

Poaching time series for use in final west coast rock lobster population models¹

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Background

There are three sources of information which need to be combined.

- 1) The **TRAFFIC** time series of annual amounts of poached lobster exported, obtained by comparison of international import and export statistics. These values are absolute (in tons) and are under-estimates of the total amount poached each year² as they do not include illegal catches sold locally. These data extend from 2001 to 2018.
- 2) The **compliance** trend series obtained from statistics collected by the DAFF compliance section (see MARAM/IWS/2019/WCRL/P1) from 2008 to 2018. These are relative indices (i.e. NOT in tons) and are taken to apply to all poaching (i.e. both international and local sales). Some assumption is needed to scale these values to absolute quantities in tons.
- 3) Impressions of the likely size of the **locally sold illegal catch** in 2018. This is used to provide the number to scale the compliance series to tons. The west coast rock lobster task team (TT) had different views on the appropriate value for this amount, but reached a compromise agreement to consider a range from 400 to 700 tons.

The final composite series was constructed by:

- a) Using the TRAFFIC time series to 2008.
- b) From 2009 to 2018 using the compliance series calibrated as described in 3).

Further information

The TT proposals regarding poaching trends and quantities were developed through a number of steps. These are set out in detail below.

North:South split (North A3-7 : South A8+) (unchanged from previous years' assumptions)

North : South in 2008: 30 : 70

The relative splits of poaching in the North area amongst A3+4, A5+6 and A7 remain as previously, and are (as a % of poaching in the North):

A3+4: 37.5% (i.e. in 2008 11.25% of total)

A5+6: 37.5% (i.e. in 2008 11.25% of total)

A7: 25.0% (i.e. in 2008 7.5% of total)

¹ This document is provided only for background and possible questions of clarification. It is not intended for panel review/discussion as it depends heavily on local expert opinion.

² They may also reflect delays arising from times in storage.

Historical Trend (relative trend with a value of 1.0 in 2008)

Pre-1990	0.5 in 1990 decreasing linearly to zero in 1950	
South 1990 – 2008	0.5 (in 1990) → 1.13	(in 2008)
North 1990 – 2008	0.5 (in 1990) → 1.00	(in 2008)

TRAFFIC absolute values

The TRAFFIC data provide absolute estimates of poaching for the 2001-2018 period. The method of 3-pt averaging is used to provide a series of poaching estimates for the 2001-2018 period and which is shown in Figure 1. The smoothing is used to reduce the impact of noise in these estimates and the varying effects of time delays.

The compliance trend series

Figure 2 (see MARAM/IWS/2019/WCRL/P1 for further details) shows the final estimates of trends in poaching from the DAFF compliance data for both the North (A3-7) and South (A8+). The TT uses the 3-pt smoothing method to summarise those estimates.

Final Trends

The final two poaching series (local sales of either 400 MT or 700 MT) are shown in Figure 3.

