

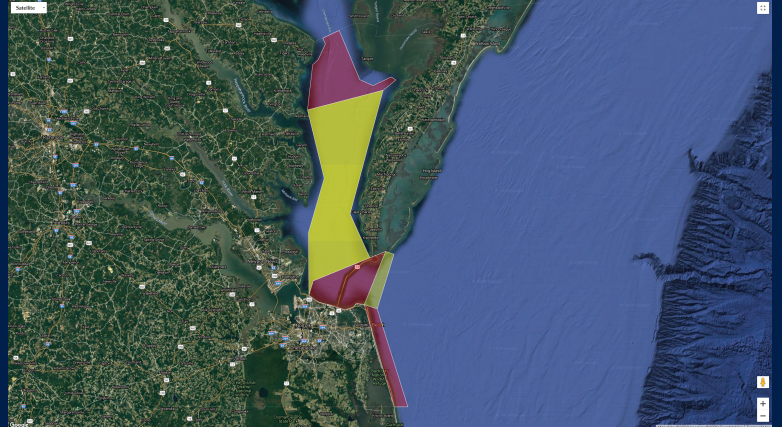
Crab! Restocking just isn't enough

Although the restocking program like the one in Chesapeake Bay has improved the blue crab population, it would not be as successful without the compliance of the fishers and the MPAs being implemented.

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A picture of blue crabs retrieved from https://www.chesapeakebay.net/S=0/fieldguide/crutter/blue_crab#



Map of the Chesapeake Bay MPAs retrieved from <https://mrc.virginia.gov/regulations/fr-752.shtm>

The Chesapeake Bay has been one of the most productive fishing grounds, it has also supported the largest blue crab (*Callinectes sapidus*) fishery in the world (Zohar, et al., 2008). Due to overexploitation in the early 2000s, blue crab abundance within the bay had decreased by 70% (from 900 million to around 300 million individuals) and had an 84% decrease in the spawning stock. The Blue Crab Advanced Research Consortium (BCARC) partnered with the local fishers and the Chesapeake Bay Office of NOAA to improve the spawning stocks. Besides restocking blue crab juveniles, the implementation of MPAs also played a major role in protecting the spawning stocks. The protected migratory corridors allowed spawning females to move within the bay safely.

A study showed that the MPAs with the dispersal corridor were crucial for protecting the female blue crabs when they are moving from the nurseries to the spawning grounds (Lipcius, Stockhausen, Seitz, & Geer, 2003). The authors also suggested that MPAs were complementary with other conservation measures. And such model could be used when evaluating other exploited marine species with similar life cycles.

Recommendations - adopting the guidelines developed by IUCN

1. Conduct extensive background research and risk assessment
2. Reduce the (fishing) pressure of the species **FIRST** before considering restocking
3. Include stakeholders and local communities during the planning phase of the restocking project (which will help to gain their support and improve the socio-economical feasibility of the project)
4. Robust monitoring after restocking to measure its effectiveness

References

- Lipcius, R. N., Stockhausen, W. T., Seitz, R. D., & Geer, P. J. (2003). Spatial dynamics and value of a marine protected area and corridor for the blue crab spawning stock in Chesapeake Bay. *Bulletin of Marine Science*, 72(2), 453-469.
- Zohar, Y., Hines, A. H., Zmora, O., Johnson, E. G., Lipcius, R. N., Seitz, R. D., . . . Chung, J. (2008). The Chesapeake Bay Blue Crab (*Callinectes sapidus*): A Multidisciplinary Approach to Responsible Stock Replenishment. *Reviews in Fisheries Science*, 16(1-3), 24-34. doi:10.1080/10641260701681623