on 31 March 2019
- maximum prescribed amount of Greenlip Abalone to be taken from the waters West of the Warren River Mouth (Augusta Sub-Area) within Area 3 is 500 kilograms of Greenlip abalone (meat weight), with a total maximum of 3,500 kilograms of Greenlip abalone (meat weight) taken in total across all Managed Fishery Licences.

The team was also advised that there had been some adjustments to the regulations concerning the recreational fishery in the Western Zone for Roe's abalone. The duration of the season was reduced from 5 h to 4 h and greater flexibility in the setting of the fishing hours was provided for to allow it to be shifted if sea conditions were likely to pose a risk to recreational fishers.

3.4 Updates on Personnel involved in science, management or industry

On the 1st of July 2017 the Department of Fisheries WA merged with the Department of Agriculture and Food as well as Regional Development to form the new Department of Primary Industries and Regional Development (DPIRD). The merger came into effect after the fishery was certified. Changes across the agency are expected but are not formalised yet. No changes to personnel were reported for the scientific or management functions for the fishery. It was reported that there had been some license sales but no change to the total number of licences operating for any of the UoCs.

The new ARMA (Aquatic Resources Management Act) is in its second draft but implementation of the new act is not expected until early 2019, as the implementation of the ARMA has recently been deferred to allow for an Act amendment to be progressed. In the meantime the FRMA remains in place.

The assessment team were also advised that although the Abalone Industry Association of Western Australia was continuing to operate, it was seeking to use a new broader seafood industry association called Southern Seafood Producers (WA) Association for executive services as a more efficient way to provide such services to its members.

3.5 Changes to the fishing operations and traceability systems

The assessment team was also advised that one of the processing companies has obtained CoC certification and is intending to use the MSC logo for product. No other changes were reported to the assessment team.

4 Assessment Process

4.1 Assessment Methodologies

The surveillance audit was carried out in accordance with the default assessment tree and process requirements of the MSC Fisheries Certification Requirements and Guidance v2.0, under which the fishery was originally certified in 2017.

Table 6. Scheme Documents

MSC Scheme Document	Issue Date
MSC FCR and Guidance v2.0	October 1, 2014
General Certification Requirements v.2.2	March, 2018
Surveillance Reporting Template v1.0	October 8, 2014

Table 7. Schedule of surveillance audits.

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 5	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re- certification site visit

The issues for the certifier, in addition to checking progress against conditions to close out, is to determine whether a random check on the performance of the fishery verifies continued compliance with the MSC standards and to document the most recent research, landings, and survey trends relating to the fishery.

The annual surveillance audit process is comprised of five general parts:

- 1. The certification body provides questions around areas of inquiry to determine if the fishery is maintaining the level of management observed during the original certification.
- The certification body informs stakeholders that they have the opportunity to contribute to the surveillance audit by participating in a face-to-face interview process or by submitting comments in writing. The certification body must inform stakeholders of the opportunity to provide comment at least 30 days before the onsite meeting.
- 3. The surveillance assessment team meets with the fishery client in an opening meeting to allow the client to present the information gathered and to answer questions asked by the surveillance team. The surveillance team can then ask questions about the information provided to ensure full understanding of how well the fishery management system is functioning and if the fishery management system is continuing to meet the MSC standards. Additional interviews are conducted of fishery management and science personnel as well as stakeholders.
- 4. The surveillance team determines if any PIs should be re-scored and presents its findings to the client fishery at the end of the site visit in a closing meeting. The results outline the assessment

team's understanding of the information presented and its conclusion regarding the fishery management system's continued compliance with MSC standards.

5. The surveillance team submits a draft report to the fishery client and a subsequent final report to the MSC for posting on the MSC website. If there are continued compliance concerns, these are presented as non-conformances that require further action and audits as specified in the surveillance report.

4.2 Consultations

SCS identified relevant stakeholders for this fishery through professional networks, the client and the audit team as well as know-how of the organizations working in the area. A list of over 11 individuals from 11 different organizations was compiled including representatives from the government, private sector and non-profit sectors working at regional and national levels (Table 8).

The main form of communication to stakeholders has been via email to personal or organizational email addresses. Stakeholders on the list received an email with the surveillance audit details, the MSC stakeholder template to provide input and an invitation to participate at the onsite. No stakeholder written comments were received prior to the audit or after the audit which was extended to all for a full 30-day consultation period.

Organization	Туре
DPIRD	Government Institution/Research &
	Management
WWF	eNGO
Conservation Council of WA	eNGO
Murdoch University	Academic Institution/Research
Department of Biodiversity, Conservation and Attractions	State Government Agency
Parks and Wildlife Services	State Government Agency
Several (South Coast, South West catchment Council,	NRM regional body
Perth Metropolitan)	
South West Aboriginal Land & Sea Council	Traditional Owners
Abalone Industry Association WA	Industry (Client)

Table 8. List of stakeholder organizations contacted for the MSC Assessment

An announcement of the surveillance audit onsite meeting to take place in Perth, Australia was published to the MSC website on 11th October 2018. A variance was granted by the MSC to allow for a shorter than 30 days notification period (see appendix 4 for variance response by MSC), was also posted on the MSC website. Stakeholders were informed of the announcements through the MSC website and through email. Stakeholders were informed that the team would also be available for meetings either by conference call or other means until the November 8[,] 2018 after the site visit.

