# Tasmanians for Marine Parks

# Submission to the Rock Lobster Review 2022

To: rocklobster.review@nre.tas.gov.au

## Our organisation

Tasmanians for Marine Parks is a community based not-for-profit organisation advocating for increased government action to protect and restore our shared marine environment. We are advocating for a network of representative no-take marine parks in each bioregion in Tasmania supported by Management Plans and Marine Parks legislation. We are also advocating for marine ecosystem health more broadly to protect ecosystem function, biodiversity, habitat and high conservation value areas. We acknowledge the connection and concern that many sectors of society have for the declining state of Tasmania's marine health which include the Aboriginal community, recreational fishers, commercial fishers and non-extractive users. We welcome this opportunity to contribute ideas.

## Proposed Rule Changes

We do not see a need to comment in detail on these measures. Their value needs to be determined by the need and the science.

## Tasmanian Rock Lobster Stocks Generally

The discussion paper is helpful frank about the status of this fishery. The discussion paper briefly notes the history of the fishery quite well, including the progressive implementation of fishing effort controls since the 1990s.

The Discussion paper correctly points to the dual current problems of over-fishing, including localised overfishing, and larger environmental factors.

Dr Lyle's 2020[1] study notes that in the late 2000s there was a record low recruitment event which led to an abrupt decline in stock and a reduction in TACC to the current level of 1050.7 tonnes. He states that we currently we have the lowest commercial catch since the 1950s.

The discussion paper notes, "Further stock rebuilding measures are needed to increase stock levels in most parts of the State except the South West." This is worth a bit more examination before moving on to the current East Coast strategy in particular.

[1] Rebuilding East Coast Rock Lobster Stocks: Developing an Effective Management Framework for Recovery, Lyle et al 2020

**Where we are catching fish**

The maps in the discussion paper average stock levels across an entire region, so they lack the detail needed to fully understand the state of the fishery in many areas.

The East Coast fishery is important to the recreational sector, but it is not the only area 'doing it tough'. There has been a general observation among our members that crayfish are scarce in most accessible areas.

It is likely that the overwhelming majority of crayfishing done within a few kilometres of a public boat ramp is recreational fishing.

When coupled with long-term environmental changes, this means the effective removal of nearly all crayfish in many of these areas.

As the stock declines this effort is then spreading along the coast. In an ABC interview in 2014 MAST's Peter Hopkins said there had been an 80 per cent surge in recreational boat numbers since 2000. That was one boat for every 17 Tasmanians, the highest level of boat ownership in the country. Anecdotally these boats have been increasingly larger vessels able to fish on more remote and exposed coastlines.

This depletion is not just evident on the East Coast. The North-West Coast is described as an area of "high productivity", but this is not the lived experience of stakeholders in that area. The catch is not evened out across Area 5, but is commercially focussed on the Fleurieu Group and King Island, where most of the catch is taken. Small boat recreational fishermen dominate accessible coastal areas like Rocky Cape. These inshore areas are typified by extremely low biomass along the majority of the mainland coastline of Bass Strait. Its hard to even see a crayfish of any size while diving on this coast. These areas are so overfished that it is unlikely that they will respond to simple rule changes.

We would concur with Dr Lyle's assessment that, "East Coast (areas 1-3) and North-West (area 5) have seen far greater exploitation and require regional management to ensure sustainable populations."[2]

This is a broader response than the one suggested for the East Coast alone.

**The importance of Crayfish to the environment**

Southern rock lobster are a keystone predator, when they aren't found in an area in their natural range of sizes it has effects on the marine ecosystem that we are only beginning to understand[3]. It has a clear relationship with urchin numbers, but also the density of other

[2] Rebuilding East Coast Rock Lobster Stocks: Developing an Effective Management Framework for Recovery, Lyle et al 2020

[3] One example is "Predation of the sea urchin Heliocidaris erythrogramma by rock lobsters (Jasus edwardsii) in no-take marine reserves August 2006 Journal of Experimental Marine Biology and Ecology 336(1):120-134", marine reserves allow us to compare fished and unfished sites for scientific research

prey species. When it get badly out of balance, it can contribute to problems like urchin barrens.

An issue for all of the community, is when 'skewed' fishing effort in sheltered and accessible coastal areas overlaps with areas of high conservation value. Sheltered areas often have higher biodiversity than open coast.

