Information regarding the NRE Tas size limit proposal for the Tasmanian Rock lobster fishery

This document provides a rationale including biological benefits and an indication of economic impacts arising from a NRE Tasmania proposal dividing the Tasmanian rock lobster fishery into three different size limit areas (see Figure 2). It was written to accompany NRE Tasmania’s “Proposed Rules and Policy Changes” and should be read in conjunction with this. It is focused on the topics considered in the NRE publication.

Note that impacts on catch rates or catch per unit effort (CPUE) have been calculated using length-frequency data from research pot data collected during the 2019/20 season. Stock assessment areas are referred to throughout this document, the boundaries are indicated in Figure 1.

Questions
Please email any questions related to the scientific aspects of this document and the proposed management changes to klaas.hartmann@utas.edu.au. To ensure your email is not missed please use “QUESTION: SRL Size Limits” in your subject. Commonly asked questions and answers will be posted at tasfisheriesresearch.org

Document version history

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Figure 1: Stock assessment areas and boundaries referred to throughout this document.
Northern Zone

Extent: Henty River to Red Rocks (south of Eddystone Point)
Minimum Size Limit: 120mm Female, 115mm Male

Rationale:
This area has the fastest growing lobsters in Tasmania, consequently the original 105/110 size limit allows lobsters to be caught at a young age, many before they have an opportunity to spawn. Increasing the size limit has the following advantages: i) ensuring females have an opportunity to spawn before becoming legal size (ideally for two seasons) and ii) obtaining a higher yield per lobster that recruits to the population.

Yield benefits would be obtained by substantially increasing size limits for both sexes, however egg production has been of significant concern in this area. Consequently, it is proposed to only increase male size limit by 5mm at this time. This will bias the catch to males and provide a higher increase in female protection and egg production. Increasing the male size limit further would be beneficial in future when egg production has recovered.

Economic Impact:
This change is likely to result in an initial 22% reduction in overall CPUE in stock assessment area 4 North East (which does not currently have a 120mm female size limit). In stock assessment area 5 the female size limit is already at 120mm and the impact of increasing the male size limit is expected to be a further 5% reduction in CPUE. In both stock assessment areas the impact on CPUE is expected to diminish over 2-3 years as female lobsters grow through the new size limit. i.e. CPUE is expected to return to current levels in ~ 2-3 years.
**Eastern Area**

**Extent:** Red Rocks (south of Eddystone Point) to Cape Pillar  
**Minimum Size Limit:** 115mm Female, 115mm Male.

**Rationale:**

This area has medium growth lobsters and features punctuated changes in growth at its Northern and Southern ends. On average across this area the 105/110 size limit is too low for the same rationale as the Northern area and has permitted a reduction in biomass to low levels, particularly in the higher growth north.

An increase in size limit will provide similar benefits to the Northern Area with one key difference. The east coast is the primary area of concern for urchin barrens caused by Centrostephanus. Consequently, increasing biomass of large lobsters is an important objective. As male lobsters reach larger sizes than females, intentionally skewing the sex ratio of catch to boost egg production (as for the Northern Area) is undesirable.

**Economic Impact:**

This change is likely to result in CPUE decreases of 25% (stock assessment area 3) to 50% (stock assessment area 2). Note that the resulting CPUE across the area is likely to still be higher than that in 2016/17 prior to the substantial CPUE increase experienced on the East coast. This negative impact on CPUE will diminish over a 2-3 year period as lobsters grow through the new size limit. Lobsters above the new size limit will be larger, consequently for the recreational fleet the catch in weight obtained may ultimately grow as recreational fishers are limited by number, not weight.

A reduced CPUE in the Eastern Area will reduce the commercial race to fish and provide a disincentive for fishers travelling to the Eastern Area opportunistically. However, the lower CPUE will also impact the profitability of local fishers who access quota through the same shared quota market.

**Southern Zone**

**Extent:** Cape Pillar to Henty River  
**Minimum Size Limit:** 105mm Female, 110mm Male.

**Rationale:**

For this area the current size limit is adequately protecting the stock.

Heightened CPUE restrictions in other areas may lead to increases in catch in this area, however given the protection afforded by the size limit this does not raise sustainability concerns.

In much of this region the stock is over-protected by the size limit and under-utilised. Utilisation of this component of the stock is the rationale for the current translocation program. A larger benefit may be attainable through lowering size limits in this region. However, it should also be noted that this over-protection has helped maintain Tasmania’s relatively high egg overall production levels. Although it is unknown how important this region is for egg production due to larval dispersal patterns.