An audit plan was provided to the client, management, scientists, and interested stakeholders by SCS before the meeting. No stakeholders requested a meeting with the team before or after the onsite visit.

A representative from the Abalone Association of Western Australia (client representative) and the management and research agency, DPIRD, attended the first surveillance audit on the **25th October 2018** (see Table 9. List of Audit Attendees). The meeting focussed on general updates and in particular, the status of the conditions that were set during the full assessment. No stakeholder submissions were received.

A draft report was submitted to the client for review. Comments from the client were taken into account before posting the third annual surveillance report on the MSC website.

Name of Attendee	Role	Organisation
Sabine Daume	Lead Auditor, P2 Expert	SCS Global Services/ AquaMeer Pty Ltd
Alexander (Sandy) Morison	P1 Expert	Consultant, SCS/ AquaMeer Pty Ltd
Peter Rickerby	Client Representative	Abalone Association of Western
		Australia
Lachlan Strain	Research Scientist	DPIRD
Anthony Hart	Principal Research Scientist	DPIRD
Nick Caputi	Supervising Scientist	DPIRD
Emily Fisher	Research Scientist	DPIRD
Shane Walters	Fisheries Management Officer	DPIRD
Kim Walshe	Principle Management Officer	DPIRD
Richard Petty (by phone)	Compliance Manager	DPIRD

Table 9. Audit Plan: Surveillance Audit Attendees

4.3 Harmonisation Considerations

As outlined in the public certification report for the fishery, harmonisation is only required with other certified fisheries in Western Australia under Principle 3. In accordance with FCR 7.4.16 and Annex PB, efforts have been made to harmonise those parts of Principle 3 with the most recent full assessment and certification outcome from a Western Australian fishery.

Principle 3: The Western Australian Abalone Fishery shares a management system with the MSCcertified Western Australia Rock Lobster Fishery, and Exmouth Gulf Prawn Trawl and Shark Bay Prawn Trawl Fisheries, and the Peel Harvey Estuarine Fishery and the West Coast Deep Sea Crab Fishery. Harmonisation is, therefore, required with the Governance and Policy Pls (3.1.1-3.1.3). The WA Abalone Fishery received a score of 100 for Pl 3.2.1 Since the last certification, there have been progress made with regard to 3.1.2. In addition, the new stakeholder engagement document was discussed with the MRAG team of the recent surveillance audits for the Exmouth Gulf Prawn and Shark Bay Prawn Trawl Fisheries. The MRAG team closed the existing condition and re-scored this Pl at 95. Table 10. Fisheries in the MSC System Considered for Harmonization.

Fishery	Status	Principles for Harmonization	Conformity Assessment Body
1.Australian Western Rock Lobster	Certified	3	SCS
2.Peel Harvey Estuarine Fishery	Certified	3	SCS
3.West Coast Deep Sea Crab	Certified	3	SCS
4.Exmouth Gulf Prawn	Certified	3	MRAG
5.Shark Bay Prawn	Certified	3	MRAG
6. Australia Pearl Oyster	Certified	3	SCS
7.Western Australian Abalone	Certified	3	SCS

Table 11. Alignment of Scores for Harmonisation.

Ы	Fishery Number (as indicated in Table 11)						Commonte	
Ы	1	2	3	4	5	6	7	Comments
3.1.1	100	100	100	100	100	100	100	-
3.1.2	100	75	75	75	75		100	The Stakeholder
		Re-	Re-	Re-scored	Re-scored	UoC 1: 75		Engagement
		scored	scored	to 95 at	to 95 at	UoC 3:		Guideline has been
		to 85 at	to 85 at	1 st audit	1 st audit	100		published by DoF
		1 st audit	1 st audit					(now DPIRD) which
								resulted in this PI
								scoring higher in
								more recent
								assessments.
								UoC 1 Australia Pearl
								Oyster Fishery (No.6)
								is under different
								management and
								does not require
								harmonisation.
3.1.3	100	100	100	100	100	UoC 1: 75	100	UoC 1 Australia Pearl
						UoC 3:		Oyster Fishery (No.6)
						100		is under different a
								management system
								of a different state
								(Northern territory
								of Australia) and
								does not require
								harmonisation.

4.4 Assessment Team

The surveillance team consisted of Dr Sabine Daume and Mr Alexander Morison. Dr Daume was a member of the full assessment team. Assessment team experience and qualification summaries were provided in

the assessment announcement and further details are provided in bios below. The team collectively meets the MSC Certification Requirements (v. 2.0, Annex PC) for assessment team members.

