

**Range State Meeting for the Action Plan to Address Aquatic Wild Meat  
Harvests in West Africa**

*Saly, Senegal, 7 September 2023*

CMS/WA-AWM-AP/Inf.4.b

**SUMMARY OF AQUATIC WILD MEAT DRIVERS AND PRESSURES IN WESTERN  
AFRICA**

*(Prepared by Maximin Kouacou Djondo,  
Member of the CMS ScC Aquatic Wild Meat Working Group)*

1. Given that the extent of use relative to the size and trends (increasing, decreasing or stable) of aquatic wild meat harvests are seldom known accurately, the impact on the conservation status of source populations can seldom be quantified with any scientific certainty. For example, the harvest of migratory small cetaceans for aquatic wild meat in the Gulf of Guinea, in particular Atlantic humpback dolphin, which meet IUCN Red List criteria for Critically Endangered, are assumed to be threatening despite limited information on harvest levels, population size, trends and distribution. Similarly, it is known that in Senegal, The Gambia, Nigeria, Cameroon, Guinea-Bissau, and Democratic Republic of the Congo, more than 1,000 manatees have been killed by illegal hunting, bycatch, dams and watercraft between 2017 and 2019.
2. Risks to riverine megafauna from harvest are also thought to be particularly high, even if opportunistic, because the risks are compounded by unique threats to riverine species, such as dams, intensive fishing, and pollution where human population density is high. Riverine megafauna also suffer from a lack of management and research as they are seen as neither terrestrial species nor fish.
3. The use of aquatic megafauna for aquatic wild meat is likely to be far more widespread in terms of frequency and species than reported here, especially amongst Indigenous Peoples and Local Communities (IPLCs). Monitoring and reporting is limited, and because many of the species are protected by national law, or are charismatic, their use is secretive.

**Drivers and Pressures of Aquatic Wild Meat Use**

4. The drivers and pressures of aquatic wild meat consumption and trade are varied and changing. Animals are taken for food, medicinal, medico-magical use, and craft work and for some IPLCs, consumption of aquatic wild meat may have high socio-cultural significance.
5. The ethnozoology of aquatic wild meat harvest and use across West Africa is diverse and changing.

6. Understanding the ethnozoology of aquatic wild meat harvest and use is of crucial importance to forming management solutions.

### **Subsistence use and commercial use**

7. Subsistence use remains a key driver, but commercial uses unhelpfully merge in many of the examples of human consumption.
8. Some uses involving deliberate and illegal harvesting for bait to catch fish of higher commercial value.

### **Increasing market access**

9. Increasing market access and integration into cash-based economies has seen a corresponding increase of aquatic wild meat consumption and trade in some parts of West Africa.

### **Declining fish stocks and terrestrial wild meat**

10. Declines of fish stocks and terrestrial wild meat sources is maybe increasing the dependence on novel forms of aquatic megafauna in coastal communities with few alternatives. Already, many communities are experiencing reduce traditional fish catch rates.
11. Some fisheries declines are directly linked to large-scale, offshore, distant water fleet harvest. Other fisheries declines are as a result of internal human migrations seeking novel fish resources.

### **Internal human migration**

12. Internal human migration from hunters, and in some cases communities, moving temporarily or permanently from regions either already over-fished or impacted by large-scale mono-culture or mining is placing new pressure on aquatic wild meat in regions with previously low levels

### **Climate change**

13. The dynamics of aquatic wild meat harvests, use, and trade is likely to change in response to climate change influences on food security and habitats.
14. At a minimum, fisheries catch potential is predicted to decline over the 21st century under all emissions scenarios, especially in the tropics, and livelihoods and food security of communities currently dependent on marine resources are predicted to be adversely affected.

## References

- Brashares, J. S., Arcese, P., Sam, M. K., Coppolillo, P. B., Sinclair, A. R. E., and Balmford, A. (2004). Bushmeat hunting, wildlife declines, and fish supply in West Africa. *Science* 306, 1180–1183. doi: 10.1126/science.1102425
- Collins, T., Boumba, R., Parnell, R., Vanleeuwe, H., Nguouesso, S., and Rosenbaum, H. C. (2010). The Atlantic humpback dolphin (*Sousa teuszii*) in Gabon and Congo: Cause for optimism or concern. SC/62/SM9. Berlin: ResearchGate.
- Collins, T., Van Waerebeek, K., Carvalho, I., Boumba, R., Dilambaka, E., Mouissou, E., et al. (2019). An Assessment of Cetacean Bycatches, Strandings and Other Mortalities from Central Africa, Including Evidence of Use by People. Document SC/68A/SM/05, IWC Scientific Committee Meeting. Nairobi.
- Djondo, M.K., et al. (2023). Mapping the survival habitats and analysing the migration strategy of the African manatee (*Trichechus senegalensis*) in the Ouémé Valley in Benin, *in press*
- Djondo, M.K., et al. (2023) Sea Turtles of the Benin Coast: Pressure and Ethnozoology, *in press*
- Djondo, M.K., et al. (2023) Sociological considerations and forms of use of *Trichechus senegalensis* (the African manatee) in the Ouémé Valley in southern Benin, *in press*
- He, F., Zarfl, C., Bremerich, V., Henshaw, A., Darwall, W., Tockner, K., et al. (2017). Disappearing giants: a review of threats to freshwater megafauna. *WIREs Water* 4:e1208.
- Ingram, D. J. (2020). Wild meat in changing times. *J. Ethnobiol.* 40, 117–130. doi: 10.1371/journal.pone.0045315
- Ingram, D. J., Coad, L., Milner-Gulland, E. J., Parry, L., Wilkie, D., Bakarr, M. I., et al. (2021). Wild meat is still on the menu: progress in wild meat research, policy and practice from 2002 – 2020. *Annu. Rev. Environ. Resour.* 4, 221–254.
- 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*, 9, p.112.
- Leeney, R. H., Dia, I. M., and Dia, M. (2015). Food, pharmacy, friend? Bycatch, direct take and consumption of dolphins in West Africa. *Hum. Ecol.* 43, 105–118.
- Rowcliffe, J. M., Milner-Gulland, E. J., and Cowlishaw, G. (2005). Do bushmeat consumers have other fish to fry? *TRENDS Ecol. Evolut.* 20, 274–276. doi: 10.1016/j.tree.2005.03.007
- Van Waerebeek, K., Barnett, L., Camara, A., Cham, A., Diallo, M., Djiba, A., et al. (2003). Conservation of cetaceans in The Gambia and Senegal, 1999-2001, and status of the Atlantic humpback dolphin. Bonn: UNEP.
- Van Waerebeek, K., Ndiaye, E., Djiba, A., Diallo, M., Murphy, P., Jallow, A., et al. (2000). A Survey of the Conservation Status of Cetaceans of Senegal, The Gambia and Guinea-Bissau. Bonn: UNEP.
- Van Waerebeek, K., Ofori-Danson, P. K., and Debrah, J. (2009). The cetaceans of Ghana, a validated faunal checklist. *West Afr. J. Appl. Ecol.* 15, 61–90.
- Van Waerebeek, K., Uwagbae, M., Segniagbeto, G., Bamy, I. L., and Ayissi, I. (2017). New records of Atlantic humpback dolphin (*Sousa teuszii*) in Guinea, Nigeria, Cameroon and Togo underscore fisheries pressure and generalised marine bushmeat demand. *Revue d'Ecol.* 72, 192–205.