Proposed poaching time series for use in final population models

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Summary

This document presents the proposals from the poaching task group for time series of annual poaching tonnages from the resource as a whole for use in population models.

Background

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

1) The TRAFFIC time series of annual amounts of poached lobster exported. These value are absolute (in tons) and are under-estimates of the total amount poached each year as they do not include illegal catches sold locally. These data are from 2001 to 2018.
2) The compliance trend series 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 poaching task group has different views on the appropriate value for this amount, but has reached a compromise agreement to consider a range from 400 to 700 tons.

The composite series has been constructed by:

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

Results

Figure 1 shows the TRAFFIC time series in isolation, together with two time series calibrated to 2018 locally sold illegal catches of 400 tons and 700 tons. Figure 2 shows the implied local sales of illegal catches (difference between the alternative poaching time series and the TRAFFIC time series reflecting illegal sales internationally). Figure 3 plots the poaching time series divided by the catch for the resource. Figure 4 compares the catch taken from the resource along with the TRAFFIC time series of poaching. Figure 5 shows the Compliance trend plotted with the implied compliance trend if the TRAFFIC time series is correct for the time series with local poaching in 2018 of 400 and 700 tons.

Fig1: Alternative poaching time series in absolute terms (mt).

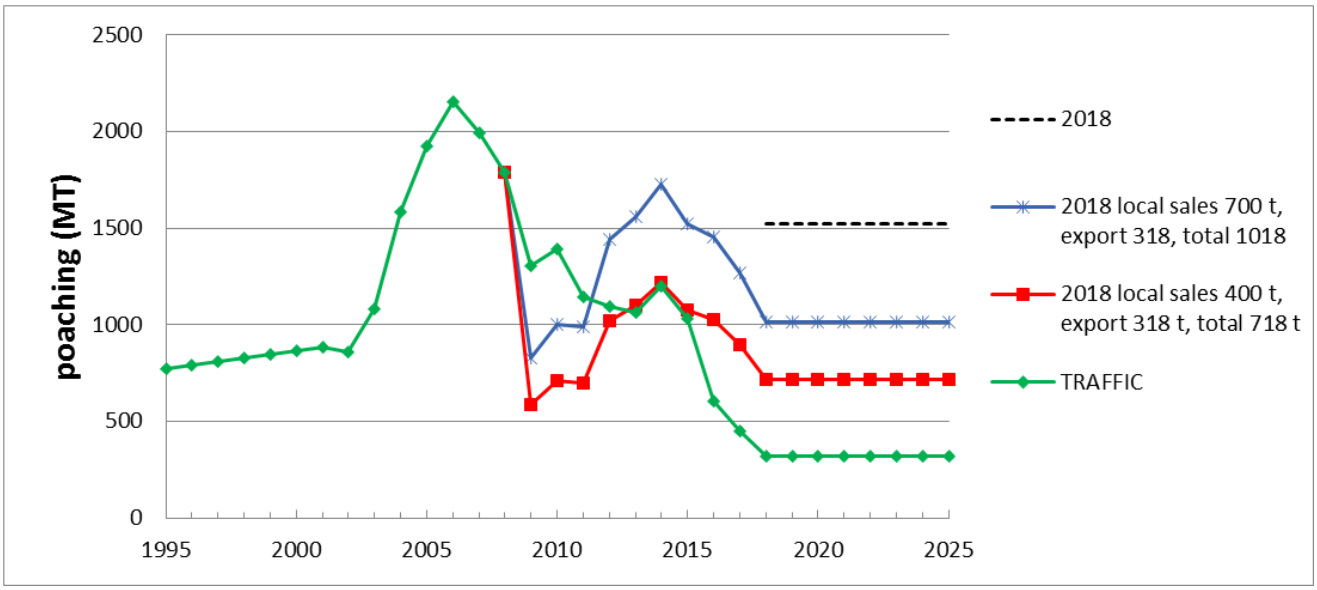

Fig 2: Implied local sales of illegal catches (difference between the alternative poaching time series and the TRAFFIC time series reflecting illegal sales internationally).