Team Leader:	Dr. Sabine Daume
Team Member:	Mr Alexander Morison

Dr. Sabine Daume, SCS Global Services (SCS), Sustainable Seafood Program, Regional Representative Australia and New Zealand

Dr. Daume is the Regional Representative for the SCS Sustainable Seafood Program in Australia and New Zealand, which covers MSC, ASC and Fisheries Improvement programs. Since 2009, Dr. Daume has led numerous MSC evaluation audits on behalf of SCS, including several large and controversial assessments, and numerous in Australia. Dr. Daume is a marine biologist with special expertise in the biology and ecology of exploited marine resources like abalone. Dr. Daume has more than 20 years' experience working with the Invertebrate fishing and aquaculture industry in Australia and internationally.

Prior to joining SCS, Dr. Daume worked as a Senior Research Scientist at the Research Division of the Department of Fisheries in Western Australia. Dr. Daume led the Western Australian rock lobster, Heard Island and McDonald Islands (HIMI) icefish and toothfish as well as Macquarie Island toothfish assessments, annual surveillances and re-assessments. She also led the Western Australia Abalone assessment in 2016 and four new full assessments in Western Australia in 2015 and 2016. Dr. Daume has been trained by the MSC to use the Risk Based Framework (RBF) and the most recent MSC Certification Requirements (v2.0 Oct. 2015). She is a certified lead auditor under the ISO 9001:2008 standard.

Alexander "Sandy" Morison – Morison Aquatic Sciences

Mr. Morison is a consultant specializing in fisheries and aquatic sciences. He has over 30 years experience in fishery science and assessment at state, national and international levels and has held senior research positions for state and national organizations in Australia.

Mr. Morison is qualified as a lead auditor for MSC assessments and has undertaken MSC assessments and pre-assessments for a diverse range of fisheries:

• Heard Island and MacDonald Islands Mackerel Icefish: Reassessments and surveillance audits (Principle 1).

• Heard Island and MacDonald Islands Patagonian toothfish: First assessment, reassessment and surveillance audits (Principle 1).

• Lakes and Coorong Fishery (South Australia): Reassessments and surveillance audits (Principle 1).

• Macquarie Island Patagonian toothfish fishery: First assessment, reassessment and surveillance audits (Principle 1).

• Kyoto Danish Seine Fishery for Snow crab and flathead flounder: Reassessment (Principle 1) and surveillance audit.

• Western Rock Lobster Fishery: Surveillance audits and reassessment. (Principle 1)

• PNA Western and Central Pacific unassociated purse seine fishery (skipjack tuna): Surveillance audits (Principle 1).

• PNA Western and Central Pacific unassociated purse seine fishery (yellowfin tuna): Expedited assessment (Principle 1).

• Northeastern Tropical Pacific purse seine yellowfin & skipjack tuna: first assessment (Principle 2).

• Tri Marine Western and Central Pacific skipjack and yellowfin tuna: first assessment (Team leader, Principle 1 and Principle 2).

- Peel-Harvey Inlet, blue swimmer crab and sea mullet fisheries (Principle 1).
- Western Australia deep sea crab fishery (Principle 1).
- Australian pearl oyster fishery (Principle 1).
- An MSC Pre-assessments of NZ Orange roughy fisheries and three other fisheries (confidential).

Mr Morison is also contracted by the Australian Fisheries Management Authority to chair the South East Fisheries Resource Assessment Group and the Shark Fisheries Resource Assessment Group, and the Tropical Rock Lobster Working Group. This includes being chair of the current and previous assessment groups that have been responsible for the assessments of Australia's orange roughy fisheries. He is also the Scientific Representative on the South East Fishery Management Advisory Committee, and is a member of the South East Scalefish and Shark Fishery Resource Assessment Group. He has also been the scientific representative on other Resource Assessment Groups. Mr Morison has experience with the assessment of invertebrate, chondrichthyan and teleost fisheries including commercial and recreational fisheries in freshwater, estuarine and marine habitats, and fisheries operating in tropical, temperate, and polar environments. He is also currently the chair of the Ecologically Related Species Working Group of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) and has been engaged in the Kobe process for harmonisation of measures across the tuna RFMOs.

Mr Morison also has experience with a range of fisheries that capture cephalopods as either targets or bycatch involving evaluation of catch rate data and ecological risk assessments. This experience covered the periods from 1999 to 2006 as a senior fisheries scientist this included State managed fisheries that capture squid from inshore waters, from 2005 to 2018 as chair of Resource Assessment Groups for South East Australian trawl fishery that take squid as a trawl bycatch, from 2010 to 2018 as the scientific member on the Management Advisory Group for this same fishery, and from 2007 to 2009 as a member of the South Pacific RFMO's Science Working Group, whose deliberations included the jumbo flying squid fishery of the eastern Pacific Ocean.

