

**Endangered Species Act Status Review Report: Atlantic Humpback Dolphin (*Sousa teuszii*):  
ID447**

Peer Review Comments

We solicited review of the draft Endangered Species Act Status Review Report for the Atlantic humpback dolphin (*Sousa teuszii*). Four people agreed to serve as peer reviewers. Reviewer comments are compiled below and are not associated with the order of the reviewers as listed. Editorial suggestions to the text are incorporated into the final document as appropriate.

Reviewers (listed alphabetically):

**Mr. Tim Collins**

Wildlife Conservation Society  
Global Conservation  
East Africa, Madagascar, and Western Indian Ocean

**Dr. Tilen Genov**

Morigenos – Slovenian Marine Mammal Society  
Piran, Slovenia

**Dr. Gianna Minton**

Megaptera Marine Conservation  
Wassenaar, Netherlands

**Ms. Nina Young**

Office of International Affairs, Trade, and Commerce  
National Marine Fisheries Service  
U.S. Department of Commerce

**Specific Responses to Charge Statement Questions** (not associated with order of names as they appear above):

Reviewer 1:

*1. In general, does the Status Review Report include and cite the best scientific and commercial information available on the species and its biology, habitat and distribution, population structure, abundance trends, threats, and risk of extinction?*

Yes, the review is very thorough and well-researched and referenced.

*2. Where available and relevant, are opposing scientific studies or theories acknowledged and discussed?*

Yes, although for the most part scientific studies are all in agreement, so this is less relevant for this review.

*3. Are the scientific conclusions factually supported, sound, and logical?*

Yes, the conclusions about risk follow logically from the available evidence.

*4. Are uncertainties assessed and clearly stated?*

Yes, there are many uncertainties for this data-poor species, and they are clearly acknowledged.

*5. Are the methods used for the Extinction Risk Analysis valid and appropriate?*

Yes - the available data is analysed in a logical and thorough manner. The designated scoring system based on predominantly qualitative data is appropriate.

*6. Are the results and conclusions of the Extinction Risk Analysis supported by the information presented?*

Yes, the risk analysis is well supported by the data presented, and the authors walk the reader through the process in a very logical step-by-step manner that makes all of the links clear. I have, however, pointed out where in the Executive Summary, wording could be more clear to avoid a misperception that direct hunting/takes is the main threat, when overutilization in the context of this review also includes fisheries bycatch.

Reviewer 2:

*1. In general, does the Status Review Report include and cite the best scientific and commercial information available on the species and its biology, habitat and distribution, population structure, abundance trends, threats, and risk of extinction?*

Yes.

*2. Where available and relevant, are opposing scientific studies or theories acknowledged and discussed?*

Yes.

*3. Are the scientific conclusions factually supported, sound, and logical?*

Yes.

*4. Are uncertainties assessed and clearly stated?*

Yes.

*5. Are the methods used for the Extinction Risk Analysis valid and appropriate?*

Yes.

*6. Are the results and conclusions of the Extinction Risk Analysis supported by the information presented?*

Yes.

Reviewer 3:

*1. In general, does the Status Review Report include and cite the best scientific and commercial information available on the species and its biology, habitat and distribution, population structure, abundance trends, threats, and risk of extinction?*

Yes.

*2. Where available and relevant, are opposing scientific studies or theories acknowledged and discussed?*

Yes.

*3. Are the scientific conclusions factually supported, sound, and logical?*

Yes.

*4. Are uncertainties assessed and clearly stated?*

Yes.

*5. Are the methods used for the Extinction Risk Analysis valid and appropriate?*

Yes.

*6. Are the results and conclusions of the Extinction Risk Analysis supported by the information presented?*

Yes.

Reviewer 4:

*1. In general, does the Status Review Report include and cite the best scientific and commercial information available on the species and its biology, habitat and distribution, population structure, abundance trends, threats, and risk of extinction?*

The review is current and cites much of the relevant literature.

*2. Where available and relevant, are opposing scientific studies or theories acknowledged and discussed?*

This question isn't relevant to this review

*3. Are the scientific conclusions factually supported, sound, and logical?*

Yes.

4. *Are uncertainties assessed and clearly stated?*

Yes.

5. *Are the methods used for the Extinction Risk Analysis valid and appropriate?*

Yes, and similar to the approaches used in the IUCN Red List Assessment.

6. *Are the results and conclusions of the Extinction Risk Analysis supported by the information presented?*

Yes.

**Editorial Comments** (by section of the report; reviewer numbers are not associated with order of names as they appear above):

#### *TITLE PAGE/COVER PHOTO*

Reviewer 4: Regarding the cover photo, the reviewer comments the following: I like the picture but isn't square to the camera, which makes the beak look much stubbier than it actually is.

#### *EXECUTIVE SUMMARY*

Reviewer 1: Regarding the phrase “overutilization of the species”, the reviewer comments: I guess this is standard language used in ESA reviews? It strikes me as a bit odd. After reading the full review, I see that overutilization includes bycatch, but the way it is worded here would make an unfamiliar reader assume that overutilization refers only to direct hunting or intentional use of the species itself. I prefer the way it is worded in the treat assessment at the end of the document: '.....we determined that overutilization of the species for commercial, recreational, scientific, or educational purposes in the form of fisheries bycatch and human use both poses a **high** level threat to the Atlantic humpback dolphin now and in the foreseeable future (Table 6)'. Adding the 'in the form of fisheries bycatch' makes it much clearer that fisheries bycatch falls under overutilization, and that its not an additional/secondary threat as could be concluded from the wording here where bycatch is addressed in the following sentence.

Reviewer 1: Regarding the phrase “bycatch mitigation has not been documented in any range country”, the reviewer comments: There are some laws and measures in place in some countries that are intended to reduce cetacean and turtle bycatch, so this may not be entirely accurate. Gillnets, for example are officially banned in Senegal (although this ban is not well enforced and gillnets are still widely used in nearshore areas). In Gabon there is a ban on setting gillnets in estuaries (also not well enforced), and a local agreement on beach seine practices is intended to reduce bycatch - see: <https://www.sousateuszii.org/2021/12/29/local-community-members-play-crucial-role-in-the-rescue-and-release-of-atlantic-humpback-dolphins-in-gabon/>

I also realise that you may not have seen the draft CMS Concerted Action Plan, which has a more extensive and more recent review of all of the existing legal protections for the species. I have emailed you a link to the latest version.

Reviewer 1: Regarding the paragraph “Based on the best available scientific and commercial information, we conclude that the Atlantic humpback dolphin faces an overall high risk of extinction based on the species’ low abundance, observed or suspected population declines, fragmented distribution with limited connectivity between some stocks, restricted geographic range, and range-wide threats which are projected to continue and, in some cases, increase in the future throughout the species’ range. The combination of these factors coupled with the fact that existing regulatory mechanisms are inadequate to address threats to the species in much of its range and its presumably low reproductive rate likely affect imperil the continued survival of the Atlantic humpback dolphin and indicates a high risk of extinction throughout its range”, the reviewer suggests to add “presumed low reproductive rate” found at the end of the paragraph before “observed or suspected declines” and add a comma after ‘*continue and,*’ and a comma after ‘in some cases,’ and delete ‘and its presumable low reproductive rate likely affect’ and replace this phrase with ‘imperil’.

Reviewer 1: Regarding the phrase “fact that existing regulatory mechanisms are inadequate to address threats to the species in much of its range”, the reviewer comments: Presumably this is supported by more detailed text in the body of the review. It will be important to demonstrate this concretely. The legal review of measures in force in range countries that is part of the CMS Concerted Action Plan may help with this.

Reviewer 3: Regarding the sentence “Atlantic humpback dolphin abundance data are very limited and robust abundance estimates are lacking for most stocks”, the reviewer suggests inserting ‘putative’ before the word ‘stocks’. And the reviewer commented about this edit saying: Since good information on stocks is still lacking.

Reviewer 3: Suggests moving the last sentence of this paragraph (“Available information indicates that the species consists of small, fragmented stocks, and is declining across its range”) to make it the first sentence of the paragraph. “Atlantic humpback dolphin abundance data are very limited and robust abundance estimates are lacking for most putative stocks. However, approximate, general estimates have been made for the species’ eleven recognized management stocks and range from the tens to low hundreds of individuals per stock, suggesting that the entire species likely consists of no more than 3,000 individuals. Available information indicates that the species consists of small, fragmented stocks, and is declining across its range.” And adds a comment with this edit saying: I suggest moving this to the beginning of the paragraph, for more logical flow.

Reviewer 4: Regarding the word ‘warm’ in the phrase ‘warm nearshore waters’, the reviewer comments: Not always warm.

Reviewer 4: For the sentence: “This species occurs in warm nearshore waters, and in a diverse array of dynamic habitats strongly influenced by tidal patterns” the reviewer suggests the following edit, so the sentence reads “This species occurs in a diverse array of shallow, nearshore habitats strongly influenced by dynamic tidal patterns”.

Reviewer 4: The reviewer suggests inserting “appears to consist” after the word ‘diet’ in the sentence “Their diet consists predominantly of coastal, estuarine, and reef-associated fish.”

Reviewer 4: Regarding use of the word ‘stock’ the reviewer comments: Be careful with the use of ‘stock’ as this is based on suggestion by Van Waerebeek to use IWC management terminology. Looking through the whole document I would suggest that you include specific mention of the Van Waerebeek ‘proposal’ (from the 2004 paper) and provide a description of/rational for the approach (which he provides in the paper) and then make a case for simplifying things and referring to all populations as populations. This is the least complicated approach in my mind, particularly as later on in the document there is a conflation between newly identified populations and the stocks that were identified way back at the IWC in 2002 (published 2004).

Reviewer 4: Suggests moving the last sentence of this paragraph (“Available information indicates that the species consists of small, fragmented stocks, and is declining across its range”) “Atlantic humpback dolphin abundance data are very limited and robust abundance estimates are lacking for most putative stocks. However, approximate, general estimates have been made for the species’ eleven recognized management stocks and range from the tens to low hundreds of individuals per stock, suggesting that the entire species likely consists of no more than 3,000 individuals. Available information indicates that the species consists of small, fragmented stocks, and is declining across its range.” to make it the first sentence of the paragraph, and make edits to include ‘and likely’ and delete the word ‘stocks’ and change to ‘population’. The reviewer also recommends on deleting ‘Atlantic humpback dolphin abundance data’ and changing it to ‘abundance’. Also suggests deleting the word ‘species’ and the words ‘recognized management stocks’ to instead have ‘populations’ and insert the word ‘these’ and delete the words ‘per stock’. So the paragraph now reads: “Available information indicates that the species consists of small, and likely fragmented populations, and is declining across its range. Abundance data are very limited and robust abundance estimates are lacking for most populations. However, approximate, general estimates have been made for the eleven populations and these range from the tens to low hundreds of individuals, suggesting that the entire species likely consists of no more than 3,000 individuals.”

Reviewer 4: The reviewer suggests adding ‘gillnet fishing’ and deleting ‘overutilization of the species’, and adding ‘hunting’ and change ‘the’ to ‘these’ and ‘threat’ to ‘threats’ and delete ‘of overutilization and threats to its habitat’ in the following sentence: “The greatest threats to the Atlantic humpback dolphin are overutilization of the species, the present or threatened destruction, modification, or curtailment of the species’ habitat or range, and the inadequacy of existing regulatory mechanisms to address the threat of overutilization and threats to its habitat”. So the sentence now reads: “The greatest threats to the Atlantic humpback dolphin

are gillnet fishing, the present or threatened destruction, modification, or curtailment of the species' habitat or range, hunting and the inadequacy of existing regulatory mechanisms to address these threats."

#### LIFE HISTORY AND ECOLOGY

##### *Taxonomy and Distinctive Characteristics*

Reviewer 1: Regarding the word "Cetartiodactyla", the reviewer comments: Note that this has now changed: <https://link.springer.com/article/10.1007/s10914-021-09572-7> This is reflected in the official SMM Committee on Taxonomy website:

<https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/> It now lists: Order ARTIODACTYLA (artiodactyls and cetaceans) Infraorder CETACEA (cetaceans; 93 species, of which 1 possibly extinct)

Reviewer 1: Suggests deleting 'has been' and adding 'was' and deleting 'over the years' and adding 'in the past' and deleting the word 'recent' to the following sentence: "While the distinctness of the species from other humpback dolphins has been questioned over the years (Ross et al. 1995), recent genetic and morphological work (Jefferson and Van Waerebeek 2004; Mendez et al. 2013; Jefferson and Rosenbaum 2014) has clarified the taxonomy of the genus *Sousa*."

Reviewer 1: The reviewer comments on their suggestion of deleting the word 'recent' from the sentence below: It is not really that recent anymore. .... "While the distinctness of the species from other humpback dolphins has been questioned over the years (Ross et al. 1995), recent genetic and morphological work (Jefferson and Van Waerebeek 2004; Mendez et al. 2013; Jefferson and Rosenbaum 2014) has clarified the taxonomy of the genus *Sousa*."

Reviewer 1: The reviewer suggests deleting 'Thus' from the sentence "Thus, current taxonomy defines *S. teuszii* as one of four species within the genus *Sousa* based on multiple lines of evidence that *S. teuszii* is a species separate from the other three of the genus *Sousa*: *S. plumbea* (Indian Ocean humpback dolphin), *S. chinensis* (Indo-Pacific humpback dolphin), and *S. sahalensis* (Australian humpback dolphin) (Jefferson and Rosenbaum 2014)."

Reviewer 1: Regarding the word 'identical' in the phrase 'and was found to be 98.1% identical to its closest relative with a sequenced mitogenome, the Indo-Pacific humpback dolphin (*S. chinensis*)', the reviewer comments: Identical indicates 100% overlap -can another word be used here?

Reviewer 1: Reviewer suggests deleting the word 'first' from the phrase 'The Atlantic humpback dolphin holotype (a skull) was first discovered in 1892'

Reviewer 1: Regarding 'Eduard Tëusz', the reviewer comments: As a fun aside, one of his ancestors is now following our CCAHD Facebook page!

Reviewer 1: Regarding the Collins *et al.* 2017 citation, the reviewer comments: I believe that the original paper describing the species should be cited here, not the Red List assessment: Kükenhal, W. . (1892). *Sotalia teuszii* n. sp. ein pflanzenfressender (?) Delphin aus Kamerun. Zoologische Jahrbücher Abteilung für Systematick, 6, 442-446.

Reviewer 1: The reviewer also provides a general comment on this section: I see that you have cited the 1891 English note on Porpoises in African Rivers, but the 1892 German paper I

mentioned above is a more complete description of the specimen, and should be cited instead in all the places where you cite the 1891 note, which is only 2 paragraphs. The 1891 note does not mention the 'plant-eating' mix up that you refer to below. This is only covered in the 1892 article. I can send a PDF if you need it.

Reviewer 1: Regarding the phrase 'separate publication' in the sentence "The Belgian zoologist Pierre Joseph Van Beneden (with whom Kükenthal corresponded) compounded the misunderstanding in a separate publication (Kükenthal 1891; Van Beneden 1892; Van Waerebeek et al. 2004)" the reviewer commented: Hmm- this is strange as kukenthal had his own publication in 1892 as well with all the details of the measurements and stomach contents.

Reviewer 1: Regarding the use of 'Figure 2' an illustration of *Sousa teuszii* physical characteristics, the reviewer comments: Were you able to check with Mark Carwardine that he is also happy for his illustrations to be used in this way? I suspect he will be fine with it, but if you haven't yet, it would be good to formally request this.

Reviewer 3: Regarding the word "Cetartiodactyla", the reviewer comments: This has recently been changed to Artiodactyla, see <https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/>, based on the following: <https://link.springer.com/article/10.1007/s10914-021-09572-7>

Reviewer 4: Regarding the word "Cetartiodactyla", the reviewer comments: The SMM committee on taxonomy no longer uses this Order - Artiodactyla is better.

Reviewer 4: Recommends inserting 'currently recognized' after 'four' in the following sentence: "Thus, current taxonomy defines *S. teuszii* as one of four species within the genus *Sousa*."

Reviewer 4: Recommends inserting 'This is' into the beginning of this sentence: "*This is* based on multiple lines of evidence that *S. teuszii* is a species separate from the other three of the genus *Sousa*: *S. plumbea* (Indian Ocean humpback dolphin), *S. chinensis* (Indo-Pacific humpback dolphin), and *S. sahalensis* (Australian humpback dolphin) (Jefferson and Rosenbaum 2014)."

Reviewer 4: Suggests deleting 'recovered' and inserting 'sent to Kükenthal' in the following sentence: "The dolphin skull and a shark-mauled carcass of a West African manatee were recovered by Tëusz, who assumed they were from the same animal (Kükenthal 1891; Van Waerebeek et al. 2004; Collins 2015; Collins et al. 2017)."

Reviewer 4: Suggests the word 'a' and replacing the word 'dolphin's' with 'holotypes' and adding 'teeth' after 'rounded' and inserting 'and likely indicative of an older animal' into the parenthetical in the following sentence: "This included the latter's stomach containing "grass, weeds and mangrove fruits", which led Kükenthal to hypothesize that the species was perhaps riparian and a vegetarian, an impression reinforced by the dolphin's rounded (i.e. worn) teeth (Collins 2015).

Reviewer 4: Suggests inserting a comma after the parenthetical '(with whom corresponded),'

Reviewer 4: Regarding the photograph in Figure 3, the reviewer comments: Might be worth lightening this image - I can't remember if you used images we provided? If not then I'll sort some out.

## Range, Distribution, and Habitat Use

Reviewer 1: Suggests deleting 'western Africa' and changing to say 'the west coast of Africa' and the reviewer added the following comment with this edit: Regionally, 'West Africa' refers only to the area of the 'hump' - e.g. from Ghana or so northward. The area below that is referred to as 'Central Africa'- including the coastal nations. As such, it is better to refer to the west coast, or Atlantic coast of Africa to avoid confusion.

Reviewer 1: Regarding the sentence "Research suggests that this species occurs in a series of localized communities with little interchange identified between them" – the reviewer comments: This is repeated below. I suggest deleting it here, as when it is presented below it is already more strongly supported by the references to the east coast of Africa and other references specific to *S. teuszii*.

Reviewer 1: Recommends deleting "in West Africa" and inserting "on the Atlantic coast of Africa".

Reviewer 1: Regarding the legend in Figure 4 (which displays the expected range of the Atlantic humpback dolphin), the reviewer comments: The legend for the management stocks is a little confusing. I can see that Dakhla Bay is used as an example to show that the underlined bold text represents a management stock, but instead it looks a bit as if the infographic was cropped in a way that left some text hanging at the bottom. Perhaps moving that text left so that it sits right under the 'presence confirmed' part of the legend, and using generic bold underlined text (XXX) or similar would make it a bit clearer that it is part of the legend and not a misplaced label?

Reviewer 1: Regarding the phrase "Ghanaian coast from 1996-2004" in the sentence "Land-based research and port monitoring of artisanal fishing ports and landing sites along the Ghanaian coast from 1996-2004, conducted by Van Waerebeek et al. (2009) indicated that *S. teuszii* remained unrecorded in Ghana", the reviewer comments: Ofori-Danson should probably be cited here as well : Ofori-Danson, P. K., Van Waerebeek, K., & Debrah, S. (2003). A survey for the conservation of dolphins in Ghanaian coastal waters. Journal of the Ghana Science Association, 5, 45-54.

