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Discussions

Interactive comment on "Spatially explicit estimates of stock size, structure and biomass of North Atlantic albacore Tuna (*Thunnus alalunga*)" *by* P. Lehodey et al.

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Page 172 lines 15-20: I did not find any netcdf files in any of the links provided for data. Source data was, however, present and obtainable (and extensive!).

Response - The netcdf file to download is at the bottom of the page after clicking on the link (http://doi.pangaea.de/10.1594/PANGAEA.831499), at the very last line.

Page 174 line 20-25: Who did the extrapolation in this case? Is this an ICCAT product of some sort?

Response - We used the data as provided in ICCAT database. The extrapolation was

done before the data were provided to ICCAT, so by the Country Fishing Authorities. The text was slightly changed for clarification. "Japanese and Taiwanese longline fleets appear complete while other longline fleets (Korea; USA) were partially covered (Fig. 3). Indeed, it is very likely that complete coverage of spatially geo-referenced catch and effort were due to extrapolation from geo-referenced catch and effort samples before submission to ICCAT while for the other fleets this extrapolation was not produced."

Technical Corrections The writing and layout of the paper is very good. The format is a bit strange to me (Methods+Results are basically the same), but I assume this is a journal requirement. It does not reduce the readability but rather lends itself akin to a technical document.

Response - Yes this is due to journal format focusing on data treatment and description. Details on the modeling work are provided elsewhere and particularly in a 2nd paper (revised version just submitted Canadian Journal of Aquatic and Fisheries Sciences).

There are several areas where some sentences should be re-worded. Mostly, this is use of prepositions. Page 172 lines 8-13: "These models have been extensively validated elsewhere and demonstrated good skills " models do not demonstrate skill. Please rewrite. "However, this configuration . . . as well as coastal upwelling regions" please rewrite this sentence

Response - Text revised: "These models have been extensively validated elsewhere and demonstrated good skills to realistically simulate seasonal to interannual and decadal physical and biogeochemical ocean variability (Lengaigne et al., 2003; Gorgues et al., 2005; Bopp et al., 2005; Aumont and Bopp, 2006). However, the spatial resolution used here is too coarse to resolve mesoscale features as well as coastal upwelling regions"

Page 173 lines 3-5: change 'targeting on' to 'targeting of' Change "1960ies" to '1960s' to be consistent with previous time periods Response - Done

"Total reported landings for the North Atlantic generally began to decline after the 1960ies, due to a reduction of fishing effort by the traditional surface" Page 174 lines 5-12: "For this latter, the change also was associated to a spatial shift of fishing grounds." change to "For the latter, the change was also associated with a spatial shift of fishing grounds." Response - Done

"For the latter, the change also was associated to a spatial shift of fishing grounds." Change "The fishing ground of the surface fisheries in the North-east Atlantic showed a tendency to retract and concentrate in the Gulf of Biscay. To keep the most possible homogeneous definition of fisheries in relation to their fishing gear catchability the Asian longline fisheries have been subdivided into two periods" To "The fishing grounds for the surface fisheries in the North-east Atlantic tended to retract and concentrate in the Gulf of Biscay. To keep the most homogeneous definition possible for fisheries in relation to their fishing gear, catchability for the Asian longline fisheries have been subdivided into two periods" Response - Done

"The fishing grounds for the surface fisheries in the North-east Atlantic tended to retract and concentrate in the Gulf of Biscay. To keep the most possible homogeneous definition possible for fisheries in relation to their fishing gear, catchability for the Asian longline fisheries have been subdivided into two periods (Table 2)." Page 178 lines 3-5: Please change "The predicted catch fitted very well observed catch over the historical fishing period used for the simulation both spatially and temporally" to "The predicted catch fit the observed catch very well, both spatially and temporally, over the historical fishing period used for the simulation"

Response - Done

"The predicted catch fitted very well the observed catch very well, both spatially and temporally, over the historical fishing period used for the simulation both spatially and temporally (Fig. 8)." Lines 20-22: please change "However, researchers involved in these developments have not necessarily the background in fisheries sciences and the

C169

detailed knowledge on the history of the fisheries that is required to understand and use these data correctly." To "However, researchers involved in these developments do not necessarily have the background in fisheries sciences nor the detailed knowledge of the history of the fishery that is required to understand and use these data correctly."

Response - Done