

Other Reports 2017/18

Ramsar TAG 8 March 2018
Steve Fisher, PHCC Science Advisor

We acknowledge the Noongar people as Traditional Custodians of this land and pay our respects to all Elders past and present



ARC-Linkage Project

Balancing estuarine and societal health in a changing environment

This research is supported under Australian Research Council's Linkage Projects funding scheme (project number LP150100451)



Project collaborators & partners



















ARC-Linkage Project Team

Workshop (6 Sep 2016)





ARC Linkage Project Components

1. Catchment-estuary function & linkages

2. Estuarine ecosystem health

3. Socio-economic health & aspirations

Catchment-Estuary response model

Nutrient isotope tracing

Estuary ecological health

Societal value provision

Socio-economic health

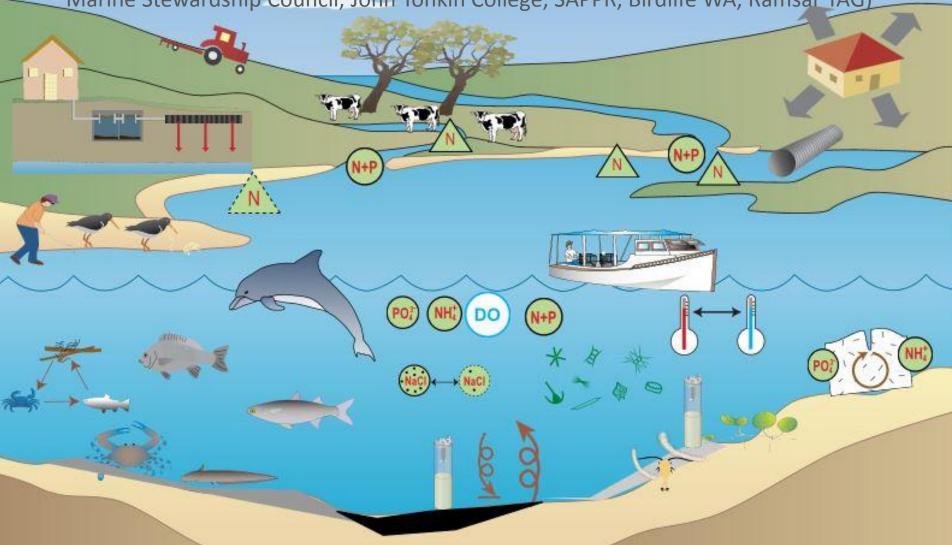
Catchment development scenarios

DSS for sustainable development



Peel-Harvey Estuary Report Card

(ARC-Linkage project, Regional Estuaries Initiative, Murdoch University Cetacean Research, Marine Stewardship Council, John Tonkin College, SAPPR, Birdlife WA, Ramsar TAG)



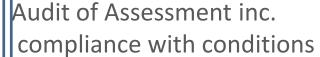
Courtesy of the Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu/symbols/).

Marine Stewardship Council Assessment of Peel-Harvey Estuarine Fishery

Assessment Report

- 2 species
- 5 units of certification
- 3 principles of sustainability:
 - P1: Stock status & Harvest strategy
 - P2: Ecosystem impact
 - P3: Governance, Policy & Management system





- Harvest strategy and control
- Bycatch
- Habitat function
- Consultation





Stakeholder Engagement on Aquatic Resource Management inc. non-fishing based e.g. PHCC, CCWA, Birdlife AUS,

State Government Departments



MSC Certification Conditions: Principle 1

Condition number	Condition	Performance Indicator	Related to previously raised condition?
1	By the 3 rd surveillance audit, provide evidence that the harvest strategy for blue swimmer crab is achieving its objectives.	1.2.1 (all gear)	N/A
2	By the 3 rd surveillance audit, provide evidence that well defined harvest control rules are in place for blue swimmer crab that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference	1.2.2 (all gear)	N/A
3	By the 3 rd surveillance audit, provide evidence that the harvest strategy for sea mullet is achieving its objectives.	1.2.1 (all gear)	N/A
4	By the 3rd surveillance audit, provide evidence that well defined harvest control rules are in place for sea mullet that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	1.2.2 (all gear)	