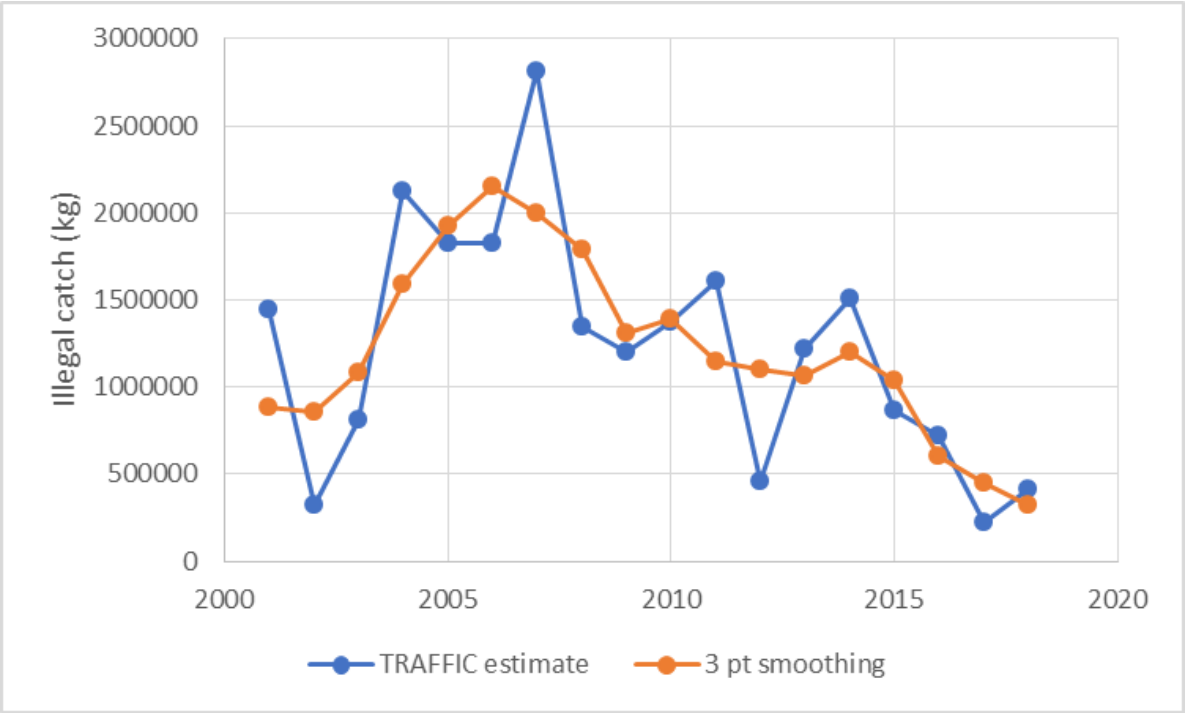


Figure 1: Estimates of poached lobster obtained from TRAFFIC import-export data analyses. The 3-pt smoothed series is also indicated.

