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Introduction

- Success of nature-based solutions (NBS) and living shoreline projects has brought to light the need for stakeholder and community engagement.
- NBS and living shorelines are unevenly distributed amongst lower-income and communities of color (Cousins, 2021).
- Understanding the perceptions of living shorelines within these “vulnerable communities” is vital to work towards equitable distribution of NBS.
- The scope of this study centered around Shell Belt Rd. (SBR) in Bayou La Batre, AL.
 - Population - 2,264 people.
 - Historically known for - low income, low high-school graduation rates, high saturation of communities of color, and a high percentage of non-English speakers.

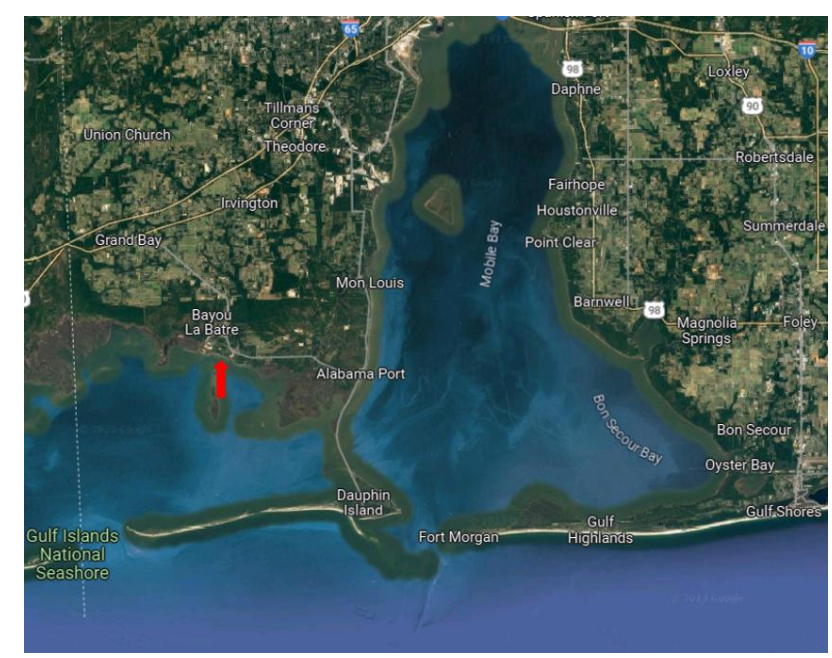


Figure 1. Map of Mobile Bay

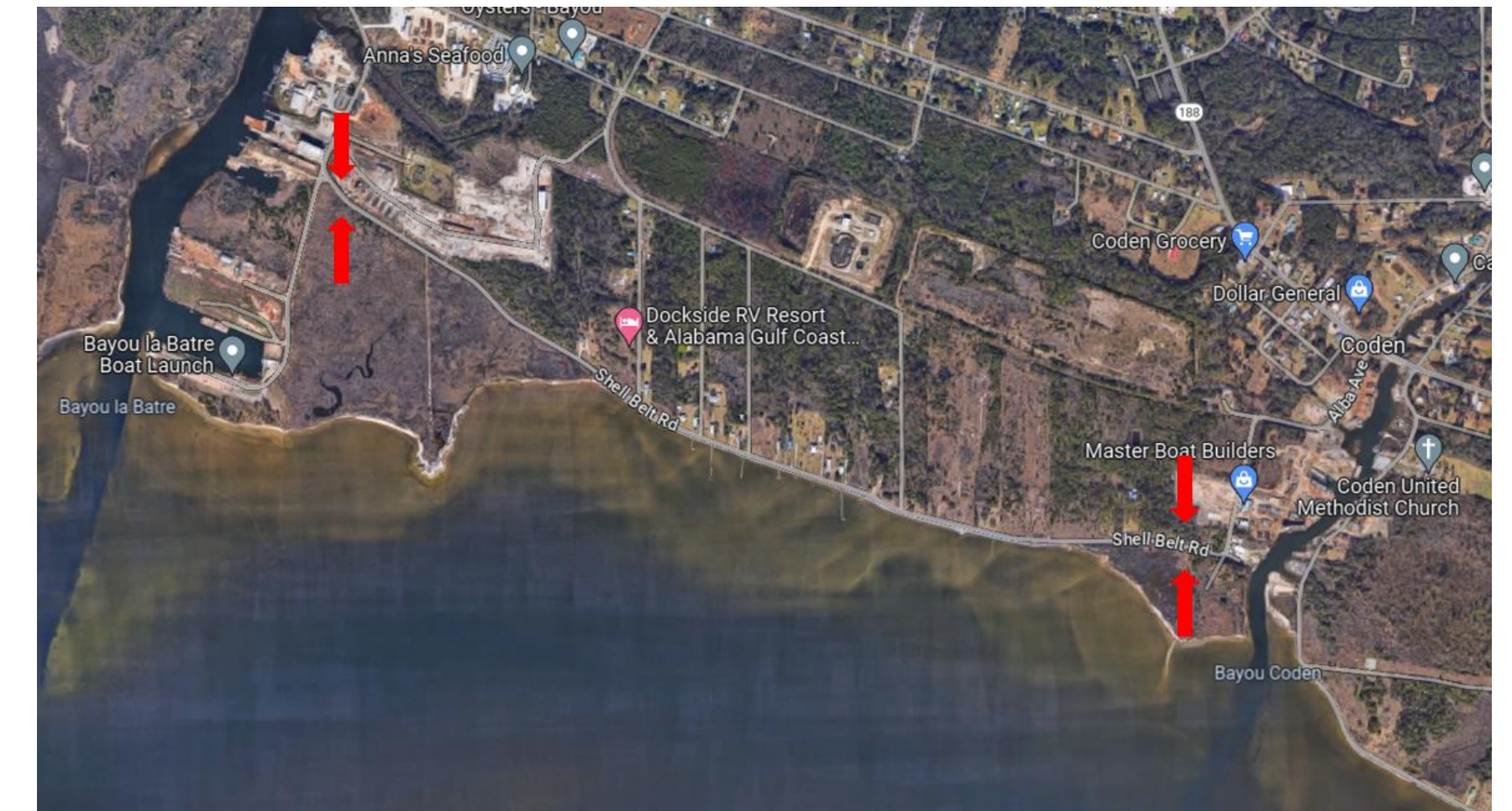


Figure 2. Map of Bayou La Batre's Shell Belt Rd.

Methods

- Developed a stakeholder survey designed to assess stakeholders, predominately SBR property owners, understanding and perceptions of living shorelines.
- Conducted online and in-person surveys with stakeholders at community meetings and in the field.
- Used results from the stakeholder survey to develop a final community meeting survey to assess property owners' willingness to implement living shorelines on their properties.
- Used the results from both the stakeholder survey and the community meeting survey to advise our sub-grant awardees, TNC, on the next steps for their grant proposal for stakeholder involvement in implementing living shorelines along SBR.