A loss of a section of stock in an area can be compensated for by better management in another area, but damage to a unique local habitat because of changing predator/prey relationships cannot be so easily fixed. Marine protected areas provide additional protection for special areas and have a place in a well-run fisheries management system. The amount of coast that would need to be devoted to this use is small.

**What is happening to the environment?**

Our members have noted the declines not just in cray numbers but also the range of sizes seen on reefs, even crays too small to be directly affected by fishing are absent. This is also showing up in studies that indicate fundamental changes have happened in our ocean environment in recent decades.

"The results showed evidence of a common trend across south-eastern Australia. Specifically, a substantially rapid decline in SP [ rock lobster surplus production] was observed around the late 1990s and early to mid-2000s period". Scientists are talking about "a regime shift in Southern Rock Lobster productivity across south-eastern Australia".[4]

"Tasmania's East Coast is a recognised global warming hotspot and fish species native to Victoria and New South Wales are now well established in our waters. This includes the long-spined sea urchin which creates large barrens where productive lobster habitat once existed[5]. There has also been a significant loss of kelp forests and related ecosystems along the east coast[6]".

Crayfishing will not return to the way it was, the indications are that we will get a temporary lift in productivity in the north as waters warm, then cray stocks will go into permanent

[4] Pecl G, Frusher S, Gardner C, Haward M, Hobday A, Jennings S, Nursey-Bray M, Punt A, Revill H, van Putten I (2009). The east coast Tasmanian rock lobster fishery – vulnerability to climate change impacts and adaptation response options. Report to the Department of Climate Change, Australia. 2009

[5] Centrostephanus rodgersii (the Longspined sea urchin or Centro) is not endemic to Tasmania, this species has undergone a range extension from coastal NSW to the Tasmanian coastline via ocean currents. This is caused by the East Australian Current, that has grown in strength over the past 60 years thanks to climate change. On the Tasmanian East Coast, surveyed densities of C. rodgersii have increased from 1,500 urchins per hectare in 2001/02 to 2600 urchins per hectare by 2016/17. This is an average population increase of 3.8% per annum. Longspined sea urchins are powerful grazers that eat off all the kelp to form urchin barrens, virtually bare rock where little survives. Urchin barrens are having a major impact on rocky reef habitat and the recreational and commercial fisheries.

[6] Pecl et al 2009

decline.[7] We can expect crayfish larvae settlement to become unpredictable, the stock to be more subject to disease, and other potential 'surprises' like ocean acidification impacts.

"Warmer waters, such as will occur along the east coast of Tasmania in the future, may mean this area would be unable to support rock lobster populations of the same size as found today"[8].

We don't need to argue about who gets a bigger share of the pie. We need to accept that the pie will continually shrink in the long-term and we need to fundamentally rethink the way we approach southern rock lobster fishing.

**Capping effort**

"The East Coast Stock status remains 'poor'" and the discussion paper admits that a 20% biomass target for the East Coast Stock Rebuilding Strategy will not be reached by the deadline in Area 2.

The report names the causes as growing fishing effort and environmental factors causing stock declines. The data indicates that recreational fishing is having a significant impact in this area.

In our experience, some recreational fishermen tend to emphasise the impact of commercial fishing alone. Every stakeholder needs to take responsibility for the state of the stock and the habitat that supports it.

While there are no doubt ongoing issues and potentially much debate about the appropriate amount of commercial fishing, the commercial fishery has a more sophisticated series of measures to control fishing effort, contribute revenue to management, and report on activity.

It would be useful for recreational fishermen, to consider a similar system to control the increasing numbers of people wanting to fish for crayfish as the stock shrinks.

The current way we are doing it just isn't working, "… despite recent management changes (reduced bag limit and shorter season), current management settings alone are not sufficient to effectively constrain recreational catches to target levels..."[9]

"In fact, since a recreational catch target was introduced for the rebuilding zone, the only other seasons when target levels were not exceeded (2015-16 and 2017-18) were those also impacted by external factors (biotoxin closures) that resulted in marked reductions in recreational fishing effort ..."[10]

The current catch and possession limits are at a very low setting, and aren't useful measures any more. The way people fish needs to fundamentally change.

