

Discussion re. Lin, Crowder & Shi opinion paper

Comments from Dr. Xia on Nov 20

- 1.人工繁育是短期最快速扩增种群规模的方法，圈养母龟产的卵应移植到自然产卵场地孵化(目前已这样做)；
- 2.繁育出来的稚龟不要全部收集起来人工养殖，而要立即让大部分(>50%)回归自然海域，另一小半也只能养殖 1~2 年，在经过 3 个月野化后放流大海，不建议长年累月养殖海龟！因为长期养殖野生动物并不是真正意义的生态保育工作！
- 3.海龟只有归海才能发挥其生态位的重要价值:维持海洋生态系统的健康与动态平衡。
- 4.人工养殖的海龟中可以留下极小部分用于对公众的自然教育和生态旅游工作。
- 5.用于人工繁育的成年海龟仅 100 只左右，亲本部分来自海龟湾养殖种群，部分来自野外救护。
- 6.保护区是从 2010 年开始逐步重视并准备人工繁育工作的，在 2017 年成功实现突破绿海龟繁育工作。

Translated version:

1. Captive breeding is the fastest method to rapidly increase population size in the short term. Eggs laid by captive female turtles should be transplanted to natural nesting sites for hatching (this is already being done).
2. The hatchlings produced should not all be collected for captive rearing; instead, the majority (>50%) should be released back into the sea immediately. A smaller portion can be raised for 1–2 years, but only after undergoing a three-month acclimatization before being released into the ocean. Long-term captive rearing of sea turtles is not recommended, as prolonged captivity of wildlife does not constitute true ecological conservation.
3. Sea turtles can only fulfill their ecological role by returning to the ocean, maintaining the health and dynamic balance of marine ecosystems.
4. A very small portion of captive-bred sea turtles can be kept for public education and ecotourism purposes.
5. Only about 100 adult sea turtles are used for captive breeding, with some parents sourced from the breeding population in the reserve and others from wildlife rescue efforts.
6. The protected area began gradually emphasizing and preparing for captive breeding in 2010 and successfully achieved breakthroughs in green sea turtle breeding in 2017.

Views discussed between George and Connie earlier and passed to Dr. Xia for response on Nov 19

在文章需要重點回應是：

1. 人工繁殖作為保育手段是不會成功的觀點，當然不能單靠這方法，但只有這方法才能在未有有效管理海洋資源時，保護中國剩下的種群。保育工作需要同步有序地進行
2. 負評惠東保護區的人工繁殖及沒有母龜產卵的說法，但不準確因保護區還有母龜上岸產卵
3. 國家在保護海洋及海龜的工作，以我所知國家不僅成立了保護區、放流活動，漁業從業員會把誤捕海龜放掉或給保護區照料等。現在措施不是單靠人工繁殖。當然仍然有更多工作需要做，如妥善減少誤捕情況、打擊非法貿易。
4. 作者們建議把國家政策中人工繁殖的內容移除，但承上的話內容就不應被移除

The key points that need to be addressed in the opinion paper are:

1. The view that artificial breeding as a conservation method will not succeed. Of course, this method cannot be relied upon alone, but it is the only way to protect China's remaining populations when there is no effective management of marine resources. Conservation work needs to be carried out in a synchronized and orderly manner.
2. Negative comments about artificial breeding in the Huidong Reserve and the claim that there are no female turtles laying eggs.
3. The country's efforts to protect the ocean and sea turtles. As far as I know, the country has not only established protected areas and conducted release activities, but fishery practitioners also release accidentally caught sea turtles or send them to protected areas for care. Current measures are not solely based on artificial breeding. Of course, there is still more work to be done, such as properly reducing accidental captures and combating illegal trade.
4. The authors suggested removing the content about artificial breeding from national policy, but based on the above, that content should not be removed.