

## **Ghana Pole and Line FIP: Advice on the management of small pelagic bait fisheries in Ghana.**

**Lisa Borges, 19 January 2023**

### **1 Introduction**

The Ghana Pole and Line Fisheries Improvement Project (FIP) has identified several areas in the tuna pole-and-line fishery that need improvement. One of them is the live baitfish fishery that is the basis for the pole-and-line tuna fishery, and specifically its lack of data and management while small pelagic stocks in Ghana are diminishing. Furthermore, to initiate an MSC certification process, information on the bait used by the fishery is fundamental. In the worst-case scenario it could prevent the process from starting as the requirement for catch composition is not fulfilled, but it could also lead to failing certification depending of the bait contribution of the total fishery catch (i.e. being a main or minor species). In this context, the objective of the present report was therefore to review the management plan and make recommendations for the small pelagics baitfish fishery in Ghana in view of reaching MSC certification.

### **2 Live bait fishery**

Live bait caught by the pole-and-line vessels along the Ghanaian coast include anchovy (*Engraulis encrasicolus*), bonga (*Ethmalosa fimbriata*), horse mackerel or scad (*Trachurus trachurus*) and juvenile sardinella (flat *Sardinella maderensis* and round *S. aurita*). Based on stakeholder information (Borges, 2022), presently the fishery is based almost exclusively on anchovy, as sardinella stocks have diminish significantly over recent years. The pole-and-line boats may fish directly for the live anchovy or they may buy from canoes. The live baitfish bought comes from the Ghanaian artisanal sector that predominantly targets the small pelagic fish. The majority of the motorized canoes propelled by 25–40 Hp outboard engines catch small pelagic fish almost all year-round using purse seines, encircling gillnets and beach seines. The Ghanaian pole-and line-vessels are authorised to catch bait within waters shallower than 30 m depth through their fishing licences.

Borges (2022) provided an estimation of the total catch of small pelagics used by the tuna pole-and-line fishery in Ghana between 2019-2022: around 530 tonnes of small pelagics were used annually. This catch volume represents less than 1% of the total annual average catch of small pelagics in Ghanese waters, and represents at a minimum of around 10% of the total catch of the fishery (Leotte, pers. comm.).

### **3 Review Ghana small pelagic fisheries management**

In Ghana, commercial fishing for small pelagic fish is guided by a number of policy framework which is based on the broader Fisheries Act, 2002 (Act 625), Fisheries (Amendment) Act, 2014 (Act 880) Fisheries Regulations, 2010 (L.I. 1968) and Fisheries (Amendment) Regulations, 2015 (L.I. 2217) (Asiedu et al., 2021).

In addition, management measures applicable to small pelagics are also included in a national Fisheries Management Plan (FMP), which a recent updated draft was provided. Ghana has also implemented an observer scheme on board its national pole and line fleet, and observers have been requested to provide data on quantities and composition of baitfish used by the FIP.

In the 2022-2026 FMP draft provided (MAFD, 2021) it is stated that the canoes fisheries segment needs to be reduced by around 30% to meet MSY objectives, but the main management measure to reduce so called effort<sup>1</sup> is to freeze new boat entries for 3 years. In addition, there are plans to rebuild old canoes. These measures will not result in a reduction of fishing exploitation and may even lead to increase in fishing efficiency. In comparison, the 2065-2019 FMP had specific targets for fishing effort reduction (50% reduction of fishing days over 3 years), although these were likely not implemented. In relation to small pelagics, and bait species fisheries in particular, these are not specified anywhere in the draft FMP, and in the tuna sector section the fishery is not even mentioned. For a fishery (or any issue) to be improved, the first step is to be recognised; and then measures such as to improve catch reporting and monitoring be specified.

**In summary, the draft 2022-2026 FMP provided does not constitute a small pelagics fisheries management plan. It is a general fisheries management plan that is less ambitious than the previous, continues to not recognise the activity of bait fisheries associated to the tuna sector, does not include specific measures to address its management issues, and ultimately will not likely help the FIP reaching its objectives.**

### 3.1 Baitfish fishery management measures

To start managing the live baitfish fisheries in Ghana several measures can be already taken (Borges, 2022 and Defaux & Huntington 2018):

1. Observers/skippers reporting should continue/start to include baitfish catch or bought
2. Logbooks should be expanded to allow for reporting of baitfish catch and bought
3. Compulsory reporting of baitfish caught or bought should to be introduced (recorded separately in the logbooks)
4. Limit entry into the fishery through restricted licensing, particularly for artisanal fisheries
5. Amend the timing of closed seasons to coincide with the peak breeding season of small pelagics and extend the duration of the closed season for both artisanal and industrial sectors.
6. Effective monitoring and surveillance should be strength to eradicate saiko and other forms of illegal fishing
7. Increase frequency of stock assessments of the small pelagic species, particularly for sardinellas and anchovy

---

<sup>1</sup> Fishing effort (number of days, hours, etc.) and capacity (number of vessels, kw, etc.) are measures of exploitation that can be regulated in accordance with different social management objectives, i.e. having a more profitable industry or providing for more jobs, in other words, having more boats but fishing less or having less boats but fishing more? I suggest the term *effort* should be replaced by *exploitation* in the draft FMP.



## 4 References

Asiedu, B, Okpei, P, Nunoo, FKE, Failler, P. 2021. A fishery in distress: An analysis of the small pelagic fishery of Ghana. *Marine Policy*, 129: 7 pp.

Borges, L. 2022. Advice on the management of small pelagic fisheries in Ghana, in particular baitfish fisheries. Lisbon, 9 August 2022. 12 pp.

Ministry of Fisheries and Aquaculture Development. 2021. National Fisheries Management Plan (2022 – 2026), Government of Ghana. 69 pp.