Marine Stewardship Council 2017 Audit Report – Blue Swimmer Crab

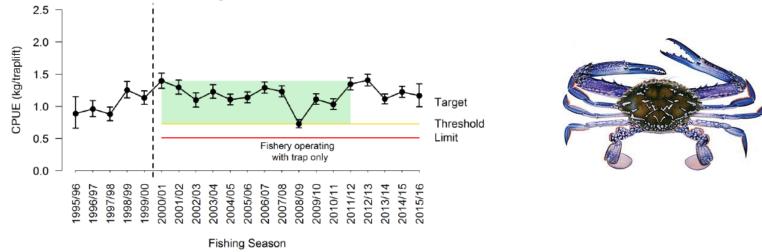


Figure 1. Annual standardised commercial catch rate (kg/traplift) of blue swimmer crabs in the Peel-Harvey crab fishery relative to the associated reference points (target, threshold and limit) for the harvest strategy. The reference period is from 2000/01 to 2011/12; defined as the period where the fishery was operating with traps only and during which time the threshold (lowest historical catch rate), limit (20% below the lowest catch rate) and target (range between the threshold and highest historical catch rate) were set. Fishing season is defined as 1 November to 31 August. (Johnston et al. 2017a, West coast blue swimmer crab resource status report 2017. In Fletcher and Santaro 2017 Status reports of the fisheries and aquatic resources of Western Australia 2016/17).

Blue Swimmer Crab (commercial)

- total catch 2015/16 = 58 t (Target 45 104 t)
- CPUE remained between target and threshold levels (0.7 1.4 kg / traplift)
- Current fishing effort not likely to affect recruitment to the stock
- Harvest Control rules are effective and do not require adjustment



Marine Stewardship Council 2017 Audit Report



- Blue Swimmer Crab (recreational)
 - total catch from boat 2015/16 = 38 56 t (Target 62 144 t)



Marine Stewardship Council 2017 Audit Report – Sea Mullet

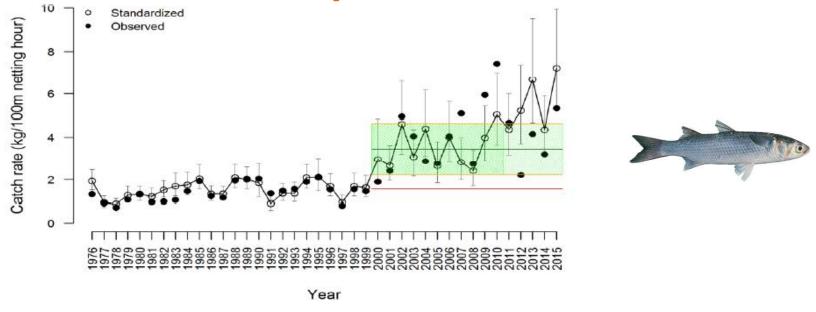


Figure 4. (from Johnston et al. 2017b http://www.fish.wa.gov.au/Documents/wamsc_reports/Western%20Australian%20Marine%20Stewardship%20Council%20Report%20Series%20No%203%20Addendum.pdf)

- Threshold levels for both catch 144.8 t* (46 70 t) & CPUE were breached triggering further investigation (stock assessment by 2019)
- Trends in catch and catch rates are either stable or increasing
- Annual catches historically > 100 t without signs of stock depletion
- Recent catches unlikely to be cause for concern

Marine Stewardship Council 2017 Audit Report – Retained species



- Yellowfin whiting
 - Large commercial catches in 2014 and 2015 (29.6 t) breached the 13.8 t threshold (target < 12 t) triggering a review
 - Results suggest that the recent level of fishing was acceptable and due to strong recruitment pulses in 2010/11 and 2015/16
- Tailor
 - 2013 threshold exceeded but were below target levels for 2014 and 2015
 - Investigations showed catch rates follow trends in recruitment and 2013 breach due to strong recruitment
 - There are no concerns about the current status of the stock and no further management actions are required





