

## Mr Joao AGUIAR MACHADO

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Date:	29 August 2019
Our reference:	1920/PAC01
Subject:	Update Pelagic AC work on additional blue whiting evaluations
CC:	Fabrizio Donatella

Dear Mr. Aguiar Machado,

As promised in our previous letter (reference 1819/PAC82 dated July 25 2019), the Pelagic Advisory Council would like to submit to you a further update regarding the work on the two-tier management approach carried out for blue whiting.

As explained in our previous letter, the Pelagic AC industry members have commissioned work from an external consultant to try and evaluate a two-tier assessment using a hindcasting approach. The Pelagic AC was hopeful this method would give insights on how a two-tier approach to management would have looked like in the past.

Enclosed you will find the final report of this evaluation (Annex 1), the main results of which will be presented to WGWIDE. The final outcome will subsequently be discussed during our planned Pelagic AC meetings on 2-3 October 2019 in The Hague.

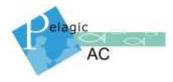
The objective of the study was to see what would have happened if a two-tier HCR was used rather than the current ICES MSY rule. In both scenario's, the rule was evaluated with and without a TAC stability mechanism (20 % down and 25% up) when the stock is assessed to be above Bpa.

The main outcomes of the report are:

- Blue whiting assessment is uncertain and difficult to predict
- Large fluctuations in recruitment impact on catch opportunities
- Application of an HCR would have led to lesser fluctuations in catches than observed in reality
- The simple HCR and two-tier HCR give broadly similar results
- Application of bounds on TAC-change could lead to counter-intuitive and undesirable results







This particular study concludes that a two-tier HCR would not give major advantages over the current ICES MSY rule in relation to the catches that could be obtained (although the final stock size was estimated to be 15% higher with the two-tier rule). However, it was striking to see the effects of the TAC stability bounds on the catches: when a TAC bound was applied, stocks would tend to crash as the large reductions in stock biomass seen were driven by recruitment, and find it difficult to recover. After the stock collapse the use of bounds prevented the TAC being increased as the stock recovered. Bounds therefore appear to limit the possibility to react to stock change and thus give more instability.

This outcome suggests that the current implementation of the bounds could be problematic for the blue whiting stock, confirming the same conclusions made by ICES in its 2016 advice on the evaluation of the blue whiting management strategy. In our view this is an important finding to investigate further. The Pelagic AC plans to discuss options for future work on blue whiting during its upcoming October meeting, and would appreciate your support in requesting ICES for further analysis on the TAC bounds and other aspects based on this discussion.

All in all, we believe the hindcasting exercise provided useful insights which could also serve as valuable input for the discussions with other Coastal States on the management of blue whiting. The Pelagic AC therefore encourages the Commission to share these results with the Coastal States before the next meeting and remains at your full disposal for any support you might require from our side, to help bring this information forward.

Thanking you in advance for your consideration of the above, and looking forward to your response.

Kind regards,

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Jesper Raakjær Chairman Pelagic AC