Reviewer 1: Regarding the sentence "*S. teuszii* predominantly occurs shoreward of the 20 m depth isobaths, and often in the shallowest ( $\leq 5$  m depth) part of that range (Weir and Collins 2015)", the reviewer comments: This repeats and is slightly at odds with the first sentence of the paragraph above. I would delete it here and use this more detailed and accurate description of depth preferences above. In fact, 20m is more accurate, as there are few if any records of *S. teuszii* in deeper waters, but 30m was easier to depict on maps, as the 20m contour line wouldn't show up at all on most maps, so this buffer was used in most maps and many texts.

Reviewer 1: Suggests deleting "West African coasts" and replacing with "Atlantic African coast" with a comment about this edit saying: Again - the area most commonly referred to as 'West Africa' is much more limited, and would not include the area around the equator:  
[https://en.wikipedia.org/wiki/West\\_Africa](https://en.wikipedia.org/wiki/West_Africa)

Reviewer 1: Regarding the sentence "Thus, the Atlantic humpback dolphin may be a nearshore species based on oceanographic definitions incorporating water depth and wave action, rather than on spatial distance from the shore (Weir and Collins 2015)", the reviewer comments: This seems to repeat information already provided above and could probably be deleted.

Reviewer 1: Regarding the phrase “...suggests that *S. teuszii* most likely inhabited the Niger Delta before large-scale oil exploration and extraction altered the coastal environment”, the reviewer comments: Actually- there have been 2 recent reports of bycatch/killings in this area. One incident occurred in 2021, and both were posted on Social Media, which is how our Nigerian colleague learned about them. We have not written a CCAHD article about them, so I am not sure how to cite these records other than something like 'E. Eniang Pers Comm.'? Here is a link to the BBC Pidgin Facebook post, which I try not to circulate too widely, as I don't want to increase hits on the video and contribute to its promotion.

[https://www.facebook.com/bbcnewspidgin/posts/1983221035216946?comment\\_id=939431886992272&notif\\_id=1635698853505374&notif\\_t=feedback\\_reaction\\_generic&ref=notif](https://www.facebook.com/bbcnewspidgin/posts/1983221035216946?comment_id=939431886992272&notif_id=1635698853505374&notif_t=feedback_reaction_generic&ref=notif)

Reviewer 1: Suggests adding “and recent social media posts showing bycaught or hunted *S. teuszii* from the Oyorokoto fishing settlement in the Andoni local government area of Rivers State indicate that the species is still present there (BBC Pidgin, Prof E. Eniang pers. Comm.)” to the end of the following sentence: “Additionally, Van Waerebeek et al. (2004) suggests that *S. teuszii* most likely inhabited the Niger Delta before large-scale oil exploration and extraction altered the coastal environment,” so it reads: “Additionally, Van Waerebeek et al. (2004) suggests that *S. teuszii* most likely inhabited the Niger Delta before large-scale oil exploration and extraction altered the coastal environment, and recent social media posts showing bycaught or hunted *S. teuszii* from the Oyorokoto fishing settlement in the Andoni local government area of Rivers State indicate that the species is still present there (BBC Pidgin, Prof E. Eniang pers. Comm.).”

Reviewer 1: Suggest adding ‘even where dedicated cetacean surveys are conducted,’ and deleting ‘suggests’ and inserting ‘may indicate’ and deleting ‘(if at all)’ and inserting ‘rather than absence’ to the following sentence: “Available data demonstrate that sightings in most areas of known occurrence can be low, and a general absence of records from “gap” areas suggests occurrence in extremely low densities (if at all).”

Reviewer 1: Regarding the phrase “sightings rates can be very low, even with dedicated effort” the reviewer comments: Actually, Minton et al. 2017 might be a better reference here: Minton, G., Kema, J. R., Todd, A., Korte, L., Maganga, P. B., Migoungui Mouelet, J. R., . . . Nguélé, G. K. (2017). Multi-stakeholder collaboration yields valuable data for cetacean conservation in Gamba, Gabon. *African Journal of Marine Science*, 39(4), 423-433. doi:10.2989/1814232X.2017.1398106

Reviewer 1: Regarding the sentence: “(Moore 2018) reports that sightings of Atlantic humpback dolphins in Dakhla Bay have decreased over the decades with four sightings reported in 1996 with a peak group size of 10 individuals (mean group size of 6.9 individuals). However, sightings between 2010 and 2018 reported no group size exceeded 3 individuals (Moore 2018)”, the reviewer comments: I'm not sure this is the best example. These are sightings made from shore by bird enthusiasts who travelled to the area intermittently. Maybe it can be retained with some qualification/caveat stating that this was based on irregular shore-based effort. We created a CCAHD post on this based on more regular local observations, emphasizing the need to conduct more systematic boat-based surveys:

<https://www.sousateuszii.org/2022/07/06/last-atlantic-humpback-dolphin-in-dakhla-bay/>

Reviewer 1: Regarding the sentence “Localized movements have been linked to feeding opportunities facilitated by tides, where Atlantic humpback dolphins feed primarily on coastal, estuarine, and reef-associated fishes”, the reviewer suggests starting the sentence with the

phrase “Because Atlantic humpback dolphins feed primarily on coastal, estuarine, and reef-associated fishes,” and deleting the phrase “where Atlantic humpback dolphins feed primarily on coastal, estuarine, and reef-associated fishes”. Thus the revised sentence would read: “Because Atlantic humpback dolphins feed primarily on coastal, estuarine, and reef-associated fishes, localized movements have been linked to feeding opportunities facilitated by tides.”

Reviewer 1: Regarding the sentences “While some evidence indicates that *S. teuszii* is capable of considerable spatial movements (Weir 2009), others consider the larger migrations between Dakhla Bay, Banc d’Arguin, and Saloum-Niumi stocks rare, given the large distances (> 350 km) involved (Maigret 1980a; Van Waerebeek et al. 2003). However, Robineau and Vely (1998) thought it “inconceivable” that the Dakhla Bay stock was isolated”, the reviewer comments: This all seems unnecessarily speculative. I would suggest deleting it, as it doesn't really give us insight into the dolphins' status.

Reviewer 1: Regarding the sentences “Records suggest transboundary movements between some range countries, such as between Saloum-Niumi (Senegal-The Gambia) and Bijagos (Guinea-Bissau) (Van Waerebeek et al. 2004; Collins 2015; Weir 2016; Collins et al. 2017). Sightings in the Rio Nuñez region suggest this connectivity extends into Guinea (Weir and Collins 2015). Additionally, beach-based observations indicate routine movements of *S. teuszii* across the Gabon/Republic of the Congo border within the Mayumba-Conkouati transboundary protected area; however, it remains unclear if these individual Atlantic humpback dolphins range further afield (Collins 2015)”, the reviewer comments: This repeats some of what is presented above, but seems more concise and clearer. I would use this text and perhaps use it to replace the information about the same trans boundary movements above.

Reviewer 2: Regarding Figure 4 (which displays the expected range of the Atlantic humpback dolphin using a map of Africa, showing the expected range of the species along the Atlantic coast of Africa’s coastline in a light blue color and some of the African countries are shaded in teal color) the reviewer comments: For the map, if you can change it, would help to use a different color than the light blue as it is hard to differentiate it from the teal.

Reviewer 3: Regarding the word ‘communities’, the reviewer comments: I suspect this is used synonymously with “stocks” used earlier on? For consistency I would suggest using “populations” or “local populations” instead of communities. To me, “communities” would imply some degree of knowledge on social connectedness, which I don’t think is the case here.

Reviewer 3: Regarding the phrase ‘and research suggests that some populations of *S. teuszii* occur in a series of localized communities with minimal interchange identified between them’, the reviewer comments: This is essentially an exact repeat of the sentence before (sentence before reads “Research suggests that this species occurs in a series of localized communities with little interchange identified between them.”).

Reviewer 3: Regarding the phrase ‘Atlantic humpback dolphin migrations and movements are poorly understood largely because tagging work has never been done on this species’, the reviewer comments: Well, and due to lack of dedicated photo-ID surveys and/or photo-ID comparisons. Tagging is not the only means to obtain this information.

Reviewer 4: The reviewer suggests deleting the word ‘communities’ and inserting ‘populations (some being transboundary)’ after the word ‘localized’ and inserting the word ‘currently’ before ‘identified’ into the following sentence: ‘Research suggests that this species occurs in a series of localized communities with little interchange identified between them.’

Reviewer 4: The reviewer suggests deleting the hyphen in 'time-frames' and instead have 'timeframes'.

Reviewer 4: Regarding the use of the term "West Africa" the reviewer comments: Important to get this right. West Africa is a UN recognized region that misses most of the southern part of the range. So either use western Africa or better use Atlantic African Coast (which you use several times below).

Reviewer 4: Regarding the language in the caption of Figure 4, the reviewer suggests deleting 'using management stocks' and replacing with the words 'identifying populations'.

Reviewer 4: Regarding the citations "(Ayissi et al. 2014; Weir and Collins 2015; Van Waerebeek et al. 2017; CCAHD 2020; Bamy et al. 2021, Figure 4, Table 1)", the reviewer comments: Collins, T., Braulik, G.T. & Perrin, W. 2017. *Sousa teuszii* (errata version published in 2018). The IUCN Red List of Threatened Species 2017: e.T20425A123792572.

<https://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T20425A50372734.en>. Accessed on 05 January 2023.

Reviewer 4: Regarding the phrase 'are poorly studied' which cites Collins 2015 and Collins *et al.* 2017, the reviewer comments: Not quite accurate - I'd be surprised if I lumped these countries like this. There has been a lot of effort in Ghana and Cote D'Ivoire. See for instance Ofori-Danson PK, Debrah J, Van Waerebeek K. 2019. The status and trends of small cetacean landings at Dixcove artisanal fishing port, western Ghana. PeerJ Preprints 7:e27749v1

<https://doi.org/10.7287/peerj.preprints.27749v1>

Reviewer 4: Regarding the sentence "Eleven putative 'management stocks' (i.e. subpopulations) of *S. teuszii* have been recognized based on localities or countries where the species has been recorded and evidence of gaps in the species' range", the reviewer recommends deleting 'have been' and inserting 'were' and deleting 'recognized' and inserting 'identified by Van Waerebeek et al. (2004)'. The reviewer also recommends deleting the citations 'Collins 2015; Collins et al. 2017 and Figure 4'.

Reviewer 4: Regarding the sentence: "These management stocks are meant to serve practical management purposes amongst range countries until intraspecific genetic variation data become available", the reviewer suggests deleting 'are' and inserting 'were' and adding this phrase to the end of the sentence ', although the use of the term is not yet standardized across the range'.

Reviewer 4: Reviewer suggests adding the following sentences to the discussion on the eleven putative 'management stocks': "Populations, including stocks identified by Van Waerebeek et al (2004) were reviewed by Collins (2015), and incorporated additional areas of occurrence that had been identified in the intervening period. These were updated again for the IUCN Red List assessment (Collins et al. 2017)."

Reviewer 4: Regarding the sentence: "However, Van Waerebeek et al. (2017) proposed that the currently recognized management stocks of Canal do Gêba-Bijagós Archipelago (Guinea-Bissau) and South Guinea be combined into a single "Guineas" stock due to multiple records reported from the Tristao Islands and the Río Nuñez Estuary (Weir 2015) in northern Guinea", the reviewer comments: I would move this to the section where you talk about transboundary movements and the reviewer also suggests deleting 'currently recognized' from the sentence.

Reviewer 4: Regarding the sentence: “Throughout its range, the Atlantic humpback dolphin occurs in shallow (<30 m) depths, in warm nearshore waters (average sea surface temperatures ranging from 15.8° to 31.8° Celsius), and in a diverse array of dynamic habitats strongly influenced by tidal patterns (e.g., sandbanks, deltas, estuaries, and mangrove systems) (Collins 2015; Weir and Collins 2015; Taylor et al. 2020)”, the reviewer suggests deleting ‘warm’ and put a comment on ‘15.8°’ in the above sentence which notes: “not warm!”

Reviewer 4: Regarding Table 1, the reviewer suggests changing the title of the table’s second column from “*S. teuszii* records” to “*S. teuszii* sighting records”.

Reviewer 4: Regarding the information on Senegal in Table 1 which states “> 30 records; some systematic surveys”, the reviewer comments: Maybe check with Gianna and Lucy

Reviewer 4: Regarding the sentences: “The Dakhla Bay, Banc d’Arguin, and Saloum-Niumi stocks are separated from each other by distances exceeding 350 km, and few observations have been recorded between them despite fieldwork over several decades (Collins 2015). This suggests that these stocks may currently be reproductively isolated from each other and from more southern stocks, and that the distribution of *S. teuszii* may be naturally discontinuous in some areas, with highest densities in optimal habitats and occurrence on intervening coasts reduced (Van Waerebeek et al. 2004; Collins 2015; Van Waerebeek et al. 2017)”, the reviewer suggests deleting the word ‘stocks’ and inserting the word ‘populations’.

Reviewer 4: Regarding the citation “(Van Waerebeek and Perrin 2007; Weir et al. 2011)” in the sentence “However, Collins (2015) notes that gaps in the species’ range may be a relatively recent phenomenon, due to increased human pressures in once pristine regions (Van Waerebeek and Perrin 2007; Weir et al. 2011)”, the reviewer comments: These refs seem to be a bit at odds with the earlier Collins citation - either delete them or include the Collins citation in the parentheses.

Reviewer 4: Regarding the phrase “Several sightings and bycaught dolphins were reported from the “Petite Côte” region within the Saloum-Niumi stock,” the reviewer suggests deleting ‘within the Saloum-Niumi stock’.

Reviewer 4: Regarding the sentence “Additionally, Van Waerebeek et al. (2004) suggests that *S. teuszii* most likely inhabited the Niger Delta before large-scale oil exploration and extraction altered the coastal environment” the reviewer comments: Right - this is a fair statement, but later on you suggest that this means that oil etc extirpated them, which isn’t the same thing. It is nuanced, but important.

Reviewer 4: Regarding the sentence: “Atlantic humpback dolphin migrations and movements are poorly understood largely because tagging work has never been done on this species (Collins et al. 2017)”, the reviewer suggests deleting ‘tagging’ and inserting ‘the necessary’ and adding a parenthetical after ‘work’ to say ‘(e.g. comparison of identification catalogues, genetic sampling and tagging)’, and delete ‘never been done’ and add ‘not been conducted’ and delete ‘on this species’. The reviewer also comments on the suggestion to delete the word ‘tagging’ noting: Pretty sure I would not have focused on tagging.

Reviewer 4: Regarding the phrase ‘Movements on larger scales are rarely documented,’ the reviewer suggests deleting ‘are rarely’ and inserting ‘have never been’

Reviewer 4: Regarding the sentence “Additionally, swim speeds of 1–7 km/hr (mean of 4 km/hr) were recorded during travel along linear coastline in Angola, indicating that Atlantic humpback dolphins are capable of undertaking considerable spatial movements with the potential for relatively large home ranges (Weir 2009)” the reviewer suggests inserting ‘a’ before ‘linear coastline’ and deleting ‘are’ and replacing with ‘might be’.

Reviewer 4: Regarding the sentence “While some evidence indicates that *S. teuszii* is capable of considerable spatial movements (Weir 2009), others consider the larger migrations between Dakhla Bay, Banc d’Arguin, and Saloum-Niumi stocks rare, given the large distances (> 350 km) involved (Maigret 1980a; Van Waerebeek et al. 2003)”, the reviewer suggests deleting ‘is’ and replacing with ‘might be’, deleting ‘the’ and replacing with ‘that’ and deleting ‘stocks’ and replacing with ‘populations are likely’.

Reviewer 4: Regarding the sentence “However, Robineau and Vely (1998) thought it “inconceivable” that the Dakhla Bay stock was isolated”, the reviewer suggests deleting ‘stock’ and replacing with ‘population’.

Reviewer 4: Regarding the phrase “however, it remains unclear if these individual Atlantic humpback dolphins range further afield (Collins 2015)”, the reviewer suggests deleting “Atlantic humpback dolphin” and inserting an ‘s’ after ‘individual’ so the phrase reads “however, it remains unclear if these individuals range further afield (Collins 2015).”

### *Diet and Feeding*

Reviewer 1: Regarding the parenthetical “(many of which are characteristically vocal)” in the sentence “However, based on stomach contents of bycaught *S. teuszii* specimens and direct observations of feeding, it is thought that *S. teuszii* diet consists predominantly of coastal, estuarine, and reef-associated fish (many of which are characteristically vocal) (Cadenat and Paraiso 1957; Cadenat 1959; Van Waerebeek et al. 2004; Weir 2009, Figure 6). ”, the reviewer comments: Not sure this adds any useful information?

Reviewer 1: Regarding the sentence “However, the link between tides and foraging was less evident in Banc d’Arguin (although daily movements of individual humpback dolphins into channels inshore were coupled with flood tides (Maigret 1980a), and (Duguy 1976) reported *S. teuszii* at the Banc d’Arguin chasing mullet in the channels between the Tidra and Nair islets”, the reviewer suggests deleting “However, the link between tides and foraging was less evident”, and “although daily movements of individual humpback dolphins into channels inshore were coupled with flood tides”, and add at the beginning of the sentence ‘Daily movements of individual humpback dolphins into channels inshore were coupled with flood tides’ so that the sentence reads “Daily movements of individual humpback dolphins into channels inshore were coupled with flood tides in Banc d’Arguin (Maigret 1980a), and (Duguy 1976) reported *S. teuszii* at the Banc d’Arguin chasing mullet in the channels between the Tidra and Nair islets.” Additionally the reviewer added comments about this sentence: I would say this is pretty good evidence that there is a link between tides and foraging. I have suggested a re-jigging of this sentence. Please feel free to take it or leave it.

Reviewer 1: Regarding the sentences “Additionally, feeding has been observed at river confluences within the Rio Grande de Buba (Van Waerebeek et al. 2000), and in the Saloum Delta the waters around Sangomar Island appear to be a preferred foraging area (Van

Waerebeek et al. 2004; Collins 2015). Some groups have been observed widely dispersed, such as a group observed foraging in Saloum (and also noted in Gabon) (Maigret 1980a; Collins et al. 2004; Van Waerebeek et al. 2004). Conversely, feeding activity in some areas also coincides with observations of larger aggregations, including the large group sizes (20 – 40 individuals) recorded (Maigret 1980a; Collins et al. 2004; Van Waerebeek et al. 2004)”, the reviewer commented: These sentences could be tightened up. I'm not sure the specific reference to Sangomar Island in the Saloum Delta is particularly helpful - as more recent surveys in the Saloum Delta (Weir 2016 and Minton et al. 2022) do not show this. I think it is better to refer only to the types of habitats and behaviours rather than specific locations that the reader will not be able to easily place. Here is the Minton 2022 reference. Minton, A. G., Keith-Diagne, L., Seck, D., Cerchio, S., Tregenza, N., Takoukam Kamla, A., . . . Cristiano, N. (2022). Preliminary results of 2021 and 2022 *Sousa teuszii* surveys in the Saloum Delta, Senegal. Document presented to the Scientific Committee of the International Whaling Commission, SC/68D/SM/12. Reviewer 1: Reviewer deleted 'spend' and suggested 'spent' and commented: It is important to show that this was the observation made at that point in time during a limited survey of 2-3 weeks. It is not necessarily indicative of what happens at present or on a continual basis.