He has chaired or served on scientific groups responsible for stock assessments that have used fisheryindependent data such as from trawl surveys, acoustic surveys, egg surveys, tagging data or close-kin mark-recapture method, and fishery-dependent data such as from catch-per-unit-effort (CPUE), or size or age-based indices. The methods have included simple empirical assessments such as CPUE-based estimates of stock status to fully integrated assessments that employ a wide variety of data sources in probabilistic analyses such as with Monte-Carlo Markov Chain methods. The applications of these methods has covered species that are short-lived such as small pelagic species through to very long-lived such as orange roughy.

He has particular expertise with fish age and growth and has been involved in the development and implementation of harvest strategies for several fisheries. He has over 20 publications in peer-reviewed scientific journals (8 as senior author), 8 book chapters, and over 100 project reports, technical reports, client reports and papers in workshop and conference proceedings.

5 Results

5.1 Progress on Conditions

Progress on conditions placed on the fishery at certification are reported below. A new condition has been added on PI 1.1.1, and the new condition table and associated action plan may be found in Appendix 2.

Condition 1.

Performance	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score
Performance Indicator(s) & Score(s)Insert relevant PI number(s)IConditionBy the 3rd surveillance audit, sufficient to move the stock to target reference point.TMilestonesBy the 1st Surveillance Audit indicators to demonstrate th 	The stock is at or fluctuating around a level consistent with MSY	70 Revised score: 60	
Condition	By the 3rd surveillance au sufficient to move the stoo target reference point.	dit, provide evidence that changes to c ck to a level where it is at or fluctuates	atch are around the
Milestones	By the 1st Surveillance Au- indicators to demonstrate rule (changes in catch). By the 3rd Surveillance Au various stock indicators.	dit - Provide an assessment of various that the stock is responding to the har dit - Provide a consolidated assessmer	stock rvest control nt of the
Client action plan	This condition will be met catch rate) against specifie strategy. That is, a formal management of Greenlip a catch rate is an appropriat moving the stock back tow 1st Audit - Provide an asse rate and recruitment surve that may be affecting thes environmental conditions) harvest control rule (chang 2nd Audit - Provide an asse rate and recruitment surve that may be affecting thes environmental conditions) harvest control rule (chang 3rd Audit - Provide a conse (e.g. annual catch rate and three years. Use the results as a basis f strategy (e.g. the time serii the harvest strategy facilit	by examining the performance indicat ad reference points, as stipulated in the harvest strategy with harvest control r abalone is in place for this fishery, so tr abalone is in place for this fishery, so tr ates the stock is resp abalone is in place for the various stock indicators (e.g. catch reductions and b) to demonstrate that the stock is resp ges in catch). blidated assessment of the various stock d recruitment surveys where available) for reviewing the outcomes of applying tes to date) with particular reference to ates the stocks ability to fluctuate arouted assessment and the stocks ability to fluctuate arouted assessment of the stock is resp at the stocks ability to fluctuate arouted assessment of the stock is resp at the stocks ability to fluctuate arouted assessment of the stock is resp at the stocks ability to fluctuate arouted assessment of the stock is resp at the stocks ability to fluctuate arouted assessment of the stock is resp at the stocks ability to fluctuate arouted assessment of the stock as a stock and the stock is resp at the stocks ability to fluctuate arouted assessment as the stock as a stock and the stock as a	or (annual e harvest ules for the racking annual atch are g. annual catch count factors /or bonding to the g. annual catch count factors /or bonding to the ck indicators over the past g the harvest o testing that und the target

	reference level. Also, demonstrate that fishing effort is being constrained to a level that is not having a significant impact on recruitment to the stock.
Revised action plan after 1 st audit to align with new condition 4	2 nd Audit Provide an assessment of the various stock indicators (e.g. annual catch rate and recruitment surveys where available) to demonstrate that the decline in abundance has been halted or reversed. If there is no evidence that the stock has responded to the HCRs, provide evidence that a formal recovery strategy has been developed to return the stock to the target level (and thus above the point of recruitment impairment) within two times the generation time of Greenlip abalone.
	Provide an assessment of the various stock indicators (e.g. annual catch rate and recruitment surveys where available) to demonstrate that the decline in abundance has been halted or reversed. If there is no evidence that the stock has responded to the HCRs, provide evidence that a formal recovery strategy has been implemented to return the stock to the target level (and thus above the point of recruitment impairment) within two times the generation time of Greenlip abalone.
	4 th Audit (to close out both conditions?) Provide a consolidated assessment of the various stock indicators (e.g. annual catch rate and recruitment surveys where available) since the harvest/rebuilding strategy was implemented, and taking into account factors that may be affecting these indicators. Use the results as a basis for reviewing the outcomes of applying the strategy and adjust this to ensure it constrains future fishing effort to a level that is not having a significant impact on recruitment to the stock.
Progress on	The latest information on stock status (Section 3.1.2) shows that the stock has continued to decline in both Area 2 (Figure 6) and Area 3 (Figure 7). This is evidence that the stock is <u>not</u> responding to the changes in catch that the
Condition [Year 1]	application of the HCR has required and that the HCR is <u>not</u> moving the stock towards the TRP. The expected progress for the 1 st Surveillance audit has therefore <u>not</u> been achieved.
Status of condition	Open. Behind target.