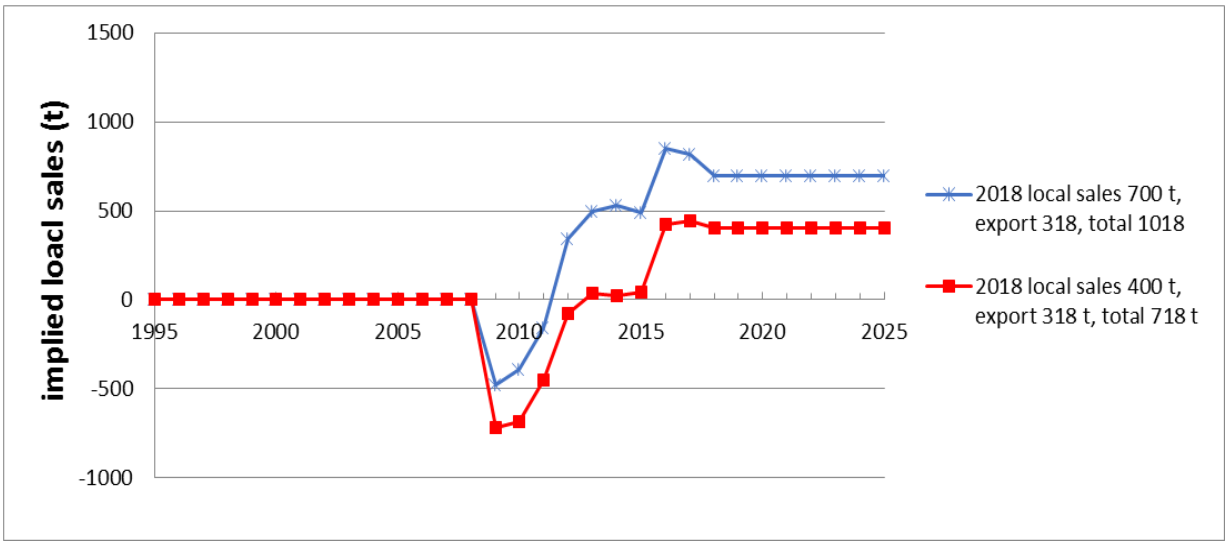

Fig 3: Poaching/catch ratios.

