

Review of: "Larache's Coastal in Morocco: Evaluating Dredging's Impact on Fisheries and Shorelineevolution"

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Potential competing interests: No potential competing interests to declare.

The article titled " Larache's Coastal in Morocco: Evaluating Dredging's Impact on Fisheries and Shorelineevolution" examines how dredging affects the environment and fishing in Larache, Morocco. It explores changes along the coastline of Ras R'mel Beach and fish catches between 2011 and 2020. By demonstrating how dredging influences these aspects, the study highlights the interaction between human activities and the marine ecosystem off the coast of Larache. Additionally, it proposes ideas to mitigate the negative effects of dredging, paving the way for discussions on the preservation of marine resources in Larache. However, here are some points and directions to consider for improving the overall quality of this article:

1. ABSTRACT:

- Your abstract highlights the importance of managing marine sand dredging responsibly, considering both socio-economic needs and marine ecosystem preservation. I believe these aspects warrant consideration:
- The context of rapid urban growth and increased demand for sand is clearly established. However, providing specific data on the extent of this demand and its impact on marine resources in the Larache region or Morocco as a whole could be beneficial.
- The importance of striking a balance between economic development and environmental preservation is well emphasized, but specific examples of dredging projects in the Larache region could strengthen the relevance of your study.
- The objectives of the article are clear, but it would be beneficial to include an overview of the methodology used to assess the impacts of dredging on the coastal area of Larache.

2. PREAMBLE:

- This section provides a good overview of the physical and biological impacts of dredging on the coastline. It would be much more engaging (if possible) to include specific examples of dredging projects in the Larache region to better illustrate the points discussed.

3. STUDY AREA:

- Your description is detailed and provides a thorough understanding of the physical and natural environment of Larache. To further bolster your study, you may consider including specific data on dredging projects in the Larache region, which could substantiate the scale and likely impact on the marine ecosystem.

4. RESULTS AND DISCUSSION:

- It would be prudent for your study to consolidate the "Results" and "Discussion" sections into a single section, instead of the current paragraphs 4, 5, and 6, which could lead to confusion.
- The absence of specific data on dredging operations both offshore of Loukkos and at the estuary mouth constitutes a major gap. Such data, combined with information on marine currents and fishing habitats, would allow for a more precise and comprehensive assessment of the impact of dredging on the marine environment and fisheries resources.
- Regarding the evolution of the shoreline at Ras R'mel beach, it appears to be stabilized by the presence of the northern dike at the mouth of the Loukkos river and a natural rock formation 4 kilometers further north. However, it is important to consider how this dike affects coastal dynamics and the natural erosion/accretion of the beach. Indeed, the observed accretion and erosion locations could result from periodic lateral redistribution of sediments rather than quantitative variations due to dredging. A more in-depth analysis of these natural processes, particularly wave action, and their relationship with human activities is necessary for a comprehensive evaluation.
- The observed quantitative declines in fisheries between 2010 and 2020 have been attributed to several factors, primarily climate change and unfavorable weather conditions (pending confirmation by meteorological data). Thus, the impact of dredging remains secondary and requires further evidence, as does the evolution of the shoreline at Ras R'mel beach.

5. CONCLUSION:

- Your conclusion asserts that there is no major negative impact on the environment and marine resources. However, this seems to contradict the concerns raised earlier regarding the impact of dredging on coastal dynamics (+45m accretion and -38m erosion), marine biodiversity, and fish species.
- In light of your conclusions, it would likely be pertinent, provided relevant data on dredging campaigns are available, to reframe the article to highlight the effectiveness of controlled dredging, which appears to have no significant repercussions on the marine ecosystem off the coast of Larache.

6. SOURCES AND CITATIONS:

- Ensure that all information, data, and citations are properly referenced. It is important to attribute sources correctly to ensure the accuracy and credibility of your article. (ANDRÉ AND EL GHARBAOUI, 1973; World Bank, 2013; ELMORHIT Mohammed, 2009; GÉODE, 2012; HAMMADA S., 2007)