Revised Scoring worksheet Principle 1

Principle	Component	Wt	Performance Indicator (PI)	Wt	Score
One Outcome	Outcome 0.333	1.1.1 Stock status	0.333	60	
		1.1.2 Stock rebuilding	0.333	80	

		1.1.3	Genetic outcome	0.333	100
Management	0.667	1.2.1	Harvest strategy	0.167	85
		1.2.2	Harvest control rules & tools	0.167	85
		1.2.3	Information & monitoring	0.167	90
		1.2.4	Assessment of stock status	0.167	90
		1.2.5	Genetic management	0.167	95
		1.2.6	Genetic Information	0.167	100

Overall weighted Principle-level scores		
Principle 1 - Target species (changed after new condition 4)		
Principle 2 - Ecosystem (unchanged)		
Principle 3 – Management (unchanged)		

Condition 2

Performance	Insert relevant PI number(s)	Insert relevant scoring issue/ scoring guidepost text	Score		
Indicator(s) & Score(s)	1.1.1 (Brownlip abalone)	The stock is at or fluctuating around a level consistent with MSY	70		
Condition	By the 3 rd surveillance aud sufficient to move the stor reference point.	it, provide evidence that changes to ca ck to a level where it fluctuates around	atch are I the target		
Milestones	By the 1 st Surveillance Audit - Provide an assessment of various stock indicators to demonstrate that the stock is responding to the harvest control rule (changes in catch). By the 3 rd Surveillance Audit - Provide a consolidated assessment of the various stock indicators.				
Client action plan	examining the performance indicator (and oints, as stipulated in the harvest strategy, harvest control rules for the management hery, so tracking annual catch rate is an ap ges to catch are moving the stock back tow ment of various stock indicators (e.g. annual vailable), and taking into account factors t g. catch reductions and/or environmental s responding to the harvest control rule (cl ment of various stock indicators (e.g. annual vailable), and taking into account factors t g. catch reductions and/or environmental s responding to the harvest control rule (cl ment of various stock indicators (e.g. annual vailable), and taking into account factors t g. catch reductions and/or environmental s responding to the harvest control rule (cl	nual catch rate) . That is, a of Brownlip propriate wards the target al catch rate and hat may be conditions), to hanges in catch). al catch rate and hat may be conditions), to hanges in catch).			
	³¹⁰ Audit - Provide a consolida annual catch rate and recruit Use the results as a basis for (e.g. the time series to date) strategy facilitates the stocks Also, demonstrate that fishin significant impact on recruit	ated assessment of the various stock indic ment surveys where available) over the pa reviewing the outcomes of applying the ha with particular reference to testing that th ability to fluctuate around the target refe g effort is being constrained to a level that nent to the stock.	ators (e.g. ast three years. arvest strategy ae harvest rence level. t is not having a		
Progress on Condition [Year 1]	The latest information on a declining trend in CPUE ha gradually increase in Area that the changes to catch the stock back towards the	the status of the stock (Section 3.1.3) s is flattened out in Area 2 (Figure 8) and 3 (Figure 9). We have considered this required by the application of the HCR is target reference level.	hows that the continued to to be evidence are moving		
Status of condition	Open. On target.				