Reviewer 1: Regarding the sentence “Individuals performing longer dives (>1 min) were presumed to be in pursuit of demersal fish and other benthic prey (Weir 2009; Collins 2015)”, the reviewer commented: This is tricky, as I suspect that every researcher/study will have their own definition of what constitutes feeding. In Senegal we only assign a behaviour category of 'definite feeding' if we see a dolphin with fish in its mouth or chasing fish at the surface, and 'probable feeding' if the dolphins are twisting and diving in a manner indicative of feeding, and there are other signs that there are fish in the area (feeding birds, fish nets/traps, fish at the surface). A dive time of 1 minute would not qualify, as it could also be indicative of dolphins trying to get away from the boat. I suspect that Weir and Collins both used tighter definitions than a 1 minute dive time. In any case, I am not sure I would include this sentence, as it is not clear if you are referring to the study in Angola, Guinea, or all of the studies above. Who knows exactly what definitions Maigret or others applied in earlier years. Probably better to delete.

Reviewer 3: Reviewer added a comma after the word “Flamingos” in the sentence “Atlantic humpback dolphins observed off the Flamingos have been observed spending approximately half of the daylight hours engaged in travel and foraging activities and were observed foraging preferentially around rocks and reefs, as well as at the mouths of rivers, including the typically dry Flamingo River (Weir 2009).”

Reviewer 3: Reviewer added a comma after the word 'limited' in the following sentence “Knowledge of the Atlantic humpback dolphin’s diet and feeding ecology is very limited as few stomach samples have been examined and direct observations of feeding are rare (Van Waerebeek et al. 2004; Collins 2015).”

### *Reproduction and Growth*

Reviewer 1: Regarding “Guinea Bissau (Collins 2015)” the reviewer commented: Again, it would be better to cite the original Guinea Bissau reference that Collins 2015 cited, rather than his review, as Collins was not in GB himself.

Reviewer 1: Regarding the sentence “The species is suspected to be sexually dimorphic (males larger at maturity and with a more prominent dorsal hump (see Figure 3)), but the current

sample size (~20 individuals) is too small to assess this statistically) (Jefferson and Rosenbaum 2014)”, the reviewer deleted an extra paren from the parenthetical “(Figure 3))” and deleted “the current” and added “of carcasses used to formally assess this trait” and deleted an extra paren at the end of the sentence.

Reviewer 1: Added a citation of “Taylor et al 2020” to end of the sentence “The data required to estimate other *S. teuszii* vital rates remain unavailable” and commented: Taylor, B. L., Abel, G., Miller, P., Gomez, F., von Fersen, L., DeMaster, D. P., . . . Cipriano, F. (2020). Ex situ options for cetacean conservation: December 2018 workshop, Nuremberg, Germany. Gland, Switzerland: Available from: <https://iucn-csg.org/wp-content/uploads/2021/08/SSC-OP-066-En.pdf-WEB.pdf>

Reviewer 4: Deleted “reproduction” and inserted “reproductive” in the sentence “Data and information regarding life history and reproduction parameters are almost nonexistent for this species.”

### *Social Behavior*

Reviewer 1: Inserted ‘s’ after the word “boat” and the word “and” between “boat” and “engines” in the phrase “Overall, the species is naturally unobtrusive, preferring to maintain a distance from boat engines;”

Reviewer 1: Regarding the citation at the end of the sentence “however, individuals have been observed occasionally leaping, breaching, spy-hopping and tail-slapping (Weir 2015, Figure 7)”, the reviewer commented: Also figure 5D above! 😊

Reviewer 1: Regarding the sentence “However, other groups have been observed foraging independently, during which individuals are more widely-dispersed, surface unpredictably, and sometimes exhibit tail-up dives (Weir 2009, 2015, 2016)”, the reviewer inserted “were” before “more widely” added a “d” to the word “surface” and added an “ed” to the word “exhibit”.

Reviewer 1: Regarding the sentence “Mixed-species associations between Atlantic humpback dolphins and bottlenose dolphins (*Tursiops truncatus*) in Western Sahara, Mauritania, Senegal, Guinea-Bissau, Gabon, the Republic of the Congo, and Angola have been reported via observations of the two species travelling in mixed groups (Weir 2009, 2011; Leeney et al. 2016)”, the reviewer inserted “have been observed” after (*Tursiops truncatus*), and deleted “have been reported via observations of the two species travelling in mixed groups”.

Reviewer 4: Regarding the sentence “Atlantic humpback dolphins have a surfacing behavior that is usually comprised of calm rolls, during which the beak is often lifted above the water and the body is arched, accentuating its characteristic hump”, the reviewer deleted “is” and “comprised” and inserted “comprises” and deleted “of” so the sentence reads: “Atlantic humpback dolphins have a surfacing behavior that usually comprises calm rolls, during which the beak is often lifted above the water and the body is arched, accentuating its characteristic hump.”

Reviewer 4: Regarding the phrase “there is evidence for strong social affiliation and stable group structure in some areas”, the reviewer inserted “some” in front of the word “evidence”.

## ABUNDANCE AND TRENDS

Reviewer 1: Regarding the caption on Figure 7, reviewer deleted “and AACF” from the list of one of the photo compilation credits for the top and bottom middle photos.

Reviewer 1: Regarding the sentence “More recent verifiable sightings by locals and birders suggest that this stock remains extant in this area (Weir and Collins 2015)”, reviewer comments: Would be better to cite Moores 2018 and perhaps our recent CCAHD news item.

Reviewer 1: Regarding the sentence “Within the South Guinea stock, six *S. teuszii* sightings were recorded by Weir (2015) during a 817.6 km boat-based effort survey in the Río Nuñez Estuary”, the reviewer recommends inserting an ‘a’ in front of ‘817.6 km’ and an ‘s’ for ‘km’ so it reads ‘817.6 kms’ and move the word ‘effort’ to after the word ‘survey’.

Reviewer 1: Regarding the phrase “Recently, records of *S. teuszii* in Togolese waters were recorded for the first time by Van Waerebeek et al. (2017)”, “ the reviewer deleted the word ‘records’ and inserted the word ‘observations’.

Reviewer 1: Regarding the sentence “Recently, however, five additional *S. teuszii* sightings have been documented between 2017 and 2021 off the coast of western Nigeria near Lagos (CCAHD, Table 2).” the reviewer suggests adding the following phrase to the end of this sentence: “and two incidents of bycatch and/or direct hunting were posted on social media by fishing communities in the Niger Delta Area (BBC Pidgin and Prof. E. Eniang pers. Comm.).” So the sentence reads: “Recently, however, five additional *S. teuszii* sightings have been documented between 2017 and 2021 off the coast of western Nigeria near Lagos (CCAHD, Table 2), and two incidents of bycatch and/or direct hunting were posted on social media by fishing communities in the Niger Delta Area (BBC Pidgin and Prof. E. Eniang pers. Comm.).”

Reviewer 1: Regarding the sentences: “Boat surveys conducted off the coast of the Gamba region of Gabon between 2013 and 2015, *S. teuszii* were documented in Gabonese waters during the survey’s first year in 2013, which included three observations with estimated group sizes of 7, 10, and 25 (mean of 14 individuals) and an overall encounter rate of only 0.13 sightings per 100km of survey effort (Minton et al. 2017).” The reviewer suggests deleting “And during a two year marine survey” at the beginning of the sentence and adding “boat surveys conducted”, inserting “the Gamba region of” before the word “Gabon” and adding “and an overall encounter rate of only 0.13 sightings per 100km of survey effort” to the end of the first sentence.

Reviewer 1: Regarding the sentence: “Surveys conducted between 2013 and 2015 within the Gamba/Sette Cama region of Gabon yielded three sightings of *S. teuszii* with an encounter rate of 0.13 sightings per 100 km (Collins et al. 2010; Collins 2015).” The reviewer recommends deleting this entire sentence with following comment regarding this recommendation: Collins et al is referring to the same surveys that were reported in Minton et al 2017. He just forgot to cite it properly!

Reviewer 1: Regarding the phrase: “However, sightings rates during shore-based work in 2012 in the Republic of the Congo within the Congo stock are much higher”, the reviewer suggests deleting ‘are’ and inserting ‘were’.

Reviewer 1: Regarding the following citation: “(Taylor et al. 2007; Collins et al. 2017; Brownell Jr et al. 2019)”, the reviewer comments: I have the 'Brownell Jr.' issue with my Endnote as well. I have to manually tweak every Brownell reference when I use cite while you write.

Reviewer 1: Regarding the phrase “This may naturally limit carrying capacity of the Atlantic humpback dolphin”, the reviewer recommends deleting the word “of” and inserting “for” and commented: Maybe some further rewording is needed here, as we are referring to the carrying capacity of the habitat, not the dolphins.

Reviewer 1: Regarding the sentence “However, as noted above, based on this evidence, and review of published estimates of abundance in each range country, the best available data and information indicates that most *S. teuszii* stocks are small and that some stocks (i.e. Canal do Gêba-Bijagós Archipelago stock) may be experiencing population declines (Collins 2015; Collins et al. 2017),” the reviewer suggests deleting the word “this” and inserting the word “available”.

Reviewer 1: Regarding Table 2, the reviewer comments: I don't know if you have engaged Tim Collins as a reviewer as well. If he does not have time for the full document, it would be good to ask him to review this table. He is much more familiar with the literature than I am. I do not have time to re-read every paper and cross-check the numbers, and will trust that you have done this accurately. But Tim may know of some missing records or updates. Obviously this table is particularly important to get 100% right and up to date.

Reviewer 1: Regarding the “Dakhla Bay (*Western Sahara*)” row in Table 2, the reviewer comments: Add information from Moore 2018 and/or CCAHD news item?

Reviewer 1: Regarding Table 2 and the use of the words “local sightings” in the “Nature of the Study” column, the reviewer comments: I'm not sure what this means. Are these sightings the authors made themselves? Or records recorded based on interviews with local inhabitants? Without going back to the original papers, I suspect the former, but then this should include shore-based or boat-based survey effort?

Reviewer 2: Regarding the phrase, “ Based on observations of three *S. teuszii* individuals in Dakhla Bay, Beaubrun (1990) described the this stock as “miniscule”,” the reviewer deleted “the”.

Reviewer 3: Regarding the phrase “have been estimated repeatedly” in the sentence “The Banc d'Arguin and Saloum-Niumu stocks have been estimated repeatedly at ~100 animals since the mid-1970s (Maigret 1980a; Van Waerebeek et al. 2003; Van Waerebeek et al. 2004)”, the reviewer comments: It would be useful to add here how. I.e. distance sampling, mark-recapture, minimum number of IDd individuals, extrapolation of counts,...

Reviewer 3: Regarding the following citation “(Weir 2016)” the reviewer deleted the parens in front of “Weir” and inserted it in front of “2016”

Reviewer 3: Regarding the sentence “Within the South Guinea stock, six *S. teuszii* sightings were recorded by Weir (2015) during a 817.6 km boat-based effort survey in the Río Nuñez Estuary,” the reviewer comments: Rio Nunez Estuary is not within the South Guinea stock, based on Fig. 1. of Waerebeek et al. 2004. It is either part of the contiguous northward stock (as proposed by

Waerebeek et al. 2004), or the “combined” Guinea stock (as proposed by Waerebeek et al. 2017), but not South Guinea.

Reviewer 3: Regarding Table 2 where it says “boat-based transect survey” in the “Nature of the Study” column, the reviewer comments: This is a bit misleading, as it gives the impression this was a line-transect distance sampling based estimate. Instead, it was a photo-ID based estimate, so it would probably be better to replace this with “photo-ID” (or add that).

Reviewer 3: Regarding Table 2 where it says “South Guinea (Guinea) stock”, the reviewer comments: Rio Nunez is not in South Guinea, it is North Guinea.

Reviewer 3: Regarding Table 2 where it says “boat-based transect survey”, the reviewer comments: Same comments as before, this is based on photo-ID.

Reviewer 3: Regarding Table 2 where it says “boat- and shore-based transect surveys”, the reviewer comments: Not sure, but I believe this was photo-ID as well. I think it is important to note when photo-ID is the basis for estimates, as it makes it very different from “guesstimates”.

Reviewer 4: Regarding the phrase “However, approximate, general estimates have been made for the eleven recognized proposed management stocks”, the reviewer suggests deleting “the” and “recognized” and inserting “proposed” before “management stocks”.

Reviewer 4: Regarding the phrase “For the Saloum-Niumi stock, encounter rates and group sizes recorded during regional surveys”, the reviewer suggests deleting the word “regional”.

Reviewer 4: Regarding the sentence “More recent sightings in the Río Nuñez Estuary may indicate that distribution across the Guinea-Bissau/Guinea border is contiguous (Collins 2015)”, the reviewer suggests deleting “may indicate” and replacing with “suggest” and deleting the word “is” and replacing with “may be”.

Reviewer 4: Regarding the sentence “Additionally, in May 2011, a recorded encounter rate of 0.386 sightings per 100 km (or 3.86 individuals per 100 km)”, the reviewer suggests deleting “(or 3.86 individuals per 100 km)” and inserting the word “searched” after “100 km”.

Reviewer 4: Regarding the sentences “And during a two-year marine survey off the coast of Gabon between 2013 and 2015, *S. teuszii* were documented in Gabonese waters during the survey’s first year in 2013, which included three observations with estimated group sizes of 7, 10, and 25 (mean of 14 individuals) (Minton et al. 2017). Surveys conducted between 2013 and 2015 within the Gamba/Sette Cama region of Gabon yielded three sightings of *S. teuszii* with an encounter rate of 0.13 sightings per 100 km (Collins et al. 2010; Collins 2015).” The reviewer comments: These refer to the same dataset

Reviewer 4: Regarding the phrase “However, sightings rates during shore-based work in 2012 in the Republic of the Congo within the Congo stock are much higher (though not directly comparable),” the reviewer suggests deleting “within the Congo stock”.

Reviewer 4: Regarding the citation “(Brownell Jr et al. 2019)”, the reviewer suggests deleting “Jr”.

Reviewer 4: Regarding the sentence “It has also been noted by (Weir et al. (2021) that availability of suitable habitat across much of the species’ range is limited to a linear band extending only a few kilometers from the shoreline (Figure 4)”, the reviewer suggests deleting “by (Weir et al. (2021)”, inserting “the” in front of “availability” and inserted the citation “(Weir and Collins, 2015; Weir et al. 2021)”, at the end of the sentence.

Reviewer 4: Regarding the caption in Table 2 which states “A summary of available information reported for *S. teuszii* abundance and population sizes for each of the eleven recognized management stocks”, the reviewer suggests deleting “each of the” and “management stocks” and replacing “management stocks” with “populations”.

#### *ANALYSIS of ESA SECTION 4(a)(1) FACTORS*

##### *(A) Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range*

Reviewer 1: Regarding the phrase “(B) overutilization for commercial, recreational, scientific, or educational purposes;” the reviewer comments: OK - I can see why you emphasise overutilization in the executive summary now, but I think that it might be more accurate to focus on E, which should include bycatch.

Reviewer 1: Regarding the citation “(Collins 2015; Weir and Collins 2015; Taylor et al. 2020)” in the sentence “The Atlantic humpback dolphin is considered an obligate coastal and shallow water nearshore species preferring dynamic habitats strongly influenced by tidal patterns (Collins 2015; Weir and Collins 2015; Taylor et al. 2020)”, the reviewer comments: I don't think Taylor et al is necessary here. It draws on the other two and can be deleted.

Reviewer 1: Regarding the citation “(Dutton 2010)”, in the sentence “While there has been no direct study of this potential threat on *S. teuszii* and impacts to its habitat, it is likely that climate change could affect all species of marine mammals (Dutton 2010)”, the reviewer commented: There are a few more recent papers that could be cited. For example: van Weelden, C., Towers, J. R., & Bosker, T. (2021). Impacts of climate change on cetacean distribution, habitat and migration. *Climate Change Ecology*, 1, 100009.  
doi:<https://doi.org/10.1016/j.ecochg.2021.100009>

Reviewer 1: Regarding the phrase “while 20% of Nigeria’s population lives in large coastal cities”, the reviewer comments: The original reference for this information is probably not Weir and Pierce -but probably the Ukwe references that you cite above? I think the whole review could use a careful check to make sure that the original authors/sources rather than the review is cited when it comes to country-specific information - especially if the original source is an African author, as it is important to recognise this work.

Reviewer 1: Regarding the phrase “Additionally, the coastal zone is the site of most airports,” the reviewer suggests adding “all ports and” after “of”

Reviewer 1: Regarding the sentence “A number of Atlantic humpback dolphin range countries are also oil producers, specifically Angola, Gabon, Cameroon, and the Republic of the Congo, and other countries in the ETA region also produce oil, such as Equatorial Guinea and Nigeria also produce oil (Ukwe and Ibe 2010; Minton et al. 2017)”, the reviewer suggests deleting “major” and inserting a period after “producers”, deleting “specifically” and inserting “are major

producers, while” before “and” and deleting the word “and” and moving “also produce oil” and moving it to the end of the sentence. So the sentence reads “A number of Atlantic humpback dolphin range countries are also oil producers. Angola, Gabon, Cameroon, and the Republic of the Congo are major producers, while other countries in the ETA region, such as Equatorial Guinea and Nigeria also produce oil (Ukwe and Ibe 2010; Minton et al. 2017)”.

Reviewer 1: Regarding the phrase “gas flaring, seismic exploration and explosives used during installation and decommissioning, and high-amplitude sound associated with shipping) are all potential impacts from the oil industry. Impacts on marine environments are evident in some areas”, the reviewer suggests deleting “are all potential impacts from the oil industry” and inserting “can all negatively impact *S. teuszii* habitat.”

Reviewer 1: Regarding the sentence “Impacts on marine environments are evident in some areas”, the reviewer suggests adding “already” before “evident”.

Reviewer 1: Regarding the phrase “And it has been noted that *S. teuszii* populations have been displaced due to large scale oil exploration and extraction which altered the coastal environment”, the reviewer suggests inserting “may” in front of “have been”

Reviewer 1: Regarding the phrase “and preferred sites frequently overlap with the *S. teuszii* habitat (Collins 2015)”, the reviewer suggests deleting “the”.

Reviewer 1: Regarding the sentence “These include Badagry (Nigeria) which is close to where recent sightings of *S. teuszii* have been made near Lagos (CCAHD unpublished data), Kamsar Port (Guinea) within the Río Nuñez Estuary (Weir 2015), and the deep-sea port of Kribi (Cameroon) (Van Waerebeek et al. 2017)”, the reviewer suggests inserting “the location of” in front of “where recent sightings” and deleting “have been made”.

Reviewer 1: Regarding the sentence “Work on other species (such as bottlenose dolphins (*Tursiops* spp.)), has indicated that short-term disturbances to individuals may translate to longer term consequences for population health and fecundity, issues that can be exacerbated by coincident ecological constraints (Ayissi et al. 2014; Collins 2015; Collins et al. 2017)” the reviewer comments: This seems a bit strange - because Sousa *teuszii*-specific citations are used to support a statement about long term impacts on *Tursiops* populations. Shouldn't the *Tursiops*-specific studies be cited here instead?

