Review of: "Evaluating Hydrologic, Geomorphic, and Vegetation Parameters to Assess Natural, Living, and Hardened Shorelines along the Northern Gulf of Mexico"

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Potential competing interests: No potential competing interests to declare.

In the coastal zone, there exists a close interrelationship between hydrology, geomorphology, and vegetation, which collectively shape the coastal ecosystem. Hydrological processes significantly influence the formation and evolution of coastal landforms. Wave energy impacts contribute to coastal erosion and sedimentation. Geomorphological features influence the distribution and types of vegetation in the coastal zone. Vegetation can help prevent coastal erosion. Hydrological conditions directly impact the survival and reproduction of coastal vegetation. Plant root systems can attenuate wave and tidal impacts, contributing to coastal protection. Additionally, the presence of vegetation aids sediment deposition and stabilization, promoting coastal stability. In summary, complex interactions exist between hydrology, geomorphology, and vegetation in the coastal zone. So, this study is of great significance in revealing the research on the interrelationships between hydrology, geomorphology, and vegetation in the coastal zone. But the draft has the following problems:

1. The Frontiers section of the draft should be reorganized, and the Frontiers section should focus on research progress on the relationship between hydrology, landforms, and vegetation in coastal areas. The results of previous studies and the blank points that need further research.

2. The data in the draft is relatively detailed, but comparing three different types of coastal zones, since these different types of coastal zones are located in different regions, it is difficult to reveal the quantitative relationship between hydrology, landform and vegetation from the mechanism.

3. This draft is more like a research report and needs more in-depth research and analysis.