

**List of key questions for the panel regarding west coast rock lobster, together with brief summaries of the documents provided**

Currently, due to immense uncertainty regarding poaching of the west coast rock lobster resource, the resource is not managed by an OMP, but rather a range of constant catch projections are produced each year, which take into account these uncertainties. The underlying operating model is a size-structured (i.e. length based) model, which fits annual CPUE data, catch-at-length data and % females in catch data for the commercial trap and hoopnet sectors, as well as from a fisheries independent monitoring survey (FIMS).

The key questions relating to west coast rock lobster poaching are as follows:

- 1) How might the “marriage” algorithm set out in WCRL/P1 to combine the conflicting data sources available relating to poaching be improved?
- 2) How might any information becoming available about local sales of poached lobster be incorporated in these calculations of the total amount poached?

The key questions relating to fitting west coast rock lobster FIMS data are as follows:

- 1) How best to select an appropriate weighting for the split FIMS data in the likelihood?
- 2) Any suggestions for other adjustments to the model to provide a better fit to these FIMS data?

*A brief description of each document is provided in red italics.*

Primary papers

MARAM/IWS/2022/WCRL/P1: Johnston, S.J. and Butterworth, D.S. A summary of key issues relating to the estimation of poaching trends for west coast rock lobster *Jasus lalandii*.

*This document provides details of the available data relating to poaching (compliance data and TRAFFIC data) as well as assumptions made regarding local sales of poached lobster. A method to combine the data is put forwards (the “marriage” method).*

MARAM/IWS/2022/WCRL/P2: Johnston, S.J. and Butterworth, D.S. Addressing the unsatisfactory fit of the assessment model to the super-area A8+ FIMS data for west coast rock lobster *Jasus lalandii*.

*This document examines different aspects of fitting to the FIMS index data and focuses on super-area A8+.*

MARAM/IWS/2022/WCRL/P3: Johnston, S.J. List of key questions for the panel regarding west coast rock lobster, together with brief summaries of the documents provided.

Background documents

MARAM/IWS/2022/WCRL/BG1: Brandao A. and Butterworth DS. Updating compliance poaching trends for west coast rock lobster from modelling the “old” and “new” databases simultaneously. DFFE Fisheries Branch document FISHERIES/2022/JUN/SWG/WCRL/09.

Detailed GLM analyses applied to the poaching compliance data.

MARAM/IWS/2022/WCRL/BG2: Louw S, Okes N and Burgener M. Estimating poached west coast rock lobster exports from South Africa to international destinations (2000-2021). DFFE Fisheries Branch document FISHERIES/2022/JUL/SWG/WCRL/22.

Detailed method and results of the TRAFFIC analyses.

MARAM/IWS/2022/WCRL/BG3: Johnston SJ and Butterworth DS. Overall poaching time series for west coast rock lobster, resulting from combining estimates of illegally exported and locally sold lobsters and compliance time series as at June 2. DFFE Fisheries Branch document FISHERIES/2022/JUN/SWG/WCRL/13.

The “marriage” method is described which aims to combine both the compliance and TRAFFIC poaching data, and the assumptions made with regards to local sales of poached lobsters.

MARAM/IWS/2022/WCRL/BG4: Johnston SJ and Butterworth DS. Further 2022 poaching trends for west coast rock lobster. DFFE Fisheries Branch document FISHERIES/2022/JUL/SWG/WCRL/18.

Final resultant poaching trends to be used in projecting the resource into the future.

MARAM/IWS/2022/WCRL/BG5: Johnston SJ and Butterworth DS. Updated 2022 assessments of the west coast rock lobster resource. DFFE Fisheries Branch document FISHERIES/2022/AUG/SWG/WCRL/23.

This document reports assessment results for all five super-areas for a range of poaching scenarios.

MARAM/IWS/2022/WCRL/BG6: Johnston SJ and Butterworth DS. Initial 2022 projections of the west coast rock lobster resource. DFFE Fisheries Branch document FISHERIES/2022/AUG/SWG/WCRL/25.

This document reports 2022 projections results for all five super-areas for a range of poaching scenarios.

MARAM/IWS/2022/WCRL/BG7: Johnston SJ and Butterworth DS. Further assessment results for the 2022 updated assessment of west coast rock lobster. DFFE Fisheries Branch document FISHERIES/2022/AUG/SWG/WCRL/24.

This document reports further assessment results for which the FIMS data for the 60-74mm carapace length data are up-weighted in the likelihood.

MARAM/IWS/2022/WCRL/BG8. Johnston SJ. Excerpts from the 2018 and 2019 IWS panel recommendations relating to compliance poaching data for west coast rock lobster.

This document tracks a series of IWS panel recommendations relating to the compliance poaching data, and reports actions taken.

MARAM/IWS/2022/WCRL/BG9. Johnston SJ. and Butterworth, D.S. The size-structured (length-based) stock assessment methodology applied to west coast rock lobster.

The document provides the details of the underlying operating model used to assess the west coast rock lobster resource.