Reviewer 1: Regarding the sentence “Oil and gas development and extraction activities occur in the central and southern portions of the species’ range, resulting in an increase in port facilities and other coastal development projects (Collins 2015; Collins et al. 2017)”, the reviewer comments: This seems to repeat information above -but makes the link between oil and gas and ports and costal development more obvious. Can it be rephrased so that it is not so much a repetition, but focuses on the cumulative effects that you refer to in the first line?

Reviewer 1: Regarding the phrase “position at the top of the food chain and transfer of contaminant loads to their offspring via milk, cetaceans as a whole are vulnerable to bioaccumulation of persistent organic pollutants”, the reviewer comments: You may also consider citing: Wells, R. S., Tornero, V., Borrell, A., Aguilar, A., Rowles, T. K., Rhinehart, H. L., . . . Sweeney, J. C. (2005). Integrating life-history and reproductive success data to examine

potential relationships with organochlorine compounds for bottlenose dolphins (*Tursiops truncatus*) in Sarasota Bay, Florida. *Science of the Total Environment*, 349, 106-119.  
doi:<https://doi.org/10.1016/j.scitotenv.2005.01.010>

Reviewer 1: Regarding the sentence “Overall, the effects of contaminants and pollutants on *S. teuszii* have largely been unstudied. However, extensive work on a related species, *S. chinensis*, indicates that some heavy metals (such as mercury) and some organochlorines (e.g. DDT and PCBs) could have negative impacts on *S. teuszii* as well, assuming they are being ingested by the species (Jefferson et al. 2006)”, the reviewer comments: Here are several other references that may be relevant for other *Sousa* species: Cagnazzi, D., Fossi, M. C., Parra, G. J., Harrison, P. L., Maltese, S., Coppola, D., . . . Marsili, L. (2013). Anthropogenic contaminants in Indo-Pacific humpback and Australian snubfin dolphins from the central and southern Great Barrier Reef. *Environmental Pollution*, 182, 490-494. Gui, D., Riqing, Y., Xuan, H., Qin, T., & Yuping, W. (2014). Tissue distribution and fate of persistent organic pollutants in Indo-Pacific humpback dolphins from the Pearl River Estuary, China. *Marine Pollution Bulletin*, 86(1-2), 266-273. Gui, D., Yu, R., He, X., Tu, Q., Chen, L., & Wu, Y. (2014). Bioaccumulation and biomagnification of persistent organic pollutants in Indo-Pacific humpback dolphins (*Sousa chinensis*) from the Pearl River Estuary, China. *Chemosphere*, 114(0), 106-113.  
doi:<http://dx.doi.org/10.1016/j.chemosphere.2014.04.028> Guo, L., Zhang, X., Luo, D., Yu, R.-Q., Xie, Q., & Wu, Y. (2021). Population-level effects of polychlorinated biphenyl (PCB) exposure on highly vulnerable Indo-Pacific humpback dolphins from their largest habitat. *Environmental Pollution*, 286, 117544. doi:<https://doi.org/10.1016/j.envpol.2021.117544> Sun, X., Guo, L., Luo, D., Yu, R.-Q., Yu, X., Liang, Y., . . . Wu, Y. (2022). Long-term increase in mortality of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary following anthropic activities: Evidence from the stranded dolphin mortality analysis from 2003 to 2017. *Environmental Pollution*, 307, 119526. doi:<https://doi.org/10.1016/j.envpol.2022.119526>

Reviewer 1: Regarding the paragraph beginning with the sentence “However, the Atlantic humpback dolphin could also show decreased resilience to climate change”, the reviewer comments: You might also want to include the following consideration: Some known *S. t.* habitats include estuaries and mangrove systems that rely on freshwater input from rainfall to regulate salinity. For example, the Saloum Delta in Senegal is an inverse estuary, with mangrove channels that become more saline further inland than where they meet the coast. A few freshwater springs and regular annual rainfall keep the tidally influenced mangrove channels from becoming hypersaline and maintain their depth and flow. Climate-change driven reduced rainfall and/or the depletion of aquifers that feed springs could lead to higher salinities, changed fish assemblages, and/or the reduction of water flow in core *S. t.* habitat, thus reducing the area of habitat available to the species. Dieng, N. M., Orban, P., Otten, J., Stumpp, C., Faye, S., & Dassargues, A. (2017). Temporal changes in groundwater quality of the Saloum coastal aquifer. *Journal of Hydrology: Regional Studies*, 9, 163-182.  
doi:<https://doi.org/10.1016/j.ejrh.2016.12.082> Ecoutin, J. M., Simier, M., Albaret, J. J., Laë, R., & Tito de Morais, L. (2010). Changes over a decade in fish assemblages exposed to both environmental and fishing constraints in the Sine Saloum estuary (Senegal). *Estuarine, Coastal and Shelf Science*, 87(2), 284-292.  
doi:<https://doi.org/10.1016/j.ecss.2010.01.009> Gning, N., Le Loc'h, F., Thiaw, O. T., Aliaume, C., & Vidy, G. (2010). Estuarine resources use by juvenile Flagfin mojarra (*Eucinostomus melanopterus*) in an inverse tropical estuary (Sine

Saloum, Senegal). *Estuarine, Coastal and Shelf Science*, 86(4), 683-691.  
doi:<https://doi.org/10.1016/j.ecss.2009.11.037>

Reviewer 1: Regarding the sentence “Overall, because potential impacts resulting from climate change are unknown, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer recommends deleting “a” and inserting “the most” in front of “significant threat”.

Reviewer 2: Regarding the word “producers” for “oil producers”, the reviewer comments: It would be good to establish the extent that Atlantic humpback dolphins overlap oil production operations. For example these operations are typically further offshore than the stated habitat for this species.

Reviewer 2: Regarding the phrase “other countries in the ETA region also produce oil, such as Equatorial Guinea and Nigeria”, the reviewer comments: So this phrase seems odd. I get there are major producers, and there are nations with a few oil fields, but where does this leave these nations in the mix of oil producers? Is there any way to clarify this?

Reviewer 2: Regarding the word “annually”, the reviewer comments: Is this discharge from oil rigs? If so, please try to clarify the source of this discharge.

Reviewer 2: Regarding the sentence “In Nigeria, solid waste or debris occasionally constituted 69% of coastal trawl catches (Solarin 2010; Weir and Pierce 2013), thus increasing the likelihood that cetaceans, especially smaller species like the Atlantic humpback dolphin may be at risk of physical entanglement with certain kinds of debris, including plastics and discarded fishing nets (Laist 1987; Weir and Pierce 2013)”, the reviewer suggests inserting a ‘.’ After “ (Solarin 2010; Weir and Pierce 2013)” and then starting a new sentence stating “Debris in the form of plastics and discarded or lost fishing nets may be an ingestion and entanglement risk for ,” and deleting “thus increasing the likelihood that cetaceans, especially smaller species like” and deleting “may be at risk of physical entanglement with certain kinds of debris, including plastics and discarded fishing nets”.

Reviewer 2: Regarding the sentence “However, it remains unclear whether the concentrations are harmful to cetaceans”, the reviewer suggests inserting ‘these elevated’ before the word ‘concentrations’.

Reviewer 2: Regarding the phrase and associated citation “on *S. teuszii* as well, assuming they are being ingested by the species (Jefferson et al. 2006)”, the reviewer comments: I think making this statement may be a bit of a leap. I would just go to the next sentence.

Reviewer 2: Regarding the sentence “Overall, because potential impacts resulting from climate change are unknown, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer suggests adding ‘, at present, an’ before the word ‘unknown’, and deleting the phrase ‘climate change does not appear to pose a significant threat’ and ‘at present’ in the sentence.

Reviewer 2: Regarding the sentence “Thus, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer suggests inserting ‘is an

unknown' before the word 'threat' and deleting 'does not appear to pose a significant' and 'at present' in the sentence.

Reviewer 3: Regarding the phrase "e.g. construction and expansion of ports and liquefied natural gas plants)", the reviewer comments: I would add mining here. I think it's important as it is directly impacting (on a rather large scale) the habitat of these animals.

Reviewer 3: Regarding "and diesel" the reviewer comments: I personally consider diesel as a subset of oil anyway, so not sure "and diesel" is needed.

Reviewer 3: Regarding the sentences "A number of Atlantic humpback dolphin range countries are also major oil producers, specifically Angola, Gabon, Cameroon, and the Republic of the Congo, and other countries in the ETA region also produce oil, such as Equatorial Guinea and Nigeria (Ukwe and Ibe 2010; Minton et al. 2017). Additionally, smaller oil fields exist in several other countries such as Senegal, Côte d'Ivoire, Ghana, and São Tomé and Príncipe (Weir and Pierce 2013)", the reviewer comments: It may be worth adding mining here, which seems to be an important and growing activity in several range countries.

Reviewer 3: Regarding the citation "(Geraci 1990; Reeves et al. 2003)", the reviewer comments: There have been a number of recent studies from the US, following the Deepwater horizon oil spill, I think by Schwacke et al., Rowles et al., Wells et al. and others. One or two of those might be really good to reference here.

Reviewer 3: Regarding the sentence "Habitat quality is also affected through increased vessel traffic and the associated underwater noise and risk of ship strikes at port sites", the reviewer commented: As well as sedimentation, introduction of pollutants, modification of habitat, etc.

Reviewer 3: Regarding the phrase "such as bottlenose dolphins (*Tursiops* spp.)), has indicated that short-term disturbances to individuals may translate to longer term consequences for population health and fecundity", the reviewer commented: A reference to this would strengthen the case here: Bejder, L., Samuels, A. M. Y., Whitehead, H. A. L., Gales, N., Mann, J., Connor, R., ... & Krützen, M. (2006). Decline in relative abundance of bottlenose dolphins exposed to long-term disturbance. *Conservation Biology*, 20(6), 1791-1798.

Reviewer 3: Regarding the phrase "we have determined that coastal development poses a current threat to the species", the reviewer suggests adding the word "substantial" in front of "current threat".

Reviewer 3: Regarding the sub-heading titled 'Contaminants and Pollutants', the reviewer comments: Not sure what the implied difference is here, as contaminants and pollutants are often used as synonyms (although not always). I would suggest "Chemical Pollutants" or just "Contaminants" may be better.

Reviewer 3: Regarding the phrase "high levels of pollution are discharged into the habitat of the Atlantic humpback dolphin resulting in indirect habitat loss through activities such as pollution", the reviewer comments: This sentence does not quite work I'm afraid. **Pollution** is discharged, resulting in habitat loss through activities such as **pollution**...

Reviewer 3: Regarding the words “solid waste” the reviewer comments: If solid waste and plastic debris is an item of this section, then I would add “Marine debris” or “Marine litter” to the heading of this section, because that doesn’t really fit well under “Contaminants” or “Pollutants”, at least not the way it is typically used. Alternatively, Chemical pollutants and Marine debris can be separate sections.

Reviewer 3: Regarding the sentence “Human sewage and other domestic waste contain bacterial, fungal, and viral pathogens, which may be transferred into cetaceans via prey or wounds”, the reviewer comments: Well, and through mucosa generally (eyes, mouth, genitals)

Reviewer 3: Regarding the phrase “internationally banned agrochemicals such as DDT, aldrin, and lindane”, the reviewer comments: I am not sure if they are in fact banned in West Africa as well.

Reviewer 3: Regarding the citation “(Harwood 2001; Aguilar et al. 2002; Islam and Tanaka 2004)”, the reviewer comments: See also [https://gajanet.pl/wp-content/uploads/2021/05/Report\\_UNDER-PRESSURE\\_2021.pdf#page=110](https://gajanet.pl/wp-content/uploads/2021/05/Report_UNDER-PRESSURE_2021.pdf#page=110) for a recent overview.

Reviewer 3: Regarding “the concentrations”, the reviewer comments: Did you mean “these” (recorded ones) concentrations? Because we know that certain concentrations definitely are harmful to cetaceans.

Reviewer 3: Regarding the sentence “Consequently, global warming could increase the availability of suitable habitat and result in range expansion”, the reviewer comments: This is only assuming there is no upper threshold – thermal stress becomes an issue at some point, as these animals have a limited ability to dissipate heat. Changing temperature may also lead to shifts in prey availability.

Reviewer 3: Regarding the sentence “Overall, because potential impacts resulting from climate change are unknown, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer comments: Personally, I am not convinced that because the impacts are unknown, it means CC does not pose a significant threat.

Reviewer 4: Regarding the citation in this sentence “The Atlantic humpback dolphin is considered an obligate coastal and shallow water nearshore species preferring dynamic habitats strongly influenced by tidal patterns (Collins 2015; Weir and Collins 2015; Taylor et al. 2020)”, the reviewer comments: Not the best reference as this is based on whatever I presented at the meeting, and was mostly citing the IUCN assessment.

Reviewer 4: Regarding the sentence “As such, these nearshore habitat requirements increase the vulnerability of Atlantic humpback dolphins to a range of human activities and anthropogenic disturbances”, the reviewer recommends inserting the citation “(Collins et al. 2017)” at the end of the sentence.

Reviewer 4: Regarding the phrase “The human population of most ETA countries is expanding by 2–3% annually (Weir and Pierce 2013),” the reviewer comments: I would refresh this and other figures using the UN Human Development Index. The Weir paper is over 10 years old.

Reviewer 4: Regarding the sentence “A number of Atlantic humpback dolphin range countries are also major oil producers, specifically Angola, Gabon, Cameroon, and the Republic of the Congo, and other countries in the ETA region also produce oil, such as Equatorial Guinea and Nigeria (Ukwe and Ibe 2010; Minton et al. 2017)”, the reviewer suggests deleting the phrase “other countries in the ETA region also produce oil..., such as Equatorial Guinea and Nigeria”, and inserting “Equatorial Guinea” in front of “Gabon” and deleting “and” in front of “the Republic of the Congo”, so the sentence reads “A number of Atlantic humpback dolphin range countries are also major oil producers, specifically Angola, Equatorial Guinea, Gabon, Cameroon, the Republic of the Congo, and Nigeria (Ukwe and Ibe 2010; Minton et al. 2017)”. The reviewer adds a comment to this suggested edit saying: Nigeria is the biggest Maybe also quote an industry source?

Reviewer 4: Regarding the sentence “And it has been noted that *S. teuszii* populations have been displaced due to large scale oil exploration and extraction which altered the coastal environment (e.g. *S. teuszii* populations which inhabited the Niger Delta) (International Whaling Commission 2011a)”, the reviewer suggests deleting “And” and adding “also” in front of “been noted”, deleting the phrase “have been displaced due” and inserting the phrase “inhabited the Niger delta prior to the development of” in front of “large scale oil exploration...”, adding a comma after the word “extraction”, and then inserting the word “subsequently” before the phrase “altered the coastal environment”, and deleting “(e.g. *S. teuszii* populations which inhabited the Niger Delta)”. The sentence now reads: “It has also been noted that *S. teuszii* populations inhabited the Niger delta prior to the development of large scale oil exploration and extraction, which subsequently altered the coastal environment (International Whaling Commission 2011a)” The reviewer also adds the following comment regarding this sentence: This isn't quite what was said - the subcommittee report refers to a paper (SC/62/SM1) within which the authors 'reiterate a suggestion by Van Waerebeek et al. 2004 that *S. teuszii* inhabited the Niger Delta before large scale oil exploration and extraction altered the coastal environment....ie the displacement is inferred, but not stated (and for good reason)

Reviewer 4: Regarding the phrase “Oil-producing companies from Guinea-Bissau to Angola are estimated to discharge 710 tons of annually”, the reviewer recommends inserting the words “into the sea” before the word “annually”.

Reviewer 4: The reviewer suggests adding the citation “(Collins, 2015)” at the end of the following sentence “These activities may directly and indirectly (via changes in prey) affect Atlantic humpback dolphins, which regularly inhabit estuarine areas”.

Reviewer 4: Regarding the sentences “Oil and gas development and extraction activities occur in the central and southern portions of the species’ range, resulting in an increase in port facilities and other coastal development projects (Collins 2015; Collins et al. 2017). Because increased coastal developments are prevalent throughout the species’ range and frequently overlap with *S. teuszii*’s preferred habitat sites, we have determined that coastal development poses a current threat to the species”, the reviewer comments: This feels like repetition

Reviewer 4: Regarding the sentence “Habitat contamination and pollution pose a threat to the health of long-lived species such as the Atlantic humpback dolphin”, the reviewer suggests inserting “likely” in front of the word “pose” and “marine” in front of the word “species”.

Reviewer 4: Regarding the phrase “Several major port cities (e.g. Nouadhibou, Dakar, Conakry, Lagos, Douala and Luanda)”, the reviewer suggests inserting “Libreville” after “Lagos”.

Reviewer 4: Regarding the citation “(Scheren et al. 2002; Weir and Pierce 2013)” in the sentence “Approximately 3.8 million metric tons per year of solid waste is produced in the Gulf of Guinea coastal zone, with much of it ending up in the ocean, and solid waste on Gulf of Guinea beaches largely constitutes plastics”, the reviewer comments: These are old - so either find more recent refs, or rephrase the sentence to reflect that these are older data

Reviewer 4: Regarding the sentence “The primary entry for water borne-pollutants into cetaceans is via their food prey (Weir and Pierce 2013)”, the reviewer suggests deleting “food” and inserting “their prey”.

*(B) Overutilization for Commercial, Recreational, Scientific, or Educational Purposes*

Reviewer 1: Regarding the sub-heading “Fisheries Bycatch”, the reviewer comments: Our 2022 report to the Scientific Committee of the IWC also includes a lot of information on types of fisheries and the overlap between fisheries effort and S.t. distribution in the Saloum Delta, Senegal based on surveys conducted in 2021 and 2022. Minton A.G., Keith-Diagne L., Seck D., Cerchio S., Tregenza N., Takoukam Kamla A., Eniang E., Senhoury C., Sallah-Muhammed Y., Lene A. & Cristiano N. (2022) Preliminary results of 2021 and 2022 *Sousa teuszii* surveys in the Saloum Delta, Senegal. Document presented to the Scientific Committee of the International Whaling Commission SC/68D/SM/12.

Reviewer 1: Regarding the phrase “notes that the species has also been “fatally entangled in octopus line”, the reviewer comments: The original reference for this is Notarbartolo di Sciarra G., Politi E. & Bayed A. (1998) A winter cetacean survey off southern Morocco, with a special emphasis on right whales. In: Document presented to the Scientific Committee of the International Whaling Commission, pp. 547-50. International Whaling Commission. This should be cited rather than Weir et al.

Reviewer 1: Regarding the sentences “Both individuals were killed for human consumption. More recently, on October 30th, 2021, at least one adult *S. teuszii* was killed in the village of Oyorokoto in the Andoni area of Rivers State, Nigeria (CCAHD; Nature News). It is likely that the animal was bycaught in fishing gear, and additional video footage shared on BBC News Pidgin indicates that the community probably intended to retain the carcass and potentially make use of the meat”, the reviewer comments: Oh great. So you do have this on record. I prefer not to include the Facebook link in documents that are going to be shared widely, as this will likely increase hits to the video, which more or less celebrates the killing. Can we refer only to the Nature News item instead? Or remove the hyperlink to the BBC Pidgin site?

Reviewer 1: Regarding the sentence “the monitoring of bycatch in these aforementioned areas is either non-existent or limited to very few landing sites (Van Waerebeek et al. 2004; Collins 2015; Collins et al. 2017)”, the reviewer recommends inserting the phrase “these are based on one-off studies and there are no formal ongoing” before the word “monitoring” and inserting “programs for cetacean” in front of “of bycatch in these aforementioned areas”, and deleting “is

either non-existent or limited to very few landing sites” and instead inserting “or anywhere else in the species’ range”.