Condition 3

Performance Indicator(s) & Sore(s) number(s) guidepost text Status 1.2.1 (Brownlip abalone) The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy over together towards achieving stock 70 Condition By the 3rd surveillance audit, adjust the harvest strategy or provide evidence that it is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in P11.1.1. This should address providing a biological basis for selection of the limit reference point. Milestones At the 1 st Surveillance Audit - Provide an update on how the fishery is performing to validate if the current reference levels are appropriate. At the 3 rd Surveillance Audit - Provide a review of the state of the stock with respect to the application of the harvest strategy to provide evidence that elements of the harvest strategy work together towards achieving stock management objectives. A formal harvest strategy work together towards achieving stock management of Brownlip abalone is in place for this fishery. The reference levels and control rules in the harvest strategy have recently been reviewed and require a suitable time series to determine if the performing to validate if the current reference levels are appropriate. Demonstrate that additional research and analyses in biological aspects relevant to the efficacy of the reference levels has started. 2 rd Audit - Provide an update on how the fishery is performing to validate if the current reference levels are appropriate. Demonstrate that additional research and analyses in biological aspects relevant to the efficacy of the reference levels has		Insert relevant PI	Insert relevant scoring issue/ scoring			
Performance Indicator(s) & Score(s) 1.2.1 (Brownlip abalone) The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy york together towards achieving stock management objectives reflected in PI 1.1.15680. 70 Condition By the 3rd surveillance audit, adjust the harvest strategy or provide evidence that it is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1. This should address providing a biological basis for selection of the limit reference point. Milestones At the 1 st Surveillance Audit - Provide a review of the state of the stock with respect to the application of the harvest strategy to provide evidence that elements of the harvest strategy work together towards achieving stock management objectives. A formal harvest strategy with performance indicators and control rules for the management of Brownlip abalone is in place for this fishery. The reference levels and control rules in the harvest strategy have recently ben reviewed and require a suitable time series to determine if the performing to validate if the current reference levels are appropriate. Demonstrate that additional research and analyses in biological aspects relevant to the efficacy of the reference levels has started. 2 nd Audit - Provide an update on how the fishery is performing to validate if the current reference levels are appropriate. Demonstrate that additional research and analyses in biological aspects relevant to the efficacy of the reference levels has started. 2 nd Audit - Provide an update on how the fishery is performing to validate if the current reference levels are appropriate. Demonstrate that addit		number(s)	guidepost text	Score		
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	implemented under the harvest strategy. The assessment team were also					
	advised that research to better identify the size at onset of maturity has been					
	initiated for Brownlip abalone in both Area 2 and Area 3. This is intended to					
	help verify whether that the reference points are appropriate for the stock.					
	The assessment teams considers that this evidence is sufficient to demonstrate					
	the expected progress towards closing out the condition.					
Status of condition	Open. On target.					

5.2 Progress on Recommendations

PI 1.2.1: Greenlip abalone.

Recommendation (i): The harvest strategy would be substantially strengthened by testing the assumption that the threshold reference point equates to 30% unfished spawning biomass. This could be explored through comparison with unfished areas as has been attempted with Roe's abalone. Reference points should then be updated through review of the HS.

Progress reported: No specific activities to address this recommendation were reported during the surveillance audit but changes made to the LML have increased the buffer between the estimated size at maturity and the LML and have therefore provided additional protection to the stock.

Recommendation (ii): The harvest strategy is somewhat vulnerable from the averaging of catch rate over a period of three years. This dampens any signal of decline and would slow management response to a period of rapid decline in the stock. Consideration should be given to reducing this risk, for example by developing a weighted index of the last three years with greatest weight given to the most recent period.

Progress reported: No specific changes to the indicator used in the harvest strategy were reported but consultation on revisions to the harvest strategy, including to the use of a 3 year moving average have begun. Also, management actions (such as the increase in LML noted above) have been taken in addition to the reductions in the TAC that were required by the application of the HCR. Industry were also pro-active with the introduction of some of the LML changes before they were mandated. This is evidence that the industry and management have been responsive to a greater degree than a strict application of the harvest strategy would have required. This responsiveness does reduce the risk identified as being inherent in the current form of the indicator used in the HCR and should continue to be demonstrated until the harvest strategy itself is revised.

PI 1.2.1: Brownlip abalone.

Recommendation (i): The harvest strategy is somewhat vulnerable from the averaging of catch rate over a period of three years. This dampens any signal of decline and would slow management response to a period of rapid decline in the stock. Consideration should be given to reducing this risk, for example by developing a weighted index of the last three years with greatest weight given to the most recent period.

Progress reported: No specific changes to the indicator used in the harvest strategy were reported but consultation on revisions to the harvest strategy, including to the use of a 3 year moving average have begun.. Also, management actions (such as the increase in LML noted above) have been taken in addition to the reductions in the TAC that were required by the application of the HCR. Industry were also pro-active with the introduction of some of the LML changes before they were mandated. This is evidence that the industry and management have been responsive to a greater degree than a strict application of the harvest strategy would have required. This responsiveness does reduce the risk identified as being inherent in the current form of the indicator used in the HCR and should continue to be demonstrated until the harvest strategy itself is revised.

PI 1.2.2: All species.

Recommendation: The control rule allows a large increase in catch when the stock moves upwards over the Threshold RP. This risk sending the stock immediately back below this RP. This could be resolved by breakout rules that allow smaller upward steps with an increment every two years, or, requiring the PI to be above the RP for at least two years before action is taken.

Progress reported: No specific actions were reported to address this risk that arises from the current form of the HCR. Nevertheless, as noted above, industry and management have been responsive to a greater degree than a strict application of the harvest strategy would have required. This responsiveness does reduce the risk identified as being inherent in the current form of the HCR and should continue to be demonstrated until the harvest strategy itself is revised.

6 References

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7 Appendices

7.1 Appendix 1. Re-scoring evaluation tables

Greenlip Abalone. Revised text is in red.