We may need to propose more radical measures like:

[7] Pecl et all 2009 4.3.2
[8] Pecl 2009 section 4.3.1
[9] Lyle 2020
[10] Lyle 2020 [Covid will also explain the recent compliance with the limits just this year]

- limited numbers of tags for each area per person, raffled or auctioned extra tags or licences set at the remaining cap, more like trophy hunting than the freezer filling efforts we sometimes engage in.
- Catch management areas e.g.– specific management plans for urchin damaged areas and other areas with specific threats, values, or challenges.
- Holistic planning across the State to deal with a range of values and uses, e.g not just a single target species but how fish farming and other uses can fit with wild fisheries management regimes.

**The Old Values of Fishing**

We are now seeing a growing demand for catch redistribution, this does not address all the issues like habitat damage that are causing a fundamental change in the environment and the fishery. These changed fishing distributions between stakeholders are short-term fixes that can only be met by ignoring longer-term problems. They will also cause significant damage to the commercial fishery, the only party who has any volume of stock to give up.

We need to stop looking at the success of a fishing activity in terms of the quantity of stock taken and focus on the quality of the experience.

**What Commercial fishermen value**

The value of a lobster to the commercial sector is the net profit. While some stakeholders may be suspicious about this as a motivation, but it provides jobs in regional areas, revenues to government and foreign exchange earnings. The concentration of ownership has solidified this as the main value for commercial operators, since a company officer has a sole duty to provide a return to shareholders.

The estimated gross value of the Tasmanian wild fishery is $188M (2016/17) compared with aquaculture at $894M. The gross value of rock lobster production is $93M with abalone taking up a large proportion of the remainder[11].

Crayfishing is a relatively small employer, only 1342 FTEs counting all downstream processing, and that is the whole State fishery including abalone production and processing[12]. Rock lobster exports by value are less than those of the cherry industry.[13] Although wild fishing

[11] Tasmanian Fisheries and Aquaculture Industry 2017/18: Economic Contributions Summary https://www.imas.utas.edu.au/__data/assets/pdf_file/0007/1308067/Economic-Contributions_TAS-Summary_NOV2019.pdf p.3

[12] Tasmanian Fisheries and Aquaculture Industry 2017/18: Economic Contributions Summary https://www.imas.utas.edu.au/__data/assets/pdf_file/0007/1308067/Economic-Contributions_TAS-Summary_NOV2019.pdf, p.3

[13] https://www.stategrowth.tas.gov.au/__data/assets/pdf_file/0008/278549/Exports_by_Product_-_2015-16_to_2019-20.pdf

overall is still a useful export earning industry, by way of comparison iron ore and aluminium exports are around $500m each per annum[14].

**What recreational fishermen value**

Fishermen are a very broad grouping with differing views and interests. Only about 15% of fishers have cray licenses. The most vocal are not always representative of the dominant view. Line fishing is the dominant activity undertaken by recreational fishers, representing 88% of total fishing effort. The average level of interest is only 5.3 days per fisher per annum. Most people are happy with a cray or two on the summer holidays[15].

Recreational fishermen will have a significant impact on the 'beer and bait' towns located near sheltered boat ramps. They must also add significant value related service industries.

This isn't directly linked to the size of the recreational catch. One of the issues with recreational fishing is that effort remains very high even when catches dramatically fall.

"…particularly keen or avid fishers contributed disproportionately to the total effort (and catch). For instance, it was estimated that just 20% of fishers accounted for more than half (55%) of the total fishing effort. 10% of fishers accounted for about a third (34%) of total effort[16].

We have crafted a catch maximisation framework to provide for maybe 2000-3000 avid recreational cray fishermen. There is as much an argument for redistributing this catch as there is the commercial catch.

For most Tasmanian fishers, non-catch motives relating to relaxation, socialising and environment were perceived to be more important than catching and consuming fish. There was strong agreement that fishing trips could be satisfying regardless of whether any fish were caught. "This does not imply that catch related aspects (including consumption) are unimportant, but rather that fishers derive benefits from the fishing experience that are unrelated to catching fish"[17]

This is consistent with other Australian surveys showing that a bigger part of the enjoyment of a fishing trip is being out on the ocean enjoying nature, as much as catching a particular amount of fish. Fishermen are less likely to enjoy a fishing trip that they think might damage the environment. People are more likely to want to see the whole environment managed rather than just a single target species.