Reviewer 1: Regarding the use of “West African”, the reviewer comments: Do you really mean the more limited area of what is considered 'West Africa' here, or would it be better to refer to the Atlantic coast of Africa, ETA or something similar ?

Reviewer 1: Again regarding the use of “West African”, the reviewer comments: Again, consider whether this is the right term.

Reviewer 1: Reviewer deleted an incorrectly placed ‘comma’ after the following sentence: “Burgeoning coastal communities and decreasing fish stocks have forced fishers to exploit new areas, new species, or used different fishing methods and gears, all of which can impact cetacean populations in West African waters (Leeney et al. 2015). ,”

Reviewer 1: Regarding the phrase “While knowledge of the species diet is sparse,” the reviewer suggests inserting an ‘apostrophe’ for the word “species”.

Reviewer 1: Regarding the citation in the following sentence, “Fish biomass in nearshore and offshore waters off the Gulf of Guinea has declined by at least 50% since 1977 due to unsustainable fishing by foreign and domestic fleets (Brashares et al. 2004; Weir et al. 2021)”, the reviewer comments: Again- Weir et al 2021 cites Brashares et al, so only the original reference should be cited here.

Reviewer 1: Regarding the following citation “(Weir and Pierce 2013)”, the reviewer comments: Again -there is probably an original reference that Weir and Pierce cited which should be cited here rather than their review.

Reviewer 1: Regarding the following citation “(Christensen et al. 2004; Leeney et al. 2015)”, the reviewer comments: Again, Leeney will not have collected this data herself. The Christensen reference is probably the only one needed.

Reviewer 1: Regarding the citation “Van Waerebeek et al. 2004; Clapham and Van Waerebeek 2007; Collins 2015; Leeney et al. 2015; Brownell Jr et al. 2019; Jefferson 2019”, the reviewer comments: This may be another good paper to cite: Ingram D.J., Prideaux M., Hodgins N., Frisch-Nwakanma H., Avila I.C., Collins T., Cosentino M., Keith-Diagne L., Marsh H., Shirley M.H., Van Waerebeek K., Djondo M.K., Fukuda Y., Glaus K.B.J., Jabado R.W., Lang J.W., Limpus C.J., Luber S., Manolis C., Webb G.J.W. & Porter L. (2022) Widespread use of migratory megafauna for aquatic wild meat in the tropics. *Frontiers in Marine Science* 9.

Reviewer 1: Regarding the citation “Balinga and Dyc 2018”, the reviewer comments: Also: Ingram D.J., Prideaux M., Hodgins N., Frisch-Nwakanma H., Avila I.C., Collins T., Cosentino M., Keith-Diagne L., Marsh H., Shirley M.H., Van Waerebeek K., Djondo M.K., Fukuda Y., Glaus K.B.J., Jabado R.W., Lang J.W., Limpus C.J., Luber S., Manolis C., Webb G.J.W. & Porter L. (2022) Widespread use of migratory megafauna for aquatic wild meat in the tropics. *Frontiers in Marine Science* 9.

Reviewer 1: Regarding the sentence “Atlantic humpback dolphin bait comes from the incidental take of stranded or bycaught dolphin carcasses that are routinely utilized by local communities for fishing bait, primarily targeting sharks (Van Waerebeek et al. 2017; Weir et al. 2021)”, the reviewer recommends deleting “Atlantic humpback dolphin bait comes from the incidental take of” and starting the sentence with “Stranded or bycaught Atlantic humpback dolphin carcasses”, and deleting the word “that”.

Reviewer 1: Regarding the sentence “Individual dolphin carcasses are from stranded individuals already either found dead on the shore (primarily having been bycaught in beach seines), or found dead after being bycaught in artisanal gillnets offshore and then subsequently brought to shore for use (Weir and Pierce 2013; CCAHD 2020; Weir et al. 2021)”, the reviewer recommends deleting the word “are” and deleting the words “and then” and inserting “are also often” before the word “subsequently”.

Reviewer 1: Reviewer deleted an extra period (‘.’) after this sentence “In The Gambia, an unidentified dolphin (either bottlenose or Atlantic humpback) found alive in a fishing net in 1996 was killed and butchered (Weir and Pierce 2013)..”

Reviewer 1: Regarding the phrase “In Imbikiri, Nigeria, dedicated ‘dolphin hunters’ embark”, the reviewer inserted “were reported to” in front of the word “embark”, and the reviewer added the following comment: We don't know if this still occurs

Reviewer 1: Regarding the sentence “In the Republic of Congo, there have been 30 cases of small cetacean carcasses being used for human consumption (30 of 34 bycatches, or 88.2% of cases) Atlantic humpback dolphins (n=18) and bottlenose dolphins (n=7) (International Whaling Commission 2019)”, the reviewer suggests inserting “,most of which were identified as” before “Atlantic humpback dolphins”.

Reviewer 1: Regarding the sentence, “In the Tristao Islands region of northern Guinea, Bamy et al. (2021) noted”, the reviewer suggests changing the word from “notes” to “noted”.

Reviewer 1: Regarding the sentence “Additionally, Van Waerebeek et al. (2017) and Bamy et al. (2021) suggest a potential correlation between dwindling fish stocks in West Africa and increasing consumption of marine animals, which may be the case in the Tristao Islands region of Guinea”, the reviewer comments: Already stated above.

Reviewer 1: Regarding Table 3, the reviewer inserted the following information into row 1  
“1”Octopus line Western Sahara Dakhla Bay Jan-Feb 1996 Notarbartolo di Sciarra et al. (1996)\*

Reviewer 1: Regarding Table 3, the reviewer inserted the following information into row 21 “2-4 Fishing gear (unspecified) Guinea Tristao Islands June 2017 Bamy et al. (2021)” and added the following comments: Ah, I see now that these are arranged chronologically rather than by country. However, I think arranging them by country, either alphabetically or from North to South would be more logical for the reader. Note that the evidence for these strandings being caused by bycatch is somewhat indirect. Perhaps you would like to review the paper yourself to see which of the 4 *Sousa teuszii* records you think should be included in this

table. <https://www.preprints.org/manuscript/202104.0094/v1>

Reviewer 1: Regarding the phrase “Additionally, the use of stranded or bycaught Atlantic humpback dolphins for human consumption and/or fishing bait has been documented throughout its range”, the reviewer suggests deleting “its” and inserting “the species” before “range”.

Reviewer 1: Regarding the sentence “Bycatch and the use of dolphins for human consumption and/or fishing bait combined with high human population densities, and coastal resource competition accompanied by rapidly expanding coastal communities leading to prey depletion of fish stocks throughout much of the species’ range, are all factors determining the species’ distribution and status”, the reviewer comments: Whew! That's quite a sentence. Might be easier to read if it is broken down or simplified.

Reviewer 2: Regarding the sentence “The depletion of prey resulting from intensive and unsustainable commercial and artisanal exploitation of fish stocks is also a potential contributing factor to declining Atlantic humpback dolphin populations”, the reviewer suggests deleting the word “considered”.

Reviewer 2: Regarding the sentence “While knowledge of the species diet is sparse, some fish predated by Atlantic humpback dolphins (e.g. mullet, *Mugil spp.*) are also targeted by coastal fisheries (Cadenat 1956; Maigret 1980b; Weir 2016)”, the reviewer suggests deleting the word “also”.

Reviewer 2: Regarding the phrase “Additionally, within Atlantic humpback dolphin range countries”, the reviewer suggests deleting the word “Additionally” and starting with the word “Within”.

Reviewer 2: Reviewer suggests inserting the following sentence “As stated above, international fishing activities in West African waters from industrial fishing fleets from Europe (Ramos and Grémillet 2013), China (estimated at 3 million tons per year) (Pauly et al. 2013), contribute substantial pressure on fisheries resources. Adding to these factors that are already depleting fishing resources is illegal, unreported, and unregulated (IUU) fishing.”

Reviewer 2: Regarding the sentence “Senegal, Mauritania, Liberia, Ghana, and Sierra Leone are amongst the countries most affected by illegal, unreported, and unregulated (IUU) fishing (Balinga and Dyc 2018)”, the reviewer suggests deleting “illegal, unreported, and unregulated (IUU) fishing” and inserting “IUU fishing” before the citation (Balinga and Dyc 2018).

Reviewer 2: Suggests deleting the sentence “Consequently, fisheries declines in general may affect Atlantic humpback dolphin populations by increasing artisanal fishing effort and pressure, leading not only to increased bycatch risk but also potentially reduced prey availability for the species (Collins 2015; Collins et al. 2017)”, and inserting the sentence “ Generally, IUU fishing is widespread throughout the species range (Brashares et al. 2004), including within protected marine areas such as Conkouati-Douli National Park in the Republic of the Congo (Collins 2015)” at the end of the paragraph.

Reviewer 2: Reviewer suggests inserting “In the Eastern Central Atlantic”, and deleting “while” and “in the Eastern Central Atlantic” from the phrase “while 68% of the main fisheries in the Eastern Central Atlantic are considered to be either at full capacity or in decline (Weir and Pierce 2013)”, so the sentence now reads “In the Eastern Central Atlantic, 68% of the main fisheries are considered to be either at full capacity or in decline (Weir and Pierce 2013).”

Reviewer 2: Reviewer suggests moving the sentence “IUU fishing is widespread throughout the species range (Brashares et al. 2004), including within protected marine areas such as Conkouati Douli National Park in the Republic of the Congo” to the previous paragraph.

Reviewer 2: Reviewer suggests inserting this sentence as the concluding sentence of the paragraph “Consequently, declines in fish biomass may affect Atlantic humpback dolphin populations by increasing artisanal fishing effort and pressure, leading not only to increased bycatch risk but also potentially reduced prey availability for the species.”

Reviewer 2: Reviewer suggests replacing “which provides” with “which indicates” in the following phrase “which indicates a potential market for cetacean products”

Reviewer 2: Reviewer suggests deleting “which is” from “which is resulting in new forms of aquatic meat”

Reviewer 2: Regarding the sentence “Furthermore, one of the main factors contributing to IUU fishing and harvesting activities are inadequate policies and institutional frameworks throughout much of the species’ range countries (Balinga and Dyc 2018; Weir et al. 2021)”, the reviewer suggests inserting “declines in fish biomass” after “contributing to” and adding “bycatch” after “fishing” and inserting “and enforcement of existing laws” after “frameworks”.

Reviewer 2: Regarding the sentence starting with “Additionally, Moores (2018)...”, reviewer suggests deleting “Additionally”.

Reviewer 2: Regarding the sentence starting with “Additionally, all vessels...”, the reviewer suggests deleting “Additionally” and starting the sentence with “All vessels..”

Reviewer 2: Regarding the phrase “which could evolve over time into more targeted hunting of the species for trade or personal income”, the reviewer suggests deleting “trade” and inserting the word “sale”, deleting “income” and inserting “personal/community consumption”.

Reviewer 2: Regarding the sentence “Bycatch and the use of dolphins for human consumption and/or fishing bait combined with high human population densities, and coastal resource competition accompanied by rapidly expanding coastal communities leading to prey depletion of fish stocks throughout much of the species’ range, are all factors determining the species’ distribution and status”, the reviewer inserted “fisheries” after “coastal”, deleted “communities” and inserted “reduction in fish biomass and thus” before “prey depletion” and deleted the word “to” and deleted “of fish stocks”, and deleted the words “distribution and”. The reviewer added the following comment with these edits: There are a lot of thoughts in this sentence, you may want to think about making it two sentences.

Reviewer 3: Regarding the hyperlink to additional video footage shared on BBC News Pidgin, the reviewer comments: This video apparently isn't available anymore.

Reviewer 3: Reviewer deleted a misplaced comma (,) before the sentence "Industrial fisheries have also been known to fish in zones set aside for artisanal fishers and in areas where dolphins are known to occur (Collins 2015; Collins et al. 2017)."

Reviewer 3: Reviewer deleted an extra period ('.') after this sentence "In The Gambia, an unidentified dolphin (either bottlenose or Atlantic humpback) found alive in a fishing net in 1996 was killed and butchered (Weir and Pierce 2013)."

Reviewer 3: Reviewer added "and disturbance" after "vessel strikes" in the phrase "(i.e. through development of boat-based dolphin or whale watching, increasing the potential for vessel strikes)".

Reviewer 3: Reviewer added "(i.e. disturbance and modification of behavior)" after the phrase "While ecotourism is increasing in some countries within the species' range, and the activities associated with ecotourism may directly (i.e. vessel strikes) and/or indirectly"

Reviewer 3: Regarding the phrase "overall potential impacts resulting from ecotourism are unknown", the reviewer comments: And presently unlikely to pose a threat, I would add.

Reviewer 4: Reviewer deleted "Jr" from the "(Brownell Jr et al 2019)" citation.

Reviewer 4: Deleted the words "continued to" and inserted and 'ed' after the word "occur" so phrase reads "In northern Guinea, bycatch (mostly gillnet entanglements) of Atlantic humpback dolphins has also occurred in small-scale local fisheries surrounding the Marine Protected Area of the Tristao Islands..."

Reviewer 4: Regarding the phrase "It is likely that the animal was bycaught in fishing gear, and additional video footage shared on BBC News Pidgin indicates..." the reviewer inserted "the" in front of "BBC News Pidgin" and "website" in front of "indicates".

Reviewer 4: Regarding the citations "(Collins 2015; Collins et al. 2017)", the reviewer comments: Metcalfe, K., Collins, T., Abernethy, K.E., Boumba, R., Dengui, J.C., Miyalou, R., Parnell, R.J., Plummer, K.E., Russell, D.J., Safou, G.K. and Tilley, D., 2017. Addressing uncertainty in marine resource management; combining community engagement and tracking technology to characterize human behavior. *Conservation Letters*, 10(4), pp.460-469.

Reviewer 4: Regarding the sub-section heading titled 'Use and Trade', the reviewer comments: No mention of the Ingram paper - this has updated information Ingram, D.J., Prideaux, M., Hodgins, N.K., Frisch-Nwakanma, H., Avila, I.C., Collins, T., Cosentino, M., Keith-Diagne, L.W., Marsh, H., Shirley, M.H. and Van Waerebeek, K., 2022. Widespread use of migratory megafauna for aquatic wild meat in the tropics and subtropics. *Frontiers in Marine Science*, p.112.

Reviewer 4: Reviewer deleted "Jr" from the "(Brownell Jr et al 2019)" citation.

Reviewer 4: Reviewer deleted an extra period (‘.’) after this sentence “In The Gambia, an unidentified dolphin (either bottlenose or Atlantic humpback) found alive in a fishing net in 1996 was killed and butchered (Weir and Pierce 2013)..”

Reviewer 4: Regarding the sentence “In Imbikiri, Nigeria, dedicated ‘dolphin hunters’ embark on weekly or fortnightly hunting trips and use large-mesh drift gillnets to capture around two to five animals dolphins per trip (Uwagbae and Van Waerebeek 2010)”, the reviewer comments: This is a bit misleading - they mostly hunt offshore. Maybe clarify. The reviewer also deleted “animals” and inserted “dolphins” into the sentence.

Reviewer 4: Regarding the citation in the sentence “In the Republic of Congo, there have been 30 cases of small cetacean carcasses being used for human consumption (30 of 34 bycatches, or 88.2% of cases); Atlantic humpback dolphins (n=18) and bottlenose dolphins (n=7) (International Whaling Commission 2019)”, the reviewer comments: This is actually referencing the Collins 2015 and 2017 papers

Reviewer 4: Regarding “forensic evidence” in the sentence “Additionally, forensic evidence in the region indicates that bycaught dolphins are often utilized for local consumption (Bamy et al. 2021)”, the reviewer comments: ?? Really??

Reviewer 4: Regarding the sentence “Additionally, Van Waerebeek et al. (2017) and Bamy et al. (2021) suggest a potential correlation between dwindling fish stocks in West Africa and increasing consumption of marine animals, which may be the case in the Tristao Islands region of Guinea”, the reviewer comments: This is repetitive

Reviewer 4: Regarding the phrase “which includes killing of live entangled animals, and using dolphin meat as bait”, the reviewer inserts “the” in front of the word “killing”

Reviewer 4: Reviewer deleted a space inbetween the word “over utilization”

### *(C) Disease or Predation*

Reviewer 1: Regarding the phrase “lobomycosis-like disease in an individual *S. plumbea* from the KwaZulu-Natal Coast in South Africa. However, there is currently no data to determine whether these parasites or disease negatively affect the health or population status of the Atlantic humpback dolphin specifically”, the reviewer comments Photos from recent surveys in the Delta Saloum, Senegal, indicate that at least two individuals also have skin lesions typical of lobomycosis, although this has not yet been published anywhere (I see that it is not mentioned in our 2022 report to the IWC, although we did exchange photos with a veterinary pathologist to seek her advice on a diagnosis. We would need to ask Lucy Keith-Diagne, who runs the research programme in Senegal for permission to pers. comm. If we would like to include a reference/if you think it appropriate.

Reviewer 1: Regarding the use of the citation “(Whittaker and Young 2018)”, the reviewer comments: See the comment above for multiple additional references for the impacts of water-borne pollution on *S. chinensis* and *sahulensis* that could be cited here.

Reviewer 1: The reviewer suggests deleting “boating” and inserting “vessel traffic” in the phrase “stress derived from close interaction with boating, industry, noise”.

Reviewer 1: The reviewer suggests deleting the “(Whittaker and Young 2018)” citation and comments: This reference might also be useful: Smith F., Allen S.J., Bejder L. & Brown A.M. (2017) Shark bite injuries on three inshore dolphin species in tropical northwestern Australia. *Marine Mammal Science*, n/a-n/a. doi:10.1111/mms.12435. Regarding the phrase: “increasing the probability that sharks prey on Atlantic humpback dolphins” the reviewer also suggests deleting the “increasing the probability that” and inserting “indicating that it is likely that” and inserting “also” in front of “prey”.

Reviewer 1: Regarding the sentence “Overall, because of the paucity of information, there is no indication that disease or predation pose a threat to the Atlantic humpback dolphin, thus their associated potential impacts remain unknown”, the reviewer comments: We might ask Marie van Bresseem to review this section. I would conclude, that disease could have a major impact on this species if the environmental stressors reviewed above continue: Van Bresseem, M.-F., Raga, J. A., Di Guardo, G., Jepson, P. D., Duigan, P. J., Siebert, U., . . . Van Waerebeek, K. (2009). Emerging infectious diseases in cetaceans worldwide and the possible role of environmental stressors. *Diseases of Aquatic Organisms*, 86, 143–157.

Reviewer 2: Regarding the words ‘lordosis’ and ‘kyphosis’, the reviewer comments: It may help to drop a footnote to give the reader more explanation about these diseases.

Reviewer 2: Regarding the phrase “it is probable that sharks may prey on this species across its range”, the reviewer suggests deleting the word ‘may’.