PI 1.1.1	The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing			
Scoring Issue	SG 60	SG 80	SG 100	
A Stock sta	itus relative to recruitment impairment			
Guidep ost	It is likely that the stock is above the point where recruitment would be impaired (PRI).	It is highly likely that the stock is above the PRI.	There is a high degree of certainty that the stock is above the PRI.	
Met?	Y	Ν	Ν	
Justific ation	Catch is dominated by the oprimarily protected by the oprimarily protected by the opsite status of this stock, as assert relatively stable until the la and many others in the regimortalities of harvestable operations. The minimum size limit is his protection of an estimated operation of an estimated operation of an estimated operation of the legal sized bid between declines in supervise since 2005, this time long to provide a high degree areas of the fishery for the reduced over this period in The most recent annual val above it in the other. Analy and length-frequency distribution the SCPUE trend. We have	commercial fishery (~95%) w total allowable catch and the ssed using the standardised of st few years when declines w ion due to a heat wave (Hart tock or lower recruitment du igh relative to size at onset of 40% of the spawning biomas nds in recruitment which sug w years when decline has occo omass (Hart et al., 2016). The ized stock and recruits means er than fishing induced decline the SG 60 and SG 80 levels. Egree of certainty that the stoce itment has been monitored be the series of data has not beer ee of certainty (Hart et al., 20 es that stock abundance has last 7 years. Although catcher response to this decline, the ues of SCPUE are below the ses of raw catch rate, mean butions from catch sampling we concluded that while it is l	ith spawning biomass e legal minimum size. The catch rate has been vere seen in this species et al., 2016) causing ue to this or other of maturity and provides as (Hart <i>et al.</i> 2013a). gests stability through curred simultaneously with he absence of a lag s this is consistent with he in recruitment. This ock is above the PRI for the by fishery-independent in considered sufficiently 016). been declining in both es have been substantially e decline has continued. LRP in one area and just meat weight per individual , support the decline seen ikely that the stocks of	

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing				
Scorin	g Issue	SG 60	SG 80	SG 100		
		highly likely that they are and therefore the scoring issue is no longer met at the SG80 level. A new condition is therefore required.				
b	Stock sta	atus in relation to achievement of MSY				
	Guidep ost	The stock is at or fluctuating around a level consistent with MSY. around with M above t recent		There is a high degree of evel certainty that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.		
	Met?		Ν	Ν		
	Justific ation	Target reference points have only been recently implemented in the fishery but the performance of the fishery has been examined in relation to these using data from the last 20 years. Over this period, the stock has only occasionally exceeded a target consistent with a proxy for MSY (Hart et al., 2016). It thus cannot be said to be fluctuating around this level. There has not been a history of change in catch consistent with attempting to keep the stock around the target SCPUE. There is evidence that this fishery has experienced changes in productivity due to natural environmental fluctuations in 2010/11. Given this, adjustments to the reference points consistent with natural environmental fluctuations are acceptable, although have not been developed in this case. Catch has been reduced in attempt to increase the stock abundance, however it is not clear that this is maintaining the stock around a level consistent with MSY given this reduced productivity.				
Refere	ences	Hart <i>et al.</i> 2013a; Hart <i>et al.</i> 2016.				
Stock	Status rel	ative to Reference Points				
		Type of reference pointValue of reference pointCurrent stock status relative to reference point				
Reference point used in scoring stock relative to PRI (SIa)		3y moving average of SCPUE	Area 2- 7.2, Area 3- 6.6 (kg meat / h)	Area 2- ~7.5, Area 3- 8.3 (kg meat / h) (that is, approaching).		
Reference point used in scoring stock relative to MSY (SIb)		3y moving average of SCPUE	Area 2- 14.4, Area 3- 13.2 (kg meat / h)	Area 2- ~7.5, Area 3- 8.3 (kg meat / h) (that is, well below).		

PI 1.1.1	The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing			
Scoring Issue	SG 60 SG 80 SG 100			
OVERALL PERF	ORMANCE INDICATOR SCOR	E:		60
Overall 60 (two	scoring issues meets SG60)			00
CONDITION NUMBER 1				
By the third surveillance audit, provide evidence that changes to catch are sufficient to				1
move the stock to a level where it is at or fluctuates around the target reference point.				
CONDITION NUMBER 4				
By the fourth surveillance audit, provide evidence that the stock is highly likely to be				4
above the PRI.				