Results and Discussion

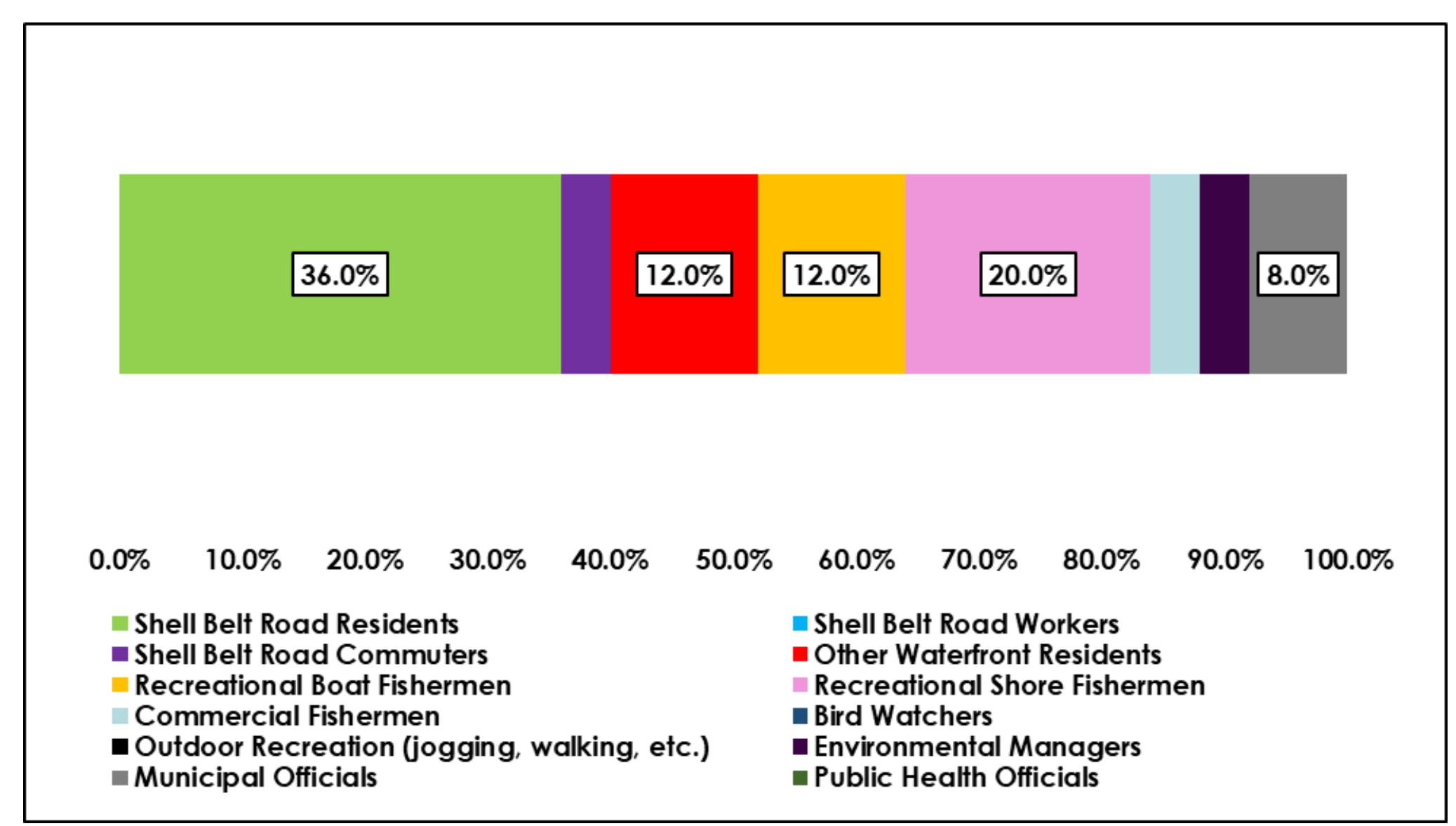


Figure 3. Stakeholder group associations

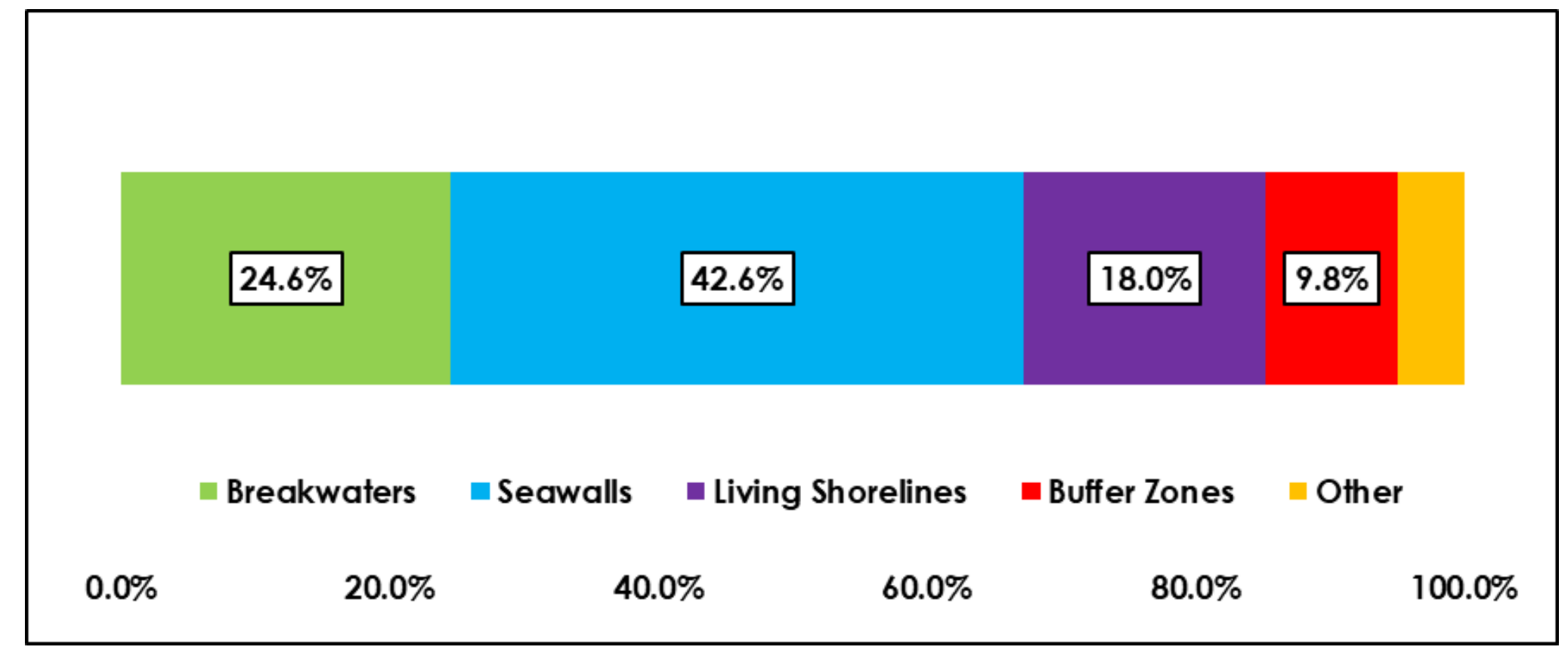


Figure 4. Knowledge of flood-risk mitigation techniques

- 90.32% of participants experience some range of daily coastal flooding