#### *(D) Inadequacy of Existing Regulatory Mechanisms*

Reviewer 1: Regarding the sentence “Below is a summary of regulatory measures that currently apply to the species, and an analysis of whether these are inadequate to protect the species from identified threats”, the reviewer comments: See also the draft CMS Concerted Action Plan, which includes a review of legal measures in place in each of the 19 range countries. I think this is important to capture somehow, as the information on regional and international treaties below almost all conclude with a statement on the lack of capacity or resources at national level to fully comply with the commitments of the treaty in question. It is important to support these statements with some credible references, otherwise it comes across as a blanket assumption that African countries do not have resources and capacity, which may, to a certain extent, be true, but without supporting evidence could be perceived as euro-centric or discriminatory.

Reviewer 1: Regarding the sentence “However, while 17 out of the 19 range countries of *S. teuszii* are Parties to CMS, conservation of the Atlantic humpback dolphin is often not a high priority for governments of range countries, despite the efforts of the Convention’s National Focal Points to promote the issue and relevant government agencies in many range countries currently lack the resources to monitor and enforce CMS provisions”, the reviewer comments: I think this needs to be supported with some kind of reference. The draft CMS Concerted Action could be used, or Weir et al. 2021, or our 2022 paper: (2022). Range-Wide Conservation Efforts for the Critically Endangered Atlantic Humpback Dolphin (*Sousa teuszii*). *Diversity*, 14(9), 716. Retrieved from <https://www.mdpi.com/1424-2818/14/9/716>

Reviewer 1: Regarding the citation “(Weir *et al.* 2021)” in the sentence “Additionally, the CMS has been closely involved with efforts to conserve the Atlantic humpback dolphin since the early 1990s and has funded two West African Cetacean Research and Conservation Programme (WAF CET) projects during the late 1990s to collect information on this (and other) species, and stimulate regional involvement in conservation efforts (Weir *et al.* 2021)”, the reviewer comments: It would probably be better to cite the MoU itself, or one of the earlier van Waerebeek papers ( e.g. Van Waerebeek 2004), that directly resulted from the CMS WAF CET projects. Again, politically, it is important to recognise the original actors/authors rather than/as well as those who summarised their efforts. You could also consider: Van Waerebeek, K., Barnett, L., Camara, A., Cham, A., Diallo, M., Djiba, A., . . . Bamy, I. L. (2003). Conservation of cetaceans in the Gambia and Senegal, 1999-2001, and status of the Atlantic humpback dolphin. WAF CET - 2 Report. Retrieved from Van Waerebeek, K., Ndiaye, E., Djiba, A., Mamadou, D., Murphy, P., Jallow, A., . . . Tous, P. (2003). A Survey of the Conservation Status of Cetaceans in Senegal, the Gambia and Guinea-Bissau ,WAF CET -I Report. Retrieved from UNEP/CMS. Bonn, Germany: <https://www.cms.int/en/document/wafcet-1-%E2%80%9D-survey-conservation-status-cetaceans-senegal-gambia-and-guinea-bissau%E2%80%9D>

Reviewer 1: Regarding the citation “(Weir *et al.* 2021)” in the sentence “A series of CMS meetings were held on West African cetaceans, which culminated in the signing of a MoU Concerning the Conservation of the Manatee and Small Cetaceans of Western Africa and Macaronesia in 2008 (Weir *et al.* 2021)”, the reviewer comments: Consider citing the MoU itself rather than Weir *et al.* <https://www.cms.int/aquatic-mammals/en/node/4122>

Reviewer 1: Regarding the citation “CA Plan” the reviewer deleted the word ‘plan’ and commented: This link is to the Concerted Action text, but not the actual Concerted Action Plan, which is still under review (see various comments above, and the draft plan, which I sent in a separate email).

Reviewer 1: Regarding the sentence “However, in many range countries there is a lack of resources to monitor and mitigate bycatch and/or design and implement other research and conservation measures, leading to little enforcement of laws relating to retention and use of bycaught individuals”, the reviewer comments: Again- I think this needs better support - consider the 2022 Minton *et al.* paper that I suggested above, as it includes range-country authors, and is hopefully less likely to come across as authors from 'developed' countries criticising less 'developed' countries.

Reviewer 1: Regarding the paragraph “The Atlantic humpback dolphin was included on CITES Appendix I in 1979, as a species threatened with extinction for which trade is permitted only in exceptional circumstances (CITES Appendices). Under Resolution Conference 8.4 (Rev. CoP15), the CITES National Legislation Project identifies those Parties whose domestic measures do not provide them with the authority to execute four minimum requirements under CITES. A Party is classed as a “Category 1 State” if its legislation is believed generally to meet the following four minimum requirements for the implementation of the Convention: (i) the State has designated at least one Management Authority and one Scientific Authority; (ii) it has legislation that prohibits trade in specimens in violation of the Convention; (iii) it penalizes such trade; and (iv) provides for the confiscation of specimens illegally traded or possessed. Parties are classed as a “Category 2 State” if their legislation is believed to only partially meet these four CITES

implementation requirements, and as a “Category 3 State” if their legislation is believed generally not to meet these four CITES implementation requirements (CITES National Legislation Project). According to the CITES National Legislation Project, 10 out of the total 18 range countries that are a Party to CITES, are classified as either a “Category 2 State” or “Category 3 State”, indicating that they lack the legal framework to effectively implement CITES provisions (CITES Legislative Status Table). Furthermore, while the remaining 8 range countries are classified as “Category 1”, government agencies in many of these range countries lack the resources to fully monitor and enforce CITES provisions”, the reviewer comments: This is really useful - and could also be used to support some of the statements above related to lack of capacity for protection.

Reviewer 1: Regarding the phrase “, and in 2010, identified a range of specific research and conservation objectives”, the reviewer inserted the word ‘it’ in front of “identified”.

Reviewer 1: Regarding the phrase “including the CMS CA Plan”, the reviewer deleted “CMS CA Plan” and inserted “MoU” with the comment: This did not yet exist in 2010, as the Concerted Action was only approved in 2017. I think this needs to be changed to MoU.

Reviewer 1: Regarding the phrase “successful bycatch mitigation has not been documented in any *S. teuszii* range country”, the reviewer comments: See comment above regarding this statement and the way we have addressed this in our 2022 paper. 'Mitigating threats: The mitigation (or always preferably, the elimination) of the threats to species survival is the most important category of action. Minimal progress has been made to date, but there are some signs of progress. In Cameroon, recent advocacy efforts by CCAHD partners led to the full legal protection of AHD along with four other marine mammal species in 2020 (Arrêté N 0053/MINFOF, passed on 1 April 2020). Another example is the provisional agreement between the manager of the Mandji Etimboué MPA in Gabon and the local fishing community, which accepted an arrangement whereby beach-seine operations would be conducted only in the presence of MPA staff, so that a quick response (safe handling and release for live animals or appropriate examination and disposal of the carcass of dead animals) could be mounted if dolphins or other marine megafauna were unintentionally entangled. This procedure saved the lives of four AHDs in December 2021 (I. Akendengue pers. comm and Kema personal observation; Figure 3). This limited progress reflects the importance of a multi-pronged approach to threat mitigation, by which strong legal frameworks are in place to regulate potentially harmful activities and local communities and bodies responsible for enforcement are able to work effectively together to ensure that regulations are implemented.

Reviewer 1: Regarding the sentence “This is primarily because a number of government agencies lack the resources to effectively mitigate bycatch or design and implement other research and conservation measures”, the reviewer comments: Again- a reference is needed to support a statement like this.

Reviewer 1: Regarding the phrase “, and full implementation of this initiative (and subsequent results) within West African nations has not been completed (IWC BMI)” the reviewer deleted “West African nations” and inserted “within *Sousa teuszii* range countries” at the end of the sentence.

Reviewer 1: Regarding the phrase “The primary objectives of this international treaty are” the reviewer deleted ‘this international’ and inserted ‘the CBD’ and comments: Seems a bit strange to rely only on the heading for the reader to know which treaty is being discussed. Other sections repeat the treaty/convention name, which I think is better.

Reviewer 1: Regarding the phrase “which includes all countries that are in...” the reviewer deletes ‘which includes’ and inserts ‘including’

Reviewer 1: Regarding the sentence “Furthermore, a number of government agencies in many range countries lack the resources to fully implement any conservation measures resulting from this Convention”, the reviewer comments: Again - some sort of support for this statement is required.

Reviewer 1: Regarding the sentence “As of October 2021, there are 172 parties, which includes 18 out of 19 range countries of *S. teuszii* (Ramsar Convention), and 2,347 designated sites, which includes sites in nearshore waters where the Atlantic humpback dolphin is known to occur such as the Saloum Delta, Senegal which is listed as a Wetland of International Importance under this Convention (Ramsar Convention)”, the reviewer suggests deleting “which includes sites in nearshore waters where the Atlantic humpback dolphin is known to occur such as” and inserting “One of these is,” before this deleted phrase and adding “, and is known to host possibly the largest know population of *S. teuszii*.” Thus the sentence now is broken into 2 sentences which read “As of October 2021, there are 172 parties, which includes 18 out of 19 range countries of *S. teuszii* (Ramsar Convention), and 2,347 designated sites. One of these is the Saloum Delta, Senegal which is listed as a Wetland of International Importance under this Convention (Ramsar Convention), and is known to host possibly the largest known population of *S. teuszii*.”

Reviewer 1: The reviewer suggest writing “West coast of Africa” instead of “West African coast”.

Reviewer 1: Regarding the sentence: “Furthermore, relevant government agencies in many range countries lack the resources to fully implement any conservation measures resulting from this Convention”, the reviewer comments: Again - it is important that this is supported by some references.

Reviewer 1: Regarding the paragraph “While the Revised African Convention provides a framework within which broad conservation and sustainable development objectives may be pursued to provide environmental regulation at the regional level, it does not specifically address Atlantic humpback dolphin conservation. Furthermore, financing the Revised African Convention has been a challenge and is crucial to implementation of its provisions as well as managing compliance of its parties. The provisions of the 2003 Revised African Convention emphasize the need for its member states to mobilize financial resources individually or jointly from bilateral or multilateral funding sources (Erinosho 2013). While the financial provisions of the 2003 Revised African Convention are an improvement on the 1968 African Convention (which was silent on issues of funding) the provisions are largely generic of funding provisions in treaties (Erinosho 2013). The successful implementation of the Revised African Convention is dependent on its procedures for implementation and compliance which are made possible with adequate financial backing from its parties. However, this remains a challenge for a number of African countries that are signatories to the Revised African Convention, as resources to fully

implement the treaty are currently lacking (Erinosho 2013),” the reviewer comments: This is really useful - and good to have a reference to support the issue of lack of funding and capacity. The reviewer also deleted ‘of’ in ‘largely generic of funding provisions’ and inserted the word ‘regarding’

Reviewer 1: Regarding the phrase “Furthermore, as part of the work on the CMS CA Plan,” the reviewer recommends deleting “Plan” and inserting “drafting an Action Plan for the CMS CA”  
Reviewer 1: Regarding the paragraph “Additionally, information on the existence of domestic laws or regulations that specifically apply to the species is absent across its range. Furthermore, as part of the work on drafting an Action Plan for the CMS CA Plan, a formal review of the legal status and relevant protection measures and instruments for the species in each range country is currently underway, which is likely to confirm that the Atlantic humpback dolphin is legally protected in most range countries”, the reviewer comments: OK - so this draft action plan is now being circulated for review. I sent an email separately with a link to this document, which was just recently circulated more widely for input. I think we could ask the CMS Secretariat if it would be OK to cite this, even though it is not yet finalised and published. It would address a lot of my concerns above about the statements regarding lack of national capacity and concrete protections.

Reviewer 1: Regarding the sentence “This is largely because a number of government agencies in many range countries lack the resources to effectively monitor and mitigate bycatch or to design and implement research and conservation measures specific to the Atlantic humpback dolphin”, the reviewer inserted “(Minton et al. 2022)” as a citation.

Reviewer 1: Regarding the sentences “Moreover, a recent study by Doumbouya et al. (2017) found that the capacity for monitoring, control, and surveillance systems of illegal fishing within the waters of six *S. teuszii* range countries (The Gambia, Guinea, Guinea-Bissau, Mauritania, Senegal, and Sierra Leone) was ‘relatively weak’. The study attributed the weakness to ‘[p]oor governance and high corruption combined with high monitoring costs’ (Doumbouya et al. 2017)”, the reviewer comments: Good - can we cite this earlier?

Reviewer 1: Reviewer inserted the word ‘successful’ in front of the words ‘bycatch mitigation’.

Reviewer 2: Regarding the phrase “, despite the efforts of the Convention’s National Focal Points to promote the issue and relevant government agencies in many range countries currently lack the resources to monitor and enforce CMS provisions”, reviewer suggests inserting the words “recognizing that” in front of “relevant government agencies” and deleting the word “and” and deleting the word “currently”.

Reviewer 2: Regarding the phrase “Additionally, the CMS has been closely involved with efforts”, the reviewer suggests deleting “Additionally” and starting the sentence with “The”.

Reviewer 2: Regarding the use of the word “West African”, the reviewer suggests deleting the “n” from “Africa”, so it reads “West Africa”.

Reviewer 2: Regarding the “CMS Listings” citation, the reviewer comments: It would be good to provide more detail here, such as detailing how are they protected. You reference laws below,

for example how many of the range countries have laws that prohibit the intentional killing, use, and retention of humpback dolphins.

Reviewer 2: Regarding the sentence “However, in many range countries there is a lack of resources to monitor and mitigate bycatch and/or design and implement other research and conservation measures, leading to little enforcement of laws relating to retention and use of bycaught individuals (CMS CA Plan)”, the reviewer suggests inserting “survey the population,” in front of “monitor”, placing a period (.) after “measures” and starting a new sentence that says “Likewise there is,”

Reviewer 2: Regarding the word “successful” (for “successful bycatch mitigation”) the reviewer comments: I also would recommend that these nations lack monitoring programs to estimate AHD bycatch in their fisheries. Without first estimating and identifying where the bycatch occurs, it is difficult to target mitigation.

Reviewer 2: Regarding the phrase “effectively mitigate bycatch or design”, the reviewer inserts “monitor and” in front of “mitigate”

Reviewer 2: Regarding the sentence “Additionally, information on the existence of domestic laws or regulations that specifically apply to the species is absent across its range”, the reviewer comments: Question, above you state that there are laws, here you seem to indicate there are none. Was an analysis of the range countries laws undertaken? If so it would be good to have a summary of the domestic legislation. I have a spreadsheet we could share with you and we could coordinate a meeting to discuss what we have found during our analyses.

Reviewer 2: Regarding the sentence “Furthermore, as part of the work on the CMS CA Plan, a formal review of the legal status and relevant protection measures and instruments for the species in each range country is currently underway, which is likely to confirm that the Atlantic humpback dolphin is legally protected in most range countries”, the reviewer comments: This sentence seems to contradict the one above. [This is referring to the sentence in the previous comment above].

Reviewer 2: Regarding the sentence “However, despite this diverse array of legal instruments, CCAHD members report that legal protection ‘on paper’ is currently”, reviewer suggests deleting “is currently” and inserting “has”.

Reviewer 2: Regarding the sentence “This is largely because a number of government agencies in many range countries lack the resources to effectively monitor and mitigate bycatch or to design and implement”, the reviewer inserts “survey the population,” in front of “monitor” and deletes the word “to”.

Reviewer 2: Regarding the sentence “Furthermore, while many range countries appear to have general protections for marine mammals in fisheries (e.g. prohibiting directed catch), few have specific protections for the Atlantic humpback dolphin and bycatch mitigation has not been documented in any *S. teuszii* range country (CCAHD 2020) (CCAHD)”, the reviewer deletes the word “Furthermore”, starts the sentence with “While”, inserts “of protected species” after “prohibiting directed catch”, inserts a period (.) after ‘dolphin’, and starts a new sentence with “Regarding”, deletes the word “and”, and inserts “monitoring, bycatch estimation, and” in front

of “mitigation” and inserts “is largely lacking throughout all of the” in front of *S. teuszii* and deletes “has not been documented in any” and changes “country” to “countries”. The sentences now read “While many range countries appear to have general protections for marine mammals in fisheries (e.g. prohibiting directed catch of protected species), few have specific protections for the Atlantic humpback dolphin. Regarding bycatch, monitoring, bycatch estimation, and mitigation is largely lacking throughout all of the *S. teuszii* range countries (CCAHD 2020) (CCAHD).”

Reviewer 3: The reviewer comments: In 2015, the Small Cetaceans sub-committee identified the Atlantic humpback dolphin as one of the cetacean populations with high priority for designation of task teams and potential development of Conservation management Plans: Genov, T., Fortuna, C. M., Reeves, R. R., Scheidat, M., Simmonds, M. P., & Donovan, G. P. (2015). Preliminary list of small cetacean populations with high priority for designation of task teams and potential development of Conservation management Plans: Paper SC/66a/SM22. Paper presented at IWC 2015, San Diego, United States.

Reviewer 3: Regarding the quotation ‘[p]oor governance and high corruption combined with high monitoring costs’, the reviewer comments: I wonder if this needs square brackets, as the only difference in this quotation from the actual paper is that p is lower vs upper case. Maybe it’s just me, but this way of writing it made me wonder if the original paper erroneously wrote “oor” instead of “poor”, so I actually went and checked. :)

#### *(E) Other Natural or Manmade Factors Affecting the Species’ Continued Existence*

Reviewer 1: Regarding the citation at the end of the sentence “It is also widely recognized that anthropogenic sound sources and the resulting acoustic disturbance can have potential impacts on cetaceans’ welfare including hearing loss, tissue damage, behavioral disturbance, displacement from important habitats, masking of communication sounds and even cognition when the added noise exceeds the threshold levels of the species (Wartzok and Ketten 1999; Whittaker and Young 2018; Stevens et al. 2021; Weir et al. 2021)”, the reviewer comments: Weir et al 2021 is not needed here. It is not specifically as study on acoustics and the impacts of sound on cetaceans, it only cites some of these other studies. I think a better reference to cite here would be: Erbe, C., Marley, S. A., Schoeman, R. P., Smith, J. N., Trigg, L. E., & Embling, C. B. (2019). The Effects of Ship Noise on Marine Mammals—A Review. *Frontiers in Marine Science*, 6(606). doi:10.3389/fmars.2019.00606 Weilgart, L. (2017). Din of the Deep: Noise in the Ocean and Its Impacts on Cetaceans. In A. Butterworth (Ed.), *Marine Mammal Welfare: Human Induced Change in the Marine Environment and its Impacts on Marine Mammal Welfare* (pp. 111-124). Cham: Springer International Publishing.

Reviewer 1: Regarding the citation at the end of the sentence “Additionally, engine and sonar noise from different vessel types (e.g. pirogues, dredgers, trawlers and tankers) may reach sufficient amplitude and duration such that the health and/or behavior of coastal marine mammals in the area (including Atlantic humpback dolphins) are negatively affected (Whittaker 2018; Weir et al. 2021)”, the reviewer comments: Include Erbe et al 2019 here: Erbe, C., Marley, S. A., Schoeman, R. P., Smith, J. N., Trigg, L. E., & Embling, C. B. (2019). The Effects of Ship Noise on Marine Mammals—A Review. *Frontiers in Marine Science*, 6(606). doi:10.3389/fmars.2019.00606

Reviewer 1: Regarding the sentence “Even though geophysical seismic surveys along the Atlantic coast of Africa are primarily focused on the continental slope, some also occur in neritic habitat (Weir et al. 2021)”, the reviewer comments: I understand that seismic surveys HAVE been conducted in nearshore areas in Gabon, Cameroon and Senegal - including areas of *S. teuszii* habitat, but I have had trouble tracking down supporting documentation for this. I just tried again to conduct an internet search but have come up empty handed. Colleagues in Gabon, Cameroon and Senegal have also searched for written sources that document campaigns they know took place in nearshore waters, but have been unable to find any that we can cite.