7.2 Appendix 2. Additional detail on conditions/ actions/ results

Condition 4

Performance Indicator	1.1.1 (Greenlip abalone)			
Score	60			
	There is no longer a high degree of certainty that the stock is above the PRI for the following reasons: Although the level of recruitment has been monitored by fishery-independent surveys since 2005, this time series of data has not been considered sufficiently			
RationaleSurveys since 2003, this time series of data has not been considered so long to provide a high degree of certainty (Hart et al., 2016). The trend in SCPUE indicates that, although catches have been substa reduced, stock abundance has been declining continued to decline in b areas of the fishery for the last 7 years. Although catches have been substantially reduced over this period in response to this decline, the o has continued The most recent annual values for the SCPUE are below LRP in one area and just above it in the other. Analyses of raw catch ra meat weight per individual and length-frequency distributions from ca sampling, support the decline seen in the SCPUE trend. We have concl that while it is likely that the stocks of Greenlip abalone are above the meeting the SG60 level, it is no longer highly likely that they are and th the scoring issue is no longer met at the SG80 level.				
Condition	By the fourth surveillance audit, provide evidence that the stock is highly likely			
	to be above the PRI. By the second Surveillance Audit – Provide undates on the standardised CPUE			
Milestones	By the second surveillance Addit – Provide diputtes on the standardised CPOE, recruitment, and other indicators of stock status for Greenlip abalone as evidence that the decline in stock abundance has been slowed or halted. By the third Surveillance Addit - Provide updates on the standardised CPUE, recruitment, and other indicators of stock status for Greenlip abalone as evidence that the stock has begun to rebuild.			
	By the fourth Surveillance Audit - Provide updates on the standardised CPUE, recruitment, and other indicators of stock status for Greenlip abalone as evidence that the stock has rebuilt to the extent that it is highly likely to be above the PRI.			
Client action plan2 nd Audit Provide an assessment of the various stock indicators (e.g. annual ca and recruitment surveys where available) to demonstrate that the de abundance has been halted or reversed. If there is no evidence that has responded to the HCRs, provide evidence that a formal recovery has been developed to return the stock to the target level (and thus				

	point of recruitment impairment) within two times the generation time of Greenlip abalone. 3 rd Audit Provide an assessment of the various stock indicators (e.g. annual catch rate and recruitment surveys where available) to demonstrate that the decline in abundance has been halted or reversed. If there is no evidence that the stock has responded to the HCRs, provide evidence that a formal recovery strategy has been implemented to return the stock to the target level (and thus above the point of recruitment impairment) within two times the generation time of Greenlip abalone.
	4 th Audit (to close out both conditions?) Provide a consolidated assessment of the various stock indicators (e.g. annual catch rate and recruitment surveys where available) since the harvest/rebuilding strategy was implemented, and taking into account factors that may be affecting these indicators. Use the results as a basis for reviewing the outcomes of applying the strategy and adjust this to ensure it constrains future fishing effort to a level that is not having a significant impact on recruitment to the stock.
Consultation on condition	The action plan has been developed in close consultation with Research and Management Staff of DPIRD (WA) and the AIAWA.

7.3 Appendix 3. Revised Surveillance Program

A level 5 surveillance program was suggested for this fishery for the initial certification period with an on-site audit for the first, third and fourth surveillance audit. Since an additional condition was assigned during this surveillance audit due to concerns about Greenlip abalone stock status the level has been changed to level 6 (defaults surveillance audit level) with onsite audits during each year.

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 6	On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit & re-certification site visit

7.4 Appendix 4. Variance request approval

COUVER STEWARDS

Marine Stewardship Council

Sabine Daume Scientific Certification Systems 2000 Powell Street Suite 600, Emeryville United States 94608

Sent by email

Date: 09/10/2018

Subject: Request for variation to the MSC Certification Requirement v2.0 FCR-7.23.11.5 for Western Australia abalone fishery

Dear Sabine Daume,

I write with reference to your submission on 09/10/2018 of a request for variation to the MSC Certification Requirement (CR) to allow:

SCS requests a shorter posting period of the MSC surveillance audit announcement (14 days instead of 30 days) for the 1st annual surveillance audit of the Western Australian Abalone Fishery.

As you are aware, the CR procedures relating to v2.0 FCR-7.23.11.5 state:

CABs shall submit this information for posting on the MSC website at least 30 days before the audit activities are carried out

These are integral to ensuring all MSC accredited Conformity Assessment Bodies operate in a consistent and transparent manner. The MSC intends that these requirements be met across all fisheries and CoC certificate holders, except in exceptional, well-justified circumstances, as part of the MSC programme.

MSC notes the factors presented supporting your request, including:

- First annual surveillance audits are part of the Western Australian (WA) Third-Party Certification Program and as such still fall under the WA Government tender process.
- · The first step of this process is to re-appoint CAB Panel members as the panel expired in September 2017.

 The next step involves selecting successful proposal for the 1st surveillance audits which are due this year, including audits of the Western Australian Abalone fishery.

Both processes have not been finalised and the situation is not within the CABs control.

Given the rationale provided, the MSC is willing to grant a variation to the CR in this case subject to the following conditions:

Given the short notification periodhe CAB should make clear that all members of the team are available to meet with stakeholders by virtual or other means, including after the site visit.

Stakeholder comments should be adequately addressed by the assessment team, including any further requests for information or on-site visits to the fishery if necessary.

If you have any questions regarding this response, please do not hesitate to contact the relevant Fisheries Assessment Manager for this fishery.

Marine Stewardship Council cc: Accreditation Services International

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