The TAC for Tristan da Cunha island rock lobster for the 2014\(^1\) season as calculated using the current OMP

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In 2013 an operational management procedure (OMP) for the Tristan da Cunha rock lobster fishery was adopted. The selected OMP is a target-based OMP based on the recent commercial powerboat CPUE. The details of the selected OMP may be found in Johnston and Butterworth (2013), and are summarised below.

Tristan OMP

The OMP is a target-based rule based on the recent commercial CPUE, viz.:

\[
TAC_{y+1} = TAC_y + \alpha(I_{y}^{rec} - I^{tar})
\]

where

- \(I_{y}^{rec}\) is the average CPUE over the last three seasons (\(y-2, y-1, y\)),
- \(I^{tar}\) is the CPUE target index of 1.163 (the average GLM-standardized 2010-2012 CPUE), and
- \(\alpha = 25\)

A rule to control the inter-annual TAC variation is also applied. The % TAC change relative to the previous season is restricted to a maximum of either up 5% down 5%, i.e.:

If \(TAC_{y+1} < 0.95TAC_y\) then \(TAC_{y+1} = 0.95TAC_y\)

If \(TAC_{y+1} > 1.05TAC_y\) then \(TAC_{y+1} = 1.05TAC_y\)

Note that for the final selected OMP is was also decided to fix the TAC for the first season for which the OMP was applied (2013) to 165 MT.

The relevant input data to be used in setting the 2014 TAC are reported in Table 1. These are the recently updated GLM-standardised CPUE values for the seasons 2011, 2012 and 2013 (see Johnston et al. 2014).

\(^1\)The season 2014 refers to here as the split season 2014/2015. The Tristan fishing season is assumed to start in July each year.
2014 TAC calculation

\( I_y^{rec} \) is the average GLM-standardised CPUE over the last three seasons (2011-2013)

\[ = \text{average of } 1.151, 0.992 \text{ and } 0.905 \]

\[ = 1.016 \]

\( TAC_{y+1} = TAC_y + \alpha(I_y^{rec} - I_x^{tar}) \)

Thus

\[ TAC_{2014} = TAC_{2013} + 25(I_y^{rec} - 1.163) \]

\[ TAC_{2014} = 165 + 25(1.016 - 1.163) \]

\[ TAC_{2014} = 161.32 \text{ MT} \]

The recommended TAC for Tristan da Cunha island for the 2014 season is thus 161.32 MT.

References


Table 1: Updated GLM-standardised CPUE for Tristan.

<table>
<thead>
<tr>
<th>Season</th>
<th>GLM CPUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>1.151</td>
</tr>
<tr>
<td>2012</td>
<td>0.992</td>
</tr>
<tr>
<td>2013</td>
<td>0.905</td>
</tr>
<tr>
<td>Average</td>
<td>1.016</td>
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</tbody>
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