MSC Certification Conditions: Principles 2 & 3

Condition number	Condition	Performance Indicator	Related to previously raised condition?
7	By the 4th surveillance audit, provide evidence that the scoop net sector is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. This should include consideration of overlap with habitat for bird species with emphasis on listed threatened species.	2.4.1 (scoop net)	
8	By the 1 st surveillance audit DoF to demonstrate that consultation processes have been amended to provide opportunity for all interested and affected parties to be involved.	3.1.2 (commercial)	N/A
9	By the 1 st surveillance audit DoF to demonstrate that consultation processes have been amended to provide opportunity for all interested and affected parties to be involved.	3.1.2 (recreational)	N/A



MSC Certification Conditions: Principle 2

Condition number	Condition	Performance Indicator	Related to previously raised condition?
5	By the 1st surveillance audit, provide evidence that an ongoing fishery independent bycatch observation/reporting program, to detect any increase in risk to bycatch species, has been implemented, of a design suitable for the scale of the fishery.		
	This may include an independent local volunteer from the region, with an agreed design, process and reporting framework (agreed with CAB). This may include compliance reports for ETP species.	2.2.3 (gill net)	N/A
6	By the 1st surveillance audit, provide evidence that an ongoing fishery independent bycatch observation/reporting program, to detect any increase in risk to bycatch species, has been implemented, of a design suitable for the scale of the fishery. This may include an independent local volunteer from the region, with an agreed design, process and reporting framework (agreed with CAB). This could include compliance reports for ETP species.	2.2.3 (haul net)	N/A



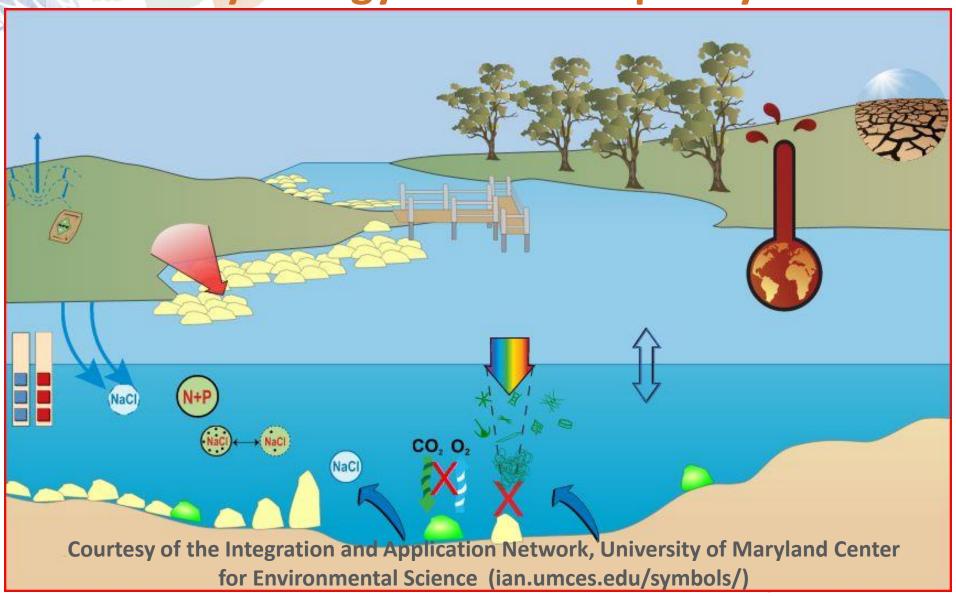
MSC Certification Conditions: Principles 2 & 3

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- DPIRD (Fisheries) conducting surveys using e.g. drones to monitor bird disturbance by fishers
- Birdlife Australia (with PHCC) has funding from a 2017 State NRM Community Action Grant to monitor bird disturbance (2017/18)