Reviewer 1: Regarding the citation at the end of this sentence “Small odontocete cetaceans use clicks and whistles for communication with other individuals, and are strongly dependent on passive hearing and active echolocation for navigation, finding prey, and predator avoidance (Reeves et al. 2003; CCAHD 2020; Stevens et al. 2021)”, the reviewer comments: CCAHD 2020 is not an appropriate citation here. Better to stick to those that focus on dolphin biology/hearing/communication.

Reviewer 1: Regarding the sentence “Given the increasing development activities within the dolphin’s habitat along the West African coast, particularly related to coastal construction activities from the oil and gas industry (e.g. development of platforms, ports, pipelines, liquefied natural gas plants), acoustic disturbance to the Atlantic humpback dolphin is likely to increase in the future”, the reviewer suggests inserting “coast of” in front of “Africa” and deleting “n coast” and inserting “(especially port construction and expansion)” after “coastal construction activities”, and deleting “from” and inserting “and” in front of “the oil and gas industry”, so the sentence reads “Given the increasing development activities within the dolphin’s habitat along the West coast of Africa, particularly related to coastal construction activities (especially port construction and expansion) and the oil and gas industry (e.g. development of platforms, ports, pipelines, liquefied natural gas plants), acoustic disturbance to the Atlantic humpback dolphin is likely to increase in the future”.

Reviewer 1: Regarding the citation at the end of the sentence “While there are no studies analyzing the impacts of acoustic disturbance on Atlantic humpback dolphins specifically, findings have been made in other dolphin species (such as bottlenose dolphins) to indicate that acoustic disturbance negatively affects dolphins’ welfare and inhibits their functioning and survival (Ketten 1995; Gordon and Moscrop 1996; Richardson and Wursig 1997; Nowacek et al. 2007; Whittaker and Young 2018)”, the reviewer comments: Consider including: Erbe, C., Marley, S. A., Schoeman, R. P., Smith, J. N., Trigg, L. E., & Embling, C. B. (2019). The Effects of Ship Noise on Marine Mammals—A Review. *Frontiers in Marine Science*, 6(606). doi:10.3389/fmars.2019.00606 Weilgart, L. (2017). Din of the Deep: Noise in the Ocean and Its Impacts on Cetaceans. In A. Butterworth (Ed.), *Marine Mammal Welfare: Human Induced Change in the Marine Environment and its Impacts on Marine Mammal Welfare* (pp. 111-124). Cham: Springer International Publishing.

Reviewer 3: Regarding the phrase “Small odontocete cetaceans, including the Atlantic humpback dolphin, rely upon a highly developed acoustic sensory system and are found to rely on echolocation to navigate”, the reviewer deleted “are found to”.

Reviewer 3: Regarding phrase “can have potential impacts on cetaceans’ welfare including hearing loss”, the reviewer deleted the “ ‘ ” after “cetaceans” and added a comma “,” after “cetaceans” and deleted the word “welfare”.

Reviewer 3: Reviewer inserted “propeller cavitation” after the word “engine” into the sentence “Additionally, engine and sonar noise from different vessel types (e.g. pirogues, dredgers, trawlers and tankers) may reach sufficient amplitude and duration such that the health and/or behavior of coastal marine mammals in the area (including Atlantic humpback dolphins) are negatively affected”. The reviewer added the comment regarding the insertion of “propeller cavitation”: This is actually a more dominant source of underwater noise than engine noise itself.

Reviewer 3: Regarding the sentence “Overall, acoustic disturbance is expected to continue well into the future”, the reviewer comments: And likely increase

Reviewer 4: Regarding the phrase “Small odontocete cetaceans, including the Atlantic humpback dolphin, rely upon a highly developed acoustic sensory system and are found to rely on echolocation to navigate”, the reviewer deleted “are found to”.

Reviewer 4: Regarding the sentence “Overall, acoustic disturbance is expected to continue well into the future”, the reviewer inserted “and to grow” after the word “continue”.

#### *EXTINCTION RISK ANALYSIS*

##### *Approach to Assessing Extinction Risk*

Reviewer 4: Regarding the phrase “Because information on the Atlantic humpback dolphin is sparse”, the reviewer inserted the word “frequently” in front of the word “sparse”.

##### *Demographic Risk Assessment*

Reviewer 1: Regarding the phrase “even a single mortality event could impact the population’s continued viability”, the reviewer deleted the words “the population” and inserted the words “some of the smaller stocks” in front of “continued viability”, and the reviewer comments: I guess you are referring to the management stocks or local communities referred to elsewhere in the review. Maybe better to use consistent terminology with Table 2?

Reviewer 1: Reviewer inserted an apostrophe (') after “species”

Reviewer 1: Regarding the phrase “habitats within 13 km” the reviewer comments: I'm not sure I'm comfortable with the 13km 'limit' it seems a bit arbitrary, and as explained elsewhere in the review is entirely dependent on the bathymetry and tidal patterns of a particular location. I would leave this out.

Reviewer 1: Regarding the phrase “minimal interchange between them over long time-frames (Mendez et al. 2011)”, the reviewer comments: I think the Mendez et al paper looks at larger scale population comparisons, but finer scale comparisons have actually found less diversity between neighbouring populations and low over all low mtDNA diversity.... This statement might need to be refined....Lampert, S., Ingle, R. A., Jackson, J. A., Gopal, K., & Plön, S. (2021). Low mitochondrial genetic diversity in the Indian Ocean humpback dolphin *Sousa plumbea* in South African waters. *Endangered Species Research*, 46, 91-103. Retrieved from <https://www.int-res.com/abstracts/esr/v46/p91-103/?fbclid=IwAR3SyKMKa2PxU91hJKypA9->

[69rTrr\\_DKIO3fUbaDrfao\\_yzTda16bQexnVY](#) Parra, G. J., Cagnazzi, D., Jedensjö, M., Ackermann, C., Frere, C., Seddon, J., . . . Krützen, M. (2018). Low genetic diversity, limited gene flow and widespread genetic bottleneck effects in a threatened dolphin species, the Australian humpback dolphin. *Biological Conservation*, 220, 192-200.  
doi:<https://doi.org/10.1016/j.biocon.2017.12.028>

Reviewer 1: Regarding the phrase “rare as only a few observations of *S. teuszii* have been recorded traveling large distances (>350 km) over several decades”, the reviewer comments: As far as I am aware - there are no confirmed observations of individually identified animals moving large distances like this. I think trans-boundary movements have been observed directly in border areas (e.g. Caroline Weir followed an *S.t.* group from the Senegalese portion of the Delta Saloum to the Gambian border and saw the dolphins continue into Gambia in 2015), or inferred because *S.t.* were observed on both sides of a continuous habitat that straddles a border (e.g. Mayumba in Gabon and Conkuati in Congo, the Tristao islands in Guinea, and similar habitats just north in Guinea Bissau.). The way this is currently worded is misleading.

Reviewer 1: Regarding the phrase “and considerable spatial movements between other stocks,” the reviewer comments: As stated above, I do not think there is any strong evidence for considerable spatial movements between other stocks. This is all conjecture and contradicts the following sentence that refers to limited exchange. If this likely exchange between stocks is excluded from consideration -does the risk below change from moderate to high?

Reviewer 1: Regarding the sentence “Consequently, without any genetic analyses to determine diversity or effective population size, it is unknown at this time whether this demographic factor is a threat contributing to the species’ risk of extinction (Table 5)”, the reviewer comments: This is fair enough. However, the two studies listed in my comment above related to low genetic diversity within *Sousa plumbea* and *Sousa sahalensis* populations provide some indication that this near-shore obligate species may also display similar patterns of low overall genetic diversity. Also a potential cause for concern: Lampert, S., Ingle, R. A., Jackson, J. A., Gopal, K., & Plön, S. (2021). Low mitochondrial genetic diversity in the Indian Ocean humpback dolphin *Sousa plumbea* in South African waters. *Endangered Species Research*, 46, 91-103. Retrieved from [https://www.int-res.com/abstracts/esr/v46/p91-103/?fbclid=IwAR3SyKMKa2PxU91hJKypA9-69rTrr\\_DKIO3fUbaDrfao\\_yzTda16bQexnVY](https://www.int-res.com/abstracts/esr/v46/p91-103/?fbclid=IwAR3SyKMKa2PxU91hJKypA9-69rTrr_DKIO3fUbaDrfao_yzTda16bQexnVY) Parra, G. J., Cagnazzi, D., Jedensjö, M., Ackermann, C., Frere, C., Seddon, J., . . . Krützen, M. (2018). Low genetic diversity, limited gene flow and widespread genetic bottleneck effects in a threatened dolphin species, the Australian humpback dolphin. *Biological Conservation*, 220, 192-200.  
doi:<https://doi.org/10.1016/j.biocon.2017.12.028>

Reviewer 2: Reviewer had the following question regarding the management units: For the management units that have an abundance estimate, could you calculate PBR and then assess PBR against any human caused mortality (e.g., bycatch) to provide a more detailed assessment for that management unit.

Reviewer 2: Regarding the phrase “Additionally, limited exchange between stocks”, the reviewer deleted “Additionally” and capitalized “L” in “limited”.

Reviewer 2: Regarding the phrase “Thus, given the available information”, the reviewer deleted “Thus,” and capitalized “G” for “given”.

Reviewer 3: Regarding the phrase “approximate, general estimates have been made for the species’ eleven recognized management stocks” the reviewer comments: I worry that this statement gives an impression that abundance estimates exist for each of those stocks. But this is not the case. I can see that the use of “approximate” and “general” was meant here to give the sense of this caveat, but still, it gives the impression that these estimates are at least roughly sensible (or that they are indeed abundance estimates). But while this may be the case for some of these stocks, it certainly isn’t the case for others (“minuscule”, “4 sightings”, etc.). This isn’t a criticism of Table 2, which summarizes the available information. My concern here is simply with the wording here, which makes it seem some of these are actual, somewhat sensible abundance estimates, based on abundance estimation methodology, but in many cases this isn’t the case.

I would suggest wording it something along the:

“While historical and robust range-wide abundance estimates are lacking, and there are no robust estimates available for most of the recognized management stocks, the available information suggest population sizes of tens to low hundreds of individuals per stock.”

OR

“While historical and robust range-wide abundance estimates are lacking, and there are no robust estimates available for most of the recognized management stocks, general inferences on abundance were made on the basis of frequency of sightings records, group sizes or opinions of experts”. (or something along those lines)

Reviewer 3: Regarding the phrase “with some numbering in the tens of individuals”, the reviewer inserted “likely” in front of the word “numbering”.

Reviewer 3: Regarding the phrase “the species’ habitat preferences appear to limit it to habitats within 13 km”, the reviewer inserted “(and often less)” after “13 km”.

Reviewer 3: Regarding the phrase “and thus they are often in immediate vicinity to the coast”, the reviewer deleted “often” and inserted the word “predominantly”.

Reviewer 4: Regarding the phrase “general estimates have been made for the species’ eleven recognized management stocks”, the reviewer comments: Again - don't anchor this to the Van Waerebeek suggestion. There are more than 11 populations, and they are not referred to as management stocks generally.

Reviewer 4: Regarding the phrase “fragmented stocks”, the reviewer deleted “stocks” and inserted the word “populations”

Reviewer 4: Regarding the phrase “a single mortality event could impact the population’s continued viability”, the reviewer deleted the word “population’s and inserted “of a particular population” at the end of the sentence.

Reviewer 4: The reviewer changed “increase” to “increases” in the phrase “narrow distribution greatly increase the impact of anthropogenic perturbations”.

Reviewer 4: Regarding the sentence “This may suggest that *S. teuszii* has an innate tendencies for localized residency”, the reviewer inserted the word “an” in front of “innate” and changed “tendencies” to “tendency”.

Reviewer 4: Regarding the sentences “While some research suggests that individuals occur in a series of localized communities with little interchange identified between them, records elsewhere suggest the species is capable of considerable spatial movements between some of the identified management stocks (i.e. Dakhla Bay, Banc d’Arguin, and Saloum-Niumi stocks) with the potential for relatively large home ranges; although some researchers consider these movements rare as only a few observations of *S. teuszii* have been recorded traveling large distances (>350 km) over several decades (Maigret 1980a; Van Waerebeek et al. 2003; Van Waerebeek et al. 2004; Weir 2009; Collins 2015; Weir 2016; Collins et al. 2017; Section 2.2)”, the reviewer comments: This needs some work - no one has data that indicates large range movement. I forget what I said in the assessment but I'd suggest going back to it to check. It is more likely that what was said is that movement between widely separated stocks would necessitate long range movements of 350 km or more, not that they were actually happening. Otherwise I'd say this statement is mostly wrong.

Reviewer 4: Regarding the sentence “Additionally, routine movements of Atlantic humpback dolphins have been observed between the Gabon Estuary and Congo stocks, but it remains unclear if these individuals range farther”, the reviewer comments: This seems a bit of an outlier - we see movement across the border, so a matter of a few km's. We can't infer movement between animals from the whole of Gabon into the whole of Congo - simply between to MPAs that straddle the border. Additionally, the reviewer deleted the word “Additionally”, and “dolphins have been observed between” and “the” and “Estuary and” and “stocks” and inserted “across the” in front of “Gabon” and inserted “border have been observed” after the word “Congo” and added “afield” at the end of the sentence. Thus, the new sentence reads: “Routine movements of Atlantic humpback across the Gabon/Congo border have been observed, but it remains unclear if these individuals range farther afield”.

Reviewer 4: Reviewer deleted the word “stocks” and inserted the word “populations” throughout this section.

Reviewer 4: Regarding the phrase “coupled with evidence for both localized residency in some stocks and considerable spatial movements between other stocks, indicates that the best available data and information regarding connectivity of *S. teuszii* are mixed”, the reviewer comments: No - again, we know they move between countries in a couple of places, but large scale movements have only ever been discussed in the context of 'they would have to swim large distances if they were to mix'.

Reviewer 4: Reviewer deleted the words “resident stocks” and inserted the word “areas”.

### *Threats Assessment*

Reviewer 1: Reviewer deleted the phrase “within 13 km of the shoreline and”.

Reviewer 1: Regarding the sentences “Furthermore, several major port cities are situated within the geographic range of Atlantic humpback dolphins, and the tendency for the species to occupy bays and estuarine systems increases its susceptibility to contaminants and pollution. With economic growth of sub-Saharan Africa increasing (PWC 2018; IMF 2022), port developments have also increased over the years and are projected to expand (see Section 4.1). At least three

ports that have recently undergone or are undergoing expansion are close to the locations of recent sightings of Atlantic humpback dolphins (Rogers 2017)", the reviewer comments: The increased vessel traffic associated with ports also increases underwater noise - not sure this was fully captured above or here, but perhaps could be made more explicit in one of these two sections.

Reviewer 1: Regarding the phrase "It has also been noted in the Niger Delta that populations of *S. teuszii* have been displaced", the reviewer inserted "possibly" in front of "been displaced". The reviewer also comments: As noted above- there have not been any systematic surveys conducted in the Niger Delta, so I am really not sure how anyone can be sure that they have been displaced. Furthermore, the recent social media posts of strandings in the area would indicate otherwise.

Reviewer 1: Regarding the citation "International Whaling Commission 2011a", the reviewer comments: Looking at the reference list, it seems to me that IWC 2011 a and 2011b are probably the same thing? Both are listed as being reports of the IWC Scientific Committee's report of the small cetacean subcommittee?

Reviewer 1: Regarding the phrase "since it is generally limited to areas where mean annual seawater temperatures exceed 15°C", the reviewer deleted "it" and inserted "the species".

Reviewer 1: Regarding the sentence "However, it is also noted that the Atlantic humpback dolphin's narrow distribution and limited range restricts it to a relatively narrow ecological niche which could also decrease its resilience environmental change (Davidson et al. 2012; Collins 2015; Weir et al. 2021)", the reviewer comments: I personally think this is sadly more likely - especially given scenarios like the Saloum Delta, where climate change may already be causing higher levels of salinity in the inverse estuary (see more extensive note above).

Reviewer 1: Reviewer deleted "and" and inserted "or" in the phrase "all of which degrade and eliminate the already restricted nearshore habitat of the Atlantic humpback dolphin".

Reviewer 1: Regarding the citation "(Clapham and Van Waerebeek 2007; Weir and Pierce 2013; Collins 2015)", the reviewer comments: Consider adding Ingram et al 2021 and Van Waerebeek et al 2017.

Reviewer 1: Regarding the sentence "This, coupled with the fact that bycatch mitigation has not been documented in any range country", the reviewer inserted the word "effective" before "bycatch" and the reviewer comments: I also inserted this in a section above. I think there are laws in place that are intended to mitigate bycatch, but they are either not enforced, or are not working. I think inserting 'effective' pays tribute to the laws and measures that some countries may have tried to put in place to reduce bycatch.

Reviewer 1: Regarding the phrase "protect the species from targeted hunting places additional pressure on already small likely fragmented, and declining Atlantic humpback dolphin stocks", the reviewer comments: As noted several times above. Some kind of reference is needed to support this statement.

Reviewer 1: Regarding the phrase “Additionally, resource competition between dolphin and human communities is an indication that this threat will continue for the foreseeable future”, the reviewer deleted “an indication that this threat” from the sentence.

Reviewer 1: Regarding the sentence “The future potential for ecotourism activities to grow into a recreational use of the species exists, as infrastructure and political stability improve”, the reviewer inserted “in some *Sousa teuszii* range countries” at the end of the sentence and added a new sentence following which says “If managed responsibly, dolphin watching and/or more general marine and coastal eco-tourism activities could provide economic incentive to protect Atlantic humpback dolphins and their habitats”.

Reviewer 1: Regarding the citation “(Whittaker and Young 2018)”, the reviewer comments: Here are a few more references related to disease in *Sousa chinensis*. Some of them make the link with development and anthropogenic factors. Banlunara, W., Techangamsuwan, S., Pirarat, N., Kaewamatawong, T., Piewbang, C., Kedsangakonwut, S., . . . Lombardini, E. (2019). Epizootic of multi-centric, squamous cell carcinomas in populations of Indo-Pacific humpbacked dolphins *Sousa chinensis* in Thai waters. *Diseases of Aquatic Organisms*, 134(2), 99-106. Retrieved from <https://www.int-res.com/abstracts/dao/v134/n2/p99-106/> Chan, S. C. Y., & Karczmarski, L. (2019). Epidermal Lesions and Injuries of Coastal Dolphins as Indicators of Ecological Health. *EcoHealth*, 16(3), 576-582. doi:10.1007/s10393-019-01428-0 Yang, W.-C., Chang, W.-L., Kwong, K.-H., Yao, Y.-T., & Chou, L.-S. (2013). Prevalence of Epidermal Conditions in Critically Endangered Indo-Pacific Humpback Dolphins (*Sousa chinensis*) from the Waters of Western Taiwan. *prevalence*, 33(4), 505-509.

Reviewer 1: Regarding the citation “(Whittaker and Young 2018)”, the reviewer comments: See additional references suggested above.

