

Climate Change Impacts on Oyster Aquaculture - Part I: Identification of Key Factors

Authors : Emmanuel Okine Neokye, Xiuquan Wang, Krishna K. Thakur, Pedro Quijon, Rana Ali Nawaz, and Sana Basheer

Abstract : Oysters are enriched with high-quality protein and are widely known for their exquisite taste. The production of oysters plays an important role in the local economies of coastal communities in many countries, including Atlantic Canada, because of their high economic value. However, because of the changing climatic conditions in recent years, oyster aquaculture faces potentially negative impacts, such as increasing water acidification, rising water temperatures, high salinity, invasive species, algal blooms, and other environmental factors. Although a few isolated effects of climate change on oyster aquaculture have been reported in recent years, it is not well understood how climate change will affect oyster aquaculture from a systematic perspective. In the first part of this study, we present a systematic review of the impacts of climate change and some key environmental factors affecting oyster production on a global scale. The study also identifies knowledge gaps and challenges. In addition, we present key research directions that will facilitate future investigations.

Keywords : climate change, oyster production, oyster aquaculture, greenhouse gases

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