- 36.67% of participants experienced flooding from extreme weather events this year, and 76.67% have experienced it in the past

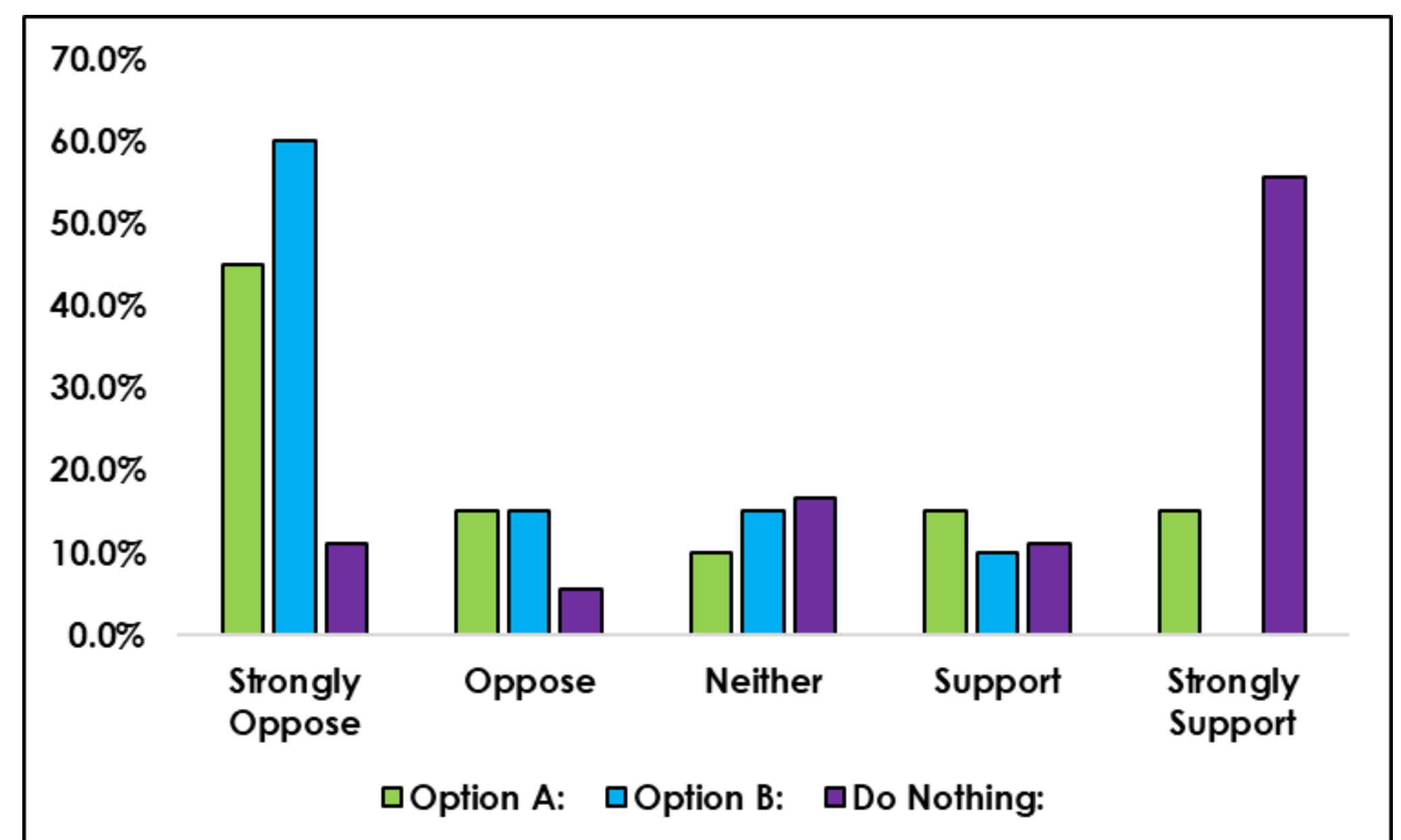


Figure 8. Stakeholder support of shoreline protection options

- 36% of participants were Shell Belt Rd. residents, the other 64% were stakeholders that rely on SBR in some capacity in their daily lives
- Only about 18% of stakeholders had heard of living shorelines as a flood-risk mitigation technique