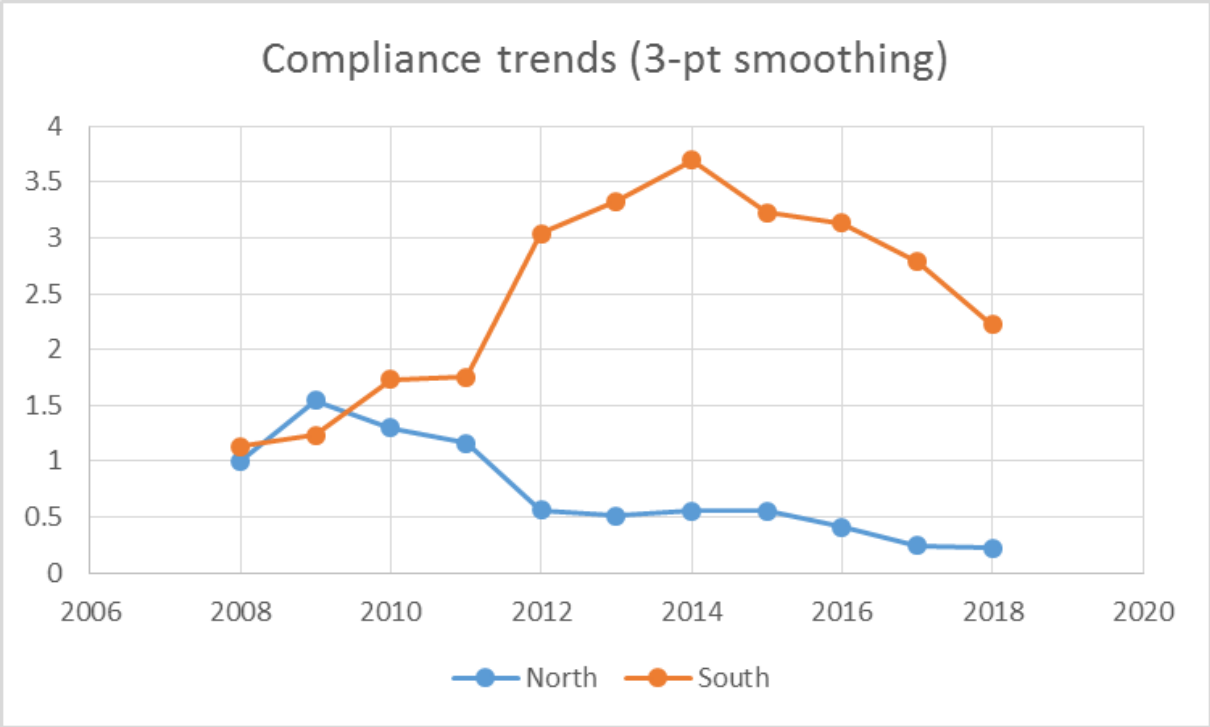


Figure 2: Poaching trends for the North and South obtained from DAFF compliance data using 3-pt smoothing (see MARAM/IWS/2019/WCRL/P1 for details).

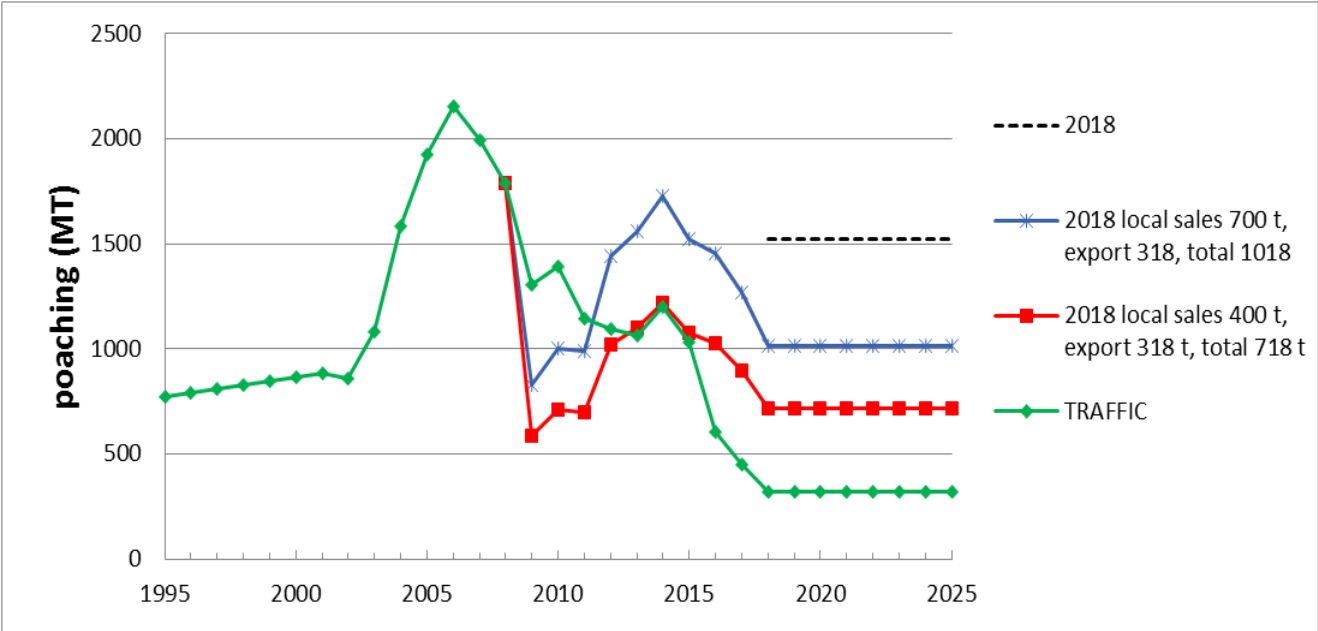


Figure 3: Alternative poaching time series in absolute terms (MT).