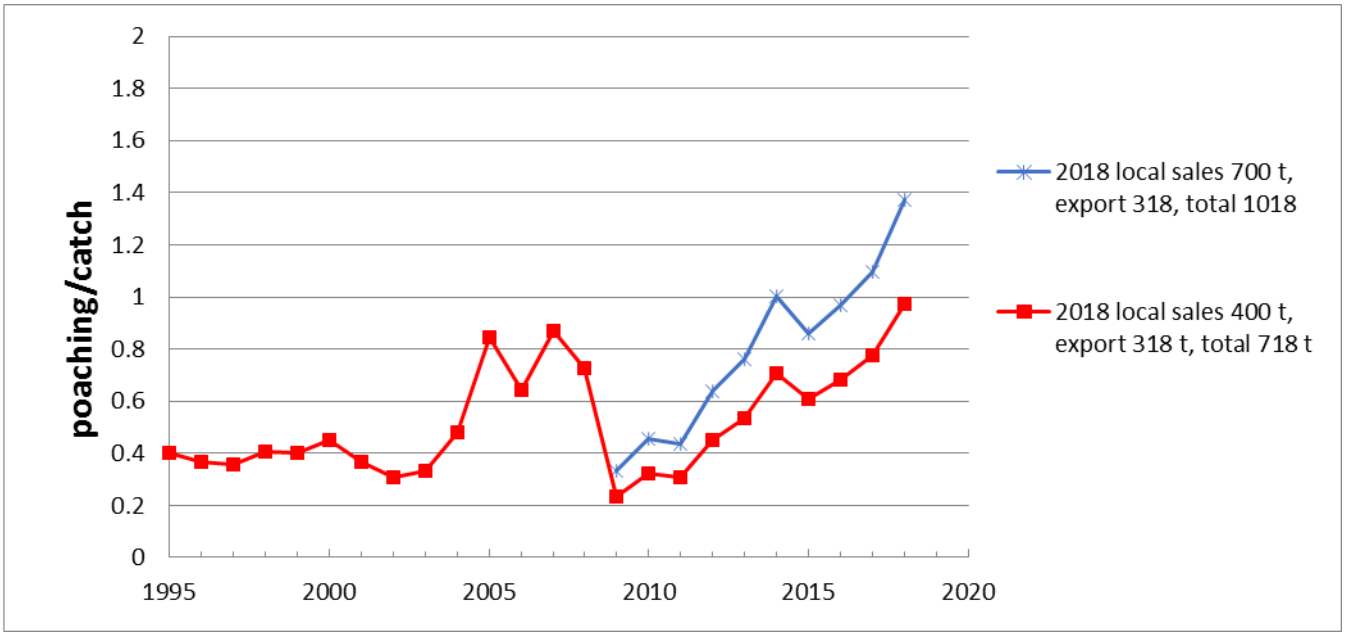

Fig 4: Time series of Catch and TRAFFIC poaching estimates for the resource.

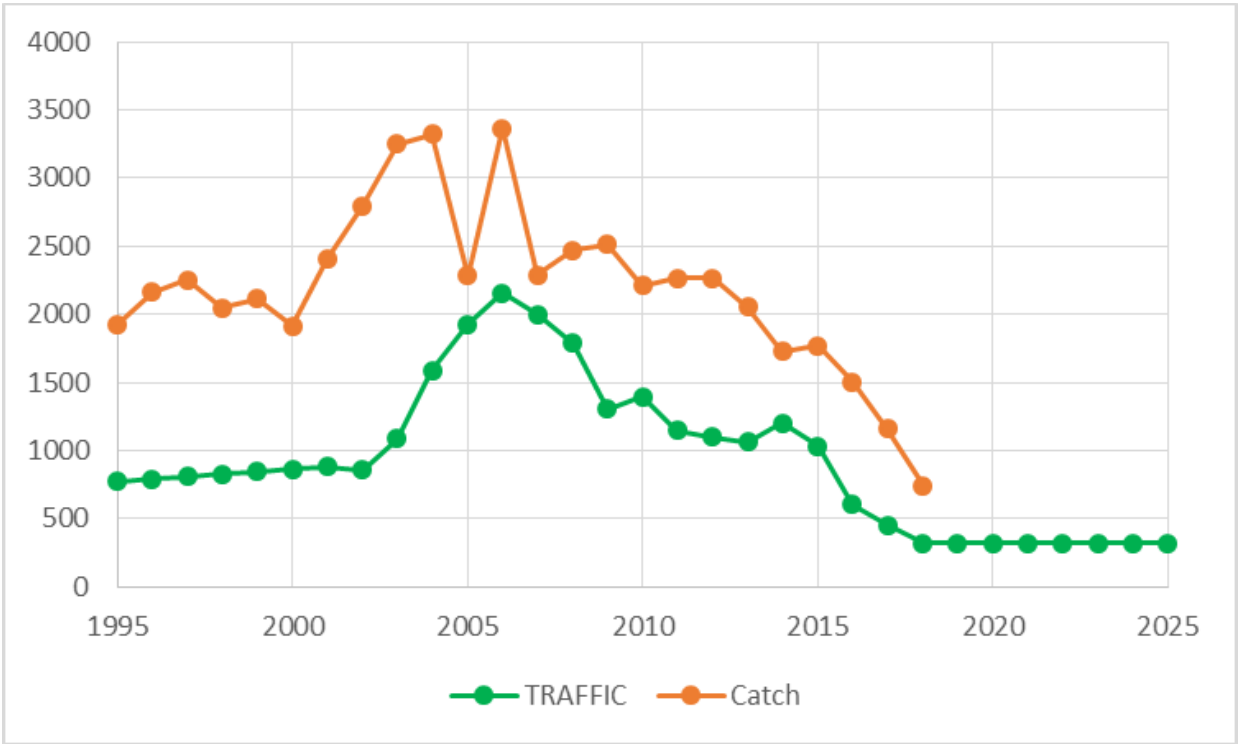

Fig 5: Compliance trend plotted with the required compliance trend if the TRAFFIC time series is correct.