Reviewer 1: Regarding the phrase “few have adopted specific protections for the species, and bycatch mitigation has not been documented in any range country”, the reviewer inserted “effective” in front of “bycatch mitigation”.

Reviewer 1: Regarding the sentences “Additionally, regulatory mechanisms that currently exist are not adequately enforced or do not address the species’ primary threats. This is further compounded by the fact that government agencies in many range countries lack the resources to effectively monitor and mitigate threats and design and implement research and conservation measures specific to the Atlantic humpback dolphin”, the reviewer comments: Again -this needs to be supported somehow with a reference.

Reviewer 1: Regarding the sentence “Atlantic humpback dolphin, since (like other odontocete species) it is strongly dependent on passive hearing and active echolocation to communicate, navigate, find food, and avoid predators”, the reviewer inserted “vocalizations to maintain social bonds, and on” in front of the words “passive hearing”.

Reviewer 1: Regarding the citation “(Ketten 1995; Gordon and Moscrop 1996; Richardson and Wursig 1997; Nowacek et al. 2007; Whittaker and Young 2018)”, the reviewer comments: See additional suggestions in comments above.

Reviewer 1: Regarding the sentence “This threat is likely to increase in the foreseeable future along with the projected increase of coastal development activities (which host major sources of noise) within the Atlantic humpback dolphin’s habitat”, the reviewer inserted “port construction, associated increased vessel traffic, and other” in front of the phrase “coastal development activities (which host major sources of noise)” in the sentence. So the new sentence reads: “This threat is likely to increase in the foreseeable future along with the projected increase of port construction, associated increased vessel traffic, and other coastal development activities (which host major sources of noise) within the Atlantic humpback dolphin’s habitat”.

Reviewer 2: Regarding the sentence “The Atlantic humpback dolphin is a narrowly distributed species, known to occur only within 13 km of the shoreline and shoreward of the 20 m depth isobaths (Weir and Collins 2015; Weir et al. 2021) within the (sub)tropical nearshore waters along the Atlantic African coast”, the reviewer comments: This is said many times in this document, and is most recently stated in the section above could this sentence be deleted?

Reviewer 2: Reviewer deleted “Thus” and inserted “This” at the beginning of the sentence “This nearshore habitat places the Atlantic humpback dolphin within areas that are in the vicinity of or overlapping with a number of coastal development projects (i.e. port development projects and liquefied natural gas plants) which occur in locations across the species’ range”.

Reviewer 2: Reviewer inserted the word “overlapping (?)” and deleted the word “of” in front of the words “the species’ range” in the sentence “Additionally, oil and gas exploration and extraction activities currently occur in a number of countries in the central and southern portions of the species’ range”.

Reviewer 2: Reviewer inserted this sentence from the end of the paragraph: “It has also been noted in the Niger Delta that populations of *S. teuszii* have been displaced due to altered coastal environments from large scale oil exploration and extraction activities (International Whaling Commission 2011a).”

Reviewer 2: Reviewer deleted the word “Furthermore”, and capitalized the word “Several” at the beginning of this sentence: “Several major port cities are situated within the geographic range of Atlantic humpback dolphins,”

Reviewer 2: Regarding the phrase “the tendency for the species to occupy bays and estuarine systems increases its susceptibility to contaminants and pollution”, the reviewer comments: What about disturbance from shipping and industrial activities associated with cities and ports?

Reviewer 2: Regarding the sentence “At least three ports that have recently undergone or are undergoing expansion are close to the locations of recent sightings of Atlantic humpback dolphins (Rogers 2017)”, the reviewer suggests inserting the word “areas” after the word “close”, deleting “to the locations of recent sightings of” and inserting the word “where” before “Atlantic humpback dolphins” and then inserting the phrase “were recently sighted” at the end of the sentence. So the new sentence reads “At least three ports that have recently undergone or are undergoing expansion are close areas where Atlantic humpback dolphins were recently sighted (Rogers 2017)”.

Reviewer 2: Suggests deleting the last sentence in the paragraph “It has also been noted in the Niger Delta that populations of *S. teuszii* have been displaced due to altered coastal environments from large scale oil exploration and extraction activities (International Whaling Commission 2011a)”, and moving up earlier in the paragraph as described in the previous edits above.

Reviewer 2: Regarding the sentence “Because potential impacts resulting from climate change are unknown, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer suggests deleting “does not appear to pose a significant” and inserting “poses an unknown” before the word “threat”. The review also adds the comment: I recommend that if you have unknown in the table below you should have unknown here.

Reviewer 2: Regarding the phrase “Additionally, habitat fragmentation resulting from these activities”, the reviewer suggests deleting the word “Additionally” and starting the sentence with “Habitat”.

Reviewer 2: Regarding the sentence “Coastal development activities have exhibited increasing trends over the past decade, with little indication that these activities will cease in the foreseeable future”, the reviewer suggests deleting “exhibited increasing trends” and inserting “increased”, and then inserting the words “decline or” in front of the word “cease”.

Reviewer 2: Regarding the phrase “Thus, the impacts of these threats on the Atlantic humpback dolphin” the reviewer suggests deleting “Thus” and starting the sentence with “The”.

Reviewer 2: Regarding the sentence “The Atlantic humpback dolphin’s preference for shallow, nearshore, and estuarine habitats, increases its susceptibility and exposure to inshore artisanal and commercial fisheries and associated gear such as artisanal gillnets, beach seines, and octopus line”, the reviewer suggests inserting “pot/trap” in lieu of “octopus” and inserting “(e.g., octopus trap lines)” at the end of the sentence.

Reviewer 2: Regarding the sentence “This, coupled with the fact that bycatch mitigation has not been documented in any range country (CCAHD 2020) and lack of effective monitoring enforcement throughout much of the species’ range countries to protect the species from targeted hunting places additional pressure on already small likely fragmented, and declining Atlantic humpback dolphin stocks”, the reviewer suggests inserting “lack of bycatch monitoring and” in front of “bycatch mitigation”, deleting “fact that” and deleting “has not been documented”, and inserting “surveillance, and” in front of “enforcement throughout much of the species’ range”. So the new sentence reads: “This, coupled with the lack of bycatch monitoring and bycatch mitigation in any range country (CCAHD 2020) and lack of effective monitoring, surveillance, and enforcement throughout much of the species’ range countries to protect the species from targeted hunting places additional pressure on already small likely fragmented, and declining Atlantic humpback dolphin stocks”.

Reviewer 2: Reviewer suggests deleting “also” from the phrase “some fish predated by Atlantic humpback dolphins (e.g. mullet, *Mugil* spp.) are also targeted by coastal fisheries”.

Reviewer 2: Reviewer suggests adding the following sentence “Most nations lack domestic legislation or regulation that implement conservation measures or plans for the Atlantic humpback dolphin population, such as population assessments and monitoring and mitigating of the impacts from coastal development, bycatch, and direct harvests in any range country”, and deleting “bycatch mitigation has not been documented”. The reviewer added the comment regarding the phrase “and bycatch mitigation has not been documented”: I recommend deleting. This is already discussed above.

Reviewer 2: Regarding the phrase “This is further compounded by the fact that”, the reviewer suggests deleting this phrase and starting the sentence with “Further”, so the sentence reads, “Further, government agencies in many range countries lack the resources to effectively monitor and mitigate threats and design and implement research and conservation measures specific to the Atlantic humpback dolphin”.

Reviewer 3: Regarding the words “contaminants and pollutants”, the reviewer comments: See my earlier comments on this, as well as on marine debris.

Reviewer 3: Regarding the sentence “Furthermore, while climate change may indirectly affect the Atlantic humpback dolphin’s habitat and food availability, it is currently unknown if climate change is a factor that contributes to the Atlantic humpback dolphin’s extinction risk, now or in the foreseeable future (Table 6)”, the reviewer comments: Doesn’t this fit more under a previous paragraph, which discusses climate change?

Reviewer 3: Regarding the phrase “already small likely fragmented, and declining Atlantic humpback dolphin stocks”, the reviewer suggests adding a comma (,) after the word “small”.

Reviewer 3: Regarding the phrase “While it is possible that increased human activity may increase the Atlantic humpback dolphin’s exposure to new and invasive parasites or disease across its range”, the reviewer suggests inserting “or susceptibility” in front of “to new and invasive parasites”. Additionally, the reviewer adds the following comment regarding this textual edit: Via potential immune suppression from contaminants.

Reviewer 3: Regarding Table 6 which summarizes threats organized by the ESA section 4(a)(1) factors and their associated likelihood rankings, the reviewer provides the following about the “contaminants and pollutants” threat: If this is meant to include marine debris (marine litter), it should be re-worded.

Reviewer 4: Regarding the sentence “The Atlantic humpback dolphin is a narrowly distributed species, known to occur only within 13 km of the shoreline and shoreward of the 20 m depth isobaths (Weir and Collins 2015; Weir et al. 2021) within the (sub)tropical nearshore waters along the Atlantic African coast”, the reviewer suggests deleting “is a narrowly distributed species, known to” and change “occur” to “occurs”, delete the word “only”, delete “13 km of the shoreline and shoreward of the 20 m depth isobaths”, and insert a relatively narrow set of shallow water (<20 m) habitats” and delete “along” and insert “of” in front of “the Atlantic African coast”. So the sentence reads “The Atlantic humpback dolphin occurs within a relatively narrow set of shallow water (<20 m) habitats (Weir and Collins 2015; Weir et al. 2021) within the (sub)tropical nearshore waters of the Atlantic African coast (Van Waerebeek et al. 2004; Collins 2015; Weir and Collins 2015; Collins et al. 2017)”.

Reviewer 4: Regarding the sentence “Thus, this nearshore habitat places the Atlantic humpback dolphin within areas that are in the vicinity of or overlapping with a number of coastal development projects (i.e. port development projects and liquefied natural gas plants) which occur in locations across the species’ range (Collins 2015; Li 2020; Weir et al. 2021)”, the reviewer suggests deleting “Thus” and “nearshore habitat” and “Atlantic humpback dolphin” and inserting “species”, and inserting the word “many” in front of the word “locations” and deleting the word “across” and inserting “within” before the words “species’ range”. So the new sentence reads: “This places the species within areas that are in the vicinity of or overlapping with a number of coastal development projects (i.e. port development projects and liquefied natural gas plants) which occur in many locations within the species’ range (Collins 2015; Li 2020; Weir et al. 2021).”

Reviewer 4: Regarding the sentence “Additionally, oil and gas exploration and extraction activities currently occur in a number of countries in the central and southern portions of the species’ range with smaller oil fields existing in several other range countries, such as Senegal, Côte d’Ivoire, and Ghana”, the reviewer suggests deleting “with smaller oil fields existing in several other range countries, such as Senegal, Côte d’Ivoire, and Ghana”.

Reviewer 4: Regarding the sentence “It has also been noted in the Niger Delta that populations of *S. teuszii* have been displaced due to altered coastal environments from large scale oil exploration and extraction activities (International Whaling Commission 2011a)”, the reviewer comments: Nope - again, see the comment above.

Reviewer 4: Regarding the sentence “Predicted global increases in seawater temperatures associated with climate change could potentially have a favorable outcome for Atlantic humpback dolphins, since it is generally limited to areas where mean annual seawater temperatures exceed 15°C (Weir et al. 2011; Weir and Collins 2015)”, the reviewer comments: I'd be very careful with statements of this kind. I don't agree. We know very little about its relationships to environmental factors nor about local adaptations to a particular set of conditions.

Reviewer 4: Regarding the sentence “Because potential impacts resulting from climate change are unknown, climate change does not appear to pose a significant threat to the Atlantic humpback dolphin at present”, the reviewer comments: Again - I would caveat this

Reviewer 4: Regarding the sentence “While it is possible that increased human activity may increase the Atlantic humpback dolphin’s exposure to new and invasive parasites or disease across its range, and some parasites have been identified which affect other species within the genus *Sousa* (i.e. *S. chinensis*) (Whittaker and Young 2018), no species-specific data exist to determine whether parasites negatively affect the health or population status of the Atlantic humpback dolphin now or in the foreseeable future.”, the reviewer suggests deleting “While” and starting the sentence with “It” and ending the sentence with the citation “(Whittaker and Young 2018)”, and then starting a new sentence with “However,”. So the new sentences read: “It is possible that increased human activity may increase the Atlantic humpback dolphin’s exposure to new and invasive parasites or disease across its range, and some parasites have been identified which affect other species within the genus *Sousa* (i.e. *S. chinensis*) (Whittaker and Young 2018). However, no species-specific data exist to determine whether parasites

negatively affect the health or population status of the Atlantic humpback dolphin now or in the foreseeable future.”

Reviewer 4: Regarding the sentence “Thus, due to the absence of data, it is currently unknown if disease or predation are factors that contribute to the Atlantic humpback dolphin’s extinction risk, now or in the foreseeable future (Table 6)”, the reviewer comments: This is the essence of a statement that I would repeat above in climate change

Reviewer 4: Regarding the citations “(Collins 2015; Collins et al. 2017)”, the reviewer comments: Maybe pull out papers from local authors.

#### *OVERALL EXTINCTION RISK*

Reviewer 1: Reviewer suggests deleting “some” and inserting “most” for the phrase “some stocks”

Reviewer 2: Regarding the sentence “Few countries within the species’ range have specific protections for the Atlantic humpback dolphin, and bycatch mitigation has not been documented in any range country”, the reviewer suggests inserting “monitoring and” before the word “mitigation”.

Reviewer 4: Regarding the words “human use”, the reviewer comments: Be direct - folks hunt them and use them for bait

Reviewer 4: Regarding the sentence “Few countries within the species’ range have specific protections for the Atlantic humpback dolphin, and bycatch mitigation has not been documented in any range country”, the reviewer comments: There are some notable exceptions - Gabon and Senegal for instance

Reviewer 4: Regarding the phrase “For example, observed or suspected population declines of already small, likely fragmented stocks throughout the species’ range drastically elevates the impact of even a single mortality event”, the reviewer deleted the word “stocks” and inserted the word “populations”, deleted the words “even a”, and changed “event” to “events”.

Reviewer 4: Regarding the phrase “Finally, it is likely that the Atlantic humpback dolphin exhibits a low reproductive rate”, the reviewer inserted the word “naturally” in front of the words “low reproductive”.

#### *SYNTHESIS AND CONCLUSION*

Reviewer 3: Regarding the mention of Dakhla Bay and Angola stocks as examples of extremely small AHD stocks, the reviewer comments: I wonder if in this section, the example localities are needed, as the statement still stands without that, and other stocks may be of high risk as well, given paucity of data, so I would personally not single out any stock here, or give an impression that some are in more urgent need of action than some others.

Reviewer 3: Regarding the phrase “suggesting that the species will continue to decline in the absence of interventions”, the reviewer suggests inserting the word “substantial” before the word “interventions”.

Reviewer 4: Reviewer deleted the word “stocks” and replaced with the word “populations” throughout this section.

**General Comments** (not associated with order of names as they appear above):

Reviewer 1: The document makes repeated references to the fact that *Sousa teuszii* range countries do not have sufficient capacity, resources or regulations to effectively address threats to the species. And yet, these statements are rarely supported by citations. While I think it is generally the case that most range countries do not have effective mechanisms in place to protect *S. teuszii*, in many cases it is due to lack of awareness that the species even exists, and it is important that we avoid presenting this information in a way that could be perceived as a judgement of one 'developed' country on 19 'less developed' countries. It would be really good if we could use a few references that are (co-) authored by range-country scientists or conservation managers to support this assessment of lack of capacity. You have found some good sources already: for example the CITES legislation status project, the reference you used to support a statement about inadequate fisheries management, and the Erinoshu reference regarding range countries' failure to be able to effectively implement the Revised African Convention. We might also think about citing the draft CMS Concerted Action Plan, as this contains a full review of the legal mechanisms in place to protect *S. teuszii* in each range country. It was also co-authored by range-country scientists, and reviewed by range country CMS focal points. We could also think about the recently published Minton et al. 2022 paper on range-wide conservation efforts for *S. teuszii*. This also has range-country authors, and was peer-reviewed. This is probably the most critical thing to address, especially since inadequate regulations is one of the risk factors that received a 'high' rating, and presumably an important underpinning of a possible designation under the ESA.

Reviewer 1: Along similar lines, there are a few places in the document where a more recent review paper (e.g. Collins 2015 or Weir et al 2021) is used to support a statement about something country-specific or industry specific, when the reviews have actually drawn from work conducted largely by range country scientists. Wherever possible, the original source/study should be cited in these instances rather than the review. I think I have pointed out most of the instances where this needs to be revised, but it would be good if you could bear this in mind when you conduct the next round of edits. It is important to give credit where credit is due, and particularly if that credit is due to range country scientists or collaborative efforts with range country scientists.

Reviewer 1: There are several places in the document where 'West Africa' or 'West African' is used to refer to the whole west coast of Africa. Regionally West Africa is understood to include a smaller range of countries ([https://en.wikipedia.org/wiki/West\\_Africa](https://en.wikipedia.org/wiki/West_Africa)), and using West Africa, would cause those who live and work in the region to think that Central African countries are not included. As such, I have tried to flag this and suggest alternatives throughout the document. However, it might be good to choose one alternative (the Atlantic Coast of Africa) and stick with it throughout.

Reviewer 1: There are two things that are stated almost as fact, which I am not sure I agree with based on my reading of the literature. It may be that we have both just read different things

more recently - and I have no doubt that you have interpreted what you read correctly. However: 1) I am skeptical about the conclusion that *S. teuszii* were extirpated from the Niger Delta, and not sure this should be presented as confidently as it is in several sections of the review. Everywhere else we say that a lack of records could be an indication of low densities rather than absence. Also - I don't think there have been any systematic surveys there, so a lack of recent records is to be expected. Finally, and perhaps most importantly, two recent social media posts of bycaught or killed dolphins (one of which you refer to in the review) are from the Niger Delta region, indicating their continued presence in the area. 2) I don't quite understand the reference to 'likely' movement of up to 350 kms between management stocks. The way this is presented makes it sound as if there is some evidence for this. However, as far as I am aware, there is no documented movement of photo-identified/recognisable individuals between management stocks, and the only evidence for transboundary movement to date is visual observations of animals moving over national borders in areas where a continuous type of habitat straddles national boundaries, as is the case in the Saloum Delta, where dolphins were observed swimming south into Gambia. Similar transboundary movements are presumed between Mayumba National park in south Gabon and Conkuatil NP in northern Congo, and there is similar contiguous *S. teuszii* habitat in the north of Guinea (Tristao islands) and the south of New Guinea. But I am not aware of confirmed individual movements in these adjacent areas, and believe that any speculation about longer range movements between management stocks is completely speculative. It is fine to cite these speculations in the sections dealing with distribution and stock structure, but I was surprised at how much weight this was given in the final threat assessment.

Reviewer 1: Finally, I think there may be some confusion related to the different CMS tools and processes used for *S. teuszii*. The WAF CET projects were started in the late 1990s, as you indicate. These were followed by the MoU for West African Cetaceans. The CMS Concerted Action was only proposed and endorsed in 2017, and extended in 2020. The hyperlink to the document for this Concerted Action that you provide in several places of the review is not the same as the draft CMS Single Species Action Plan for *S. teuszii*, which is currently under review. The latter is a much more detailed and extensive document that includes the country-by-country legal review that could be interesting to cite (as noted above).