**Questions to IWS 2019 Panel with respect to West Coast rock lobster, together with brief summaries of the documents provided**

S.J. Johnston and D.S. Butterworth

Q1) Have the Panel’s 2018 recommendations about the analysis of the compliance data to estimate poaching trends been appropriately addressed?

Q2) Is it worth pursuing the relationship for commercial CPUE further in updated assessments?

Q3) Is the method now used to estimate (particularly recent) and projected recruitment satisfactory; if not what alternatives are suggested?

Q4) Recent recruitment is poorly estimated; would approaches other than that used currently be preferable?

Q5) Should projections include taking account of stock-recruitment effects (and in the manner suggested)?

Q6) How might the basis used to provide TAC recommendations be improved?

*A brief description of each document is provided in red italics, with the particular aim of linking the documents to the key questions to the Panel. The number in [] refers to the relevant question.*

Primary Documents

MARAM/IWS/2019/WCRL/P1. Brandão, A. and Butterworth, D.S. Trends in poaching for West Coast rock lobster from modelling the “old” and the “new” databases simultaneously updated to 2018

*This document provides the full specifications and results of the poaching analyses undertaken since December 2018, which attempted to incorporate the 2018 Panel’s various recommendations. [Q1]*

MARAM/IWS/2019/WCRL/P2. Johnston S.J. and Butterworth, D.S. Updates to West Coast rock lobster assessments and projections made in 2019 taking account of recommendations made by IWS 2018 panel

*This document provides results of the most recent 2019 updated assessments for each of the five super-areas. The IWS 2018 Panel’s recommended method for estimating recruitment is discussed in this document. This document also describes the basis upon which a scientific recommendation was developed for the TAC for the 2019/20 season. [Q3, Q6]*

MARAM/IWS/2019/WCRL/P3. Johnston S.J. and Butterworth, D.S. Recent assessment and projection sensitivities pursued for West Coast rock lobster

*This document provides results of a number of sensitivities to the base case assessment model, with the aim of assisting responses to [Q2, Q4, and Q5].*

MARAM/IWS/2019/WCRL/P4: Johnston, S.J. and Butterworth, D.S. Stock recruit issues with respect to West Coast rock lobster

*This document considers possible stock-recruit relationships for each super-area, and incorporates them in future projections. [Q5]*

MARAM/IWS/2019/WCRL/P5. Questions to the IWS 2019 Panel with respect to west coast rock lobster, together with brief summaries of the documents provided

Background Documents

MARAM/IWS/2019/WCRL/BG1. Johnston S.J. and Butterworth, D.S. A summary of the west coast rock lobster fishery

*This document provides a summary of the west coast rock lobster fishery. It discusses geographic distribution, biology, trends in abundance, harvesting and management rules that have been in place historically. The document also describes briefly the data available for assessments, together with a few updated 2019 biomass assessment variants as well as providing plots of past and future catch trajectories (legal and illegal).*

MARAM/IWS/2019/WCRL/BG2: Johnston, S.J. and Butterworth, D.S. Poaching time series for use in final west coast rock lobster population models

*This document provides the details of the method used to combine the various sources of information on poaching into a single poaching time series which was used in updating the 2019 assessments as well as for projections.*

MARAM/IWS/2019/WCRL/BG3. Johnston S.J. and Butterworth, D.S. Responses to IWS 2018 workshop recommendations made with respect to West Coast rock lobster.

*This document provides responses to the 2018 IWS Panel’s recommendations, where that Panel spent considerable time on the method used for estimating past and projecting future recruitment. Responses to the Panel’s recommendations have been provided in this document.*