Threats to Lake Clifton Thrombolites: hydrology and water quality



Threatened Ecological Communities Program Logic

4. THREATENED ECOLOGICAL COMMUNITIES By 2050 the condition of the nine EPBC listed threatened ecological communities in the Peel-Harvey Region is maintained or improved

ASPIRATIONAL GOAL (2050)

The condition of EPBC Act listed Threatened Ecological Communities is improved

By 2035, the condition of the Wheatbelt Eucalypt Woodland community is improved across WA

By 2035, the condition of the eight TECs on the Swan Coastal Plain (SCP) is improved and communities are more resilient (assumption is Tuarts will be applicable)

By 2035, the condition of the Thrombolite TEC has stabilised or improved for greater resilience through management actions, including reducing the salinity of Lake Clifton

Changes

By 2035, increased numbers of land managers are delivering management actions set out in Conservation Advice and Recovery Plans and are actively involved in the conservation of TECs

Practice & attitude change

Changes

in asset

5 YR OUTCOMES (2023)

implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities

By 2023, the

4Aa By 2023 there is an 850 ha increase in the area of the Wheatbelt Eucalypt Woodland protected, managed or restored

4Ea_By 2023, demonstrate 2 partnerships are established with local indigenous (Noongar) communities to plan and deliver NRM outcomes

4Ab By 2023 there is a 949 ha increase in protected, managed and restored TECs

4Ec By 2023, 150 land managers have improved understanding of principles & practices for restoration and conservation activities

4Ed By 2023, there is an increased appreciation of values of TECs by 250 land managers that manage TEC habitat or buffers

4Ac By 2023, 110 ha of Lake Clifton buffer and catchment is managed or restored

> 4Ef By 2023. collaborative management is supported and resourced through 75% of members actively participating in the Thrmobolite Recovery Group

Practice & attitude change

Assumption: The implementation of identified actions will contribute to the achievement of the 5 year outcomes

Assumption: The achievement of the 5 year outcomes will contribute to the achievement of the long-term outcomes

Natural areas fenced

Initiatives for buffers/ linkages revegetated

4Eb By 2023, 128 TEC

landholders are

involved in active

management of TECs

regeneration/revegetation/ restoration

Feral animal control

Disease management

4Ee By 2023, 1 agreed

priority intervention

actions are defined and

commenced for the

Thrombolite TEC.

informed by peer-

reviewed science

Weed control

Outputs biophysical

Establish partnerships and engage Indigenous (Noongar) representatives/ groups to plan, deliver and preview projects

No. sites where cultural values are identified & protected

Land managers implementing improved fire and/or grazing regimes

Land managers agree to fence

Voluntary management agreements

Increased awareness of the program through promotional activities

Land Field days & w/ managers involved in shops Land for Wildlife

Determine research program for thrombolities TEC

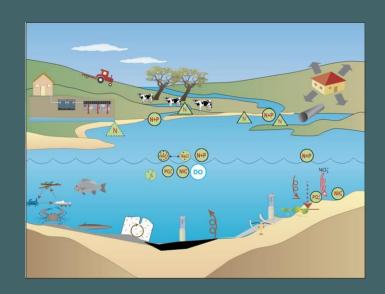
Outputs biophysical



Lake Clifton Thrombolite Recovery Plan Priority Actions addressed by NLP 2 RLP Ramsar Project Design

- Action 3: Clarify the extent and condition of the community
- Action 5: Conduct biological research to clarify threats to the thrombolites and help design recovery actions
- Action 7: Ensure areas containing the microbial community are protected from physical damage
- Action 9: Undertake ongoing monitoring of physical condition and microbial assemblage of thrombolites
- Action 10: Monitor water quality and hydrology
- Action 11: Determine the range of normal fluctuations for hydrological regimes and attempt to maintain them within that range
- Action 12: Manage water quality
- Action 20: Report on success of management strategies for the thrombolite community.







Thank you for your time today!