People want to take their kids fishing and bond with their youngsters while pulling in a nice sized flattie or cray. Occasionally they want to bring home a big monster cray and tell stories

[14] https://www.stategrowth.tas.gov.au/__data/assets/pdf_file/0008/278549/Exports_by_Product_-_2015-16_to_2019-20.pdf
[15] 2017-18 SURVEY OF RECREATIONAL FISHING IN TASMANIA J.M. Lyle, K.E. Stark, G.P. Ewing & S.R. Tracey, IMAS Hobart, November 2019
[16] 2017-18 SURVEY OF RECREATIONAL FISHING IN TASMANIA J.M. Lyle, K.E. Stark, G.P. Ewing & S.R. Tracey, IMAS Hobart, November 2019
[17] 2017-18 SURVEY OF RECREATIONAL FISHING IN TASMANIA J.M. Lyle, K.E. Stark, G.P. Ewing & S.R. Tracey, IMAS Hobart, November 2019

about their big day out. Most want to feel that this resource well managed, including the general habitat and the other animals they see and encounter out at sea. We do not need to make major sacrifices to support this activity.

**What the broader community value**

An even larger proportion of the Tasmanian community does not go fishing ( more than 75%) but they are rarely talked about, as if an extractive interest is the only legitimate kind of interest one can have in an ocean resource. The non-fishing public also 'own' this common resource. They have similar values to most fishermen. They want to see this resource well managed, a very large percentage want this to include sustainable management of the habitat as well as just a fisheries target species. This will even extend to areas that they never see or visit.

Many people take for granted the willingness of the recreational sector, and the non-extractive community to tolerate very intensive extractive activity in a large natural area that is a commonly owned resource. That tolerance needs to be supported by best practice in the wild fishery, and has to adapt to changing views about what best practice means. This can include allowing space for other uses like marine parks and indigenous fishing,

**Summary**

The answer for fishing is to find a balance whereby the 'thrill of the chase' for recreational fishing is ALWAYs rewarded with a dinner plate sized catch. For commercials it is the ability to invest and be financially secure, not maximising short-term exploitation without regard to other competing community values. For the rest of us, confidence that our 'custodian' role isn't being ignored.

It is interesting that a Rock Lobster Review in 2010 raised very similar issues: is there too much inshore fishing ? the ecological importance of rock lobster, reducing the risk of urchin barren formation, a precautionary risk based approach, gaps in knowledge, climate change as a future issue. It is slightly concerning that a decade later we are still asking the same questions.

Although some changes have occurred there is an absence of holistic strategy to the broader issues in the Tasmanian ocean environment. We seem to be running along behind major changes in the fishery and the environment, being forced to accept change rather than directing it.

Sensible self control and even reduced catches mean more benefits for everyone in the long-run.

**Part of the answer is more marine protected areas**

Marine parks are one simple and inexpensive way to safeguard the environment that our fisheries depend upon. It isn't a 'magic bullet' solution, but is an indispensable part of a sound management system.

A broad range of Australians support marine parks, including a high proportion of fishers.[18]

Most people, including fishers, are surprised by the low percentages we protect for the environment. Only 1.1% of the Tasmanian mainland coast is in sanctuary areas.[19] The same survey is showing that there is a high level of interest in what is unique and special about the places near where people live.

TMP would like to see Tasmanian give a little something back to the environment, a network of Marine Parks targeting small but special and unique areas which would help:

- Safeguard marine biodiversity by safeguard representative marine habitat in each bioregion in Tasmania
- Providing scientific reference areas isolated from impacts for further research
- Giving focus to these areas of special need for research and ecosystem restoration.
- Provide accessible areas for education and tourism possibly linking with land based National Parks for ease of management.
- Provide habitat for insurance populations to recruit to surrounding areas
- Provide areas that have maximum ecosystem function and resilience to climate change.

Michael Jacques

Coordinator

Contact: moremarineparks@gmail.com

[18] Big, Bold and Blue: Lessons from Australia's Marine Protected Areas, edited by Geoff Wescott, and James Fitzsimons, CSIRO Publishing, 2016. P. 339,340. These comments are based on essential research polls 2008-2012 on Commonwealth parks.

[19] Big, Bold and Blue p.340.