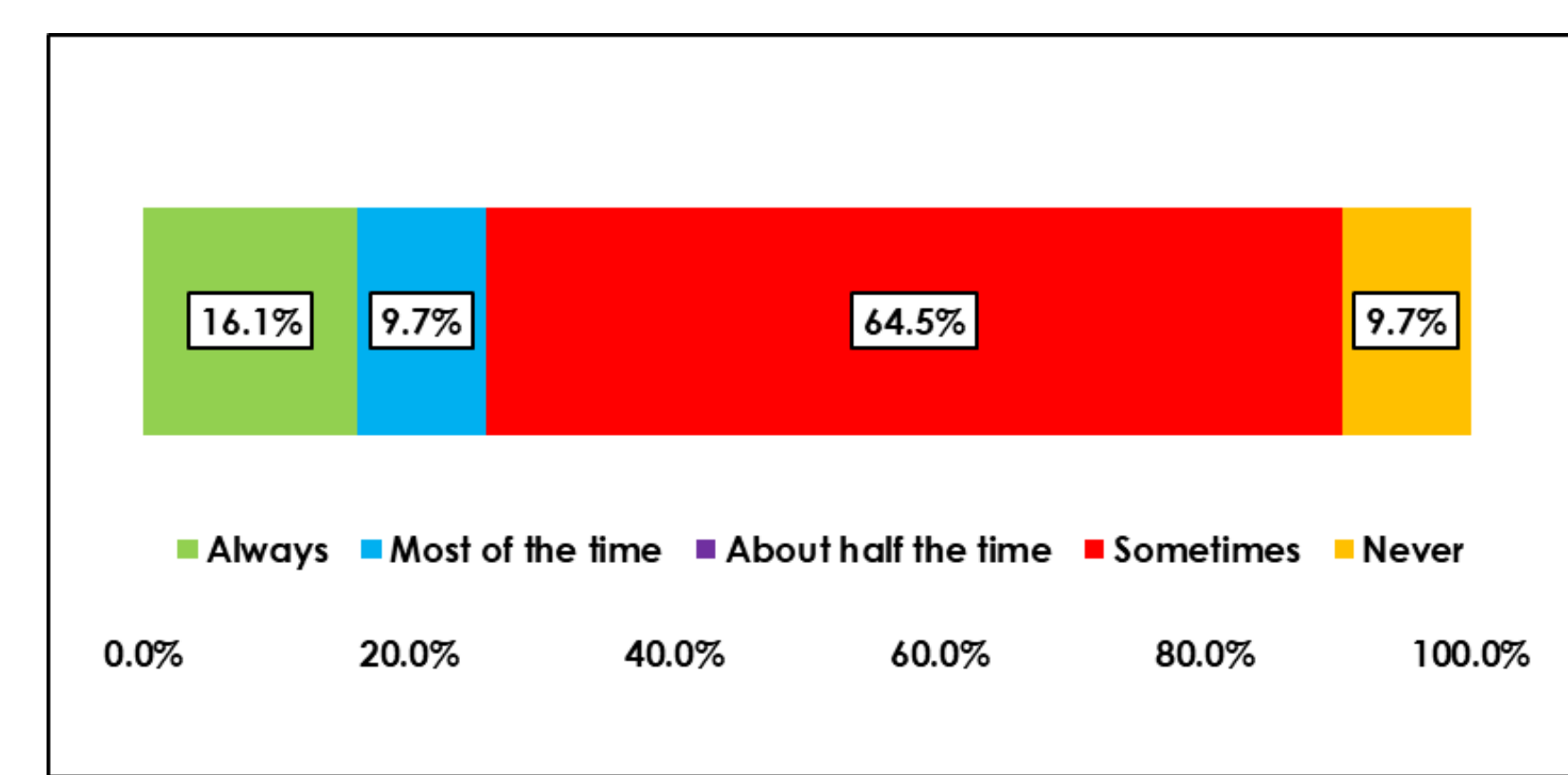


Figure 5. Daily influence of coastal flooding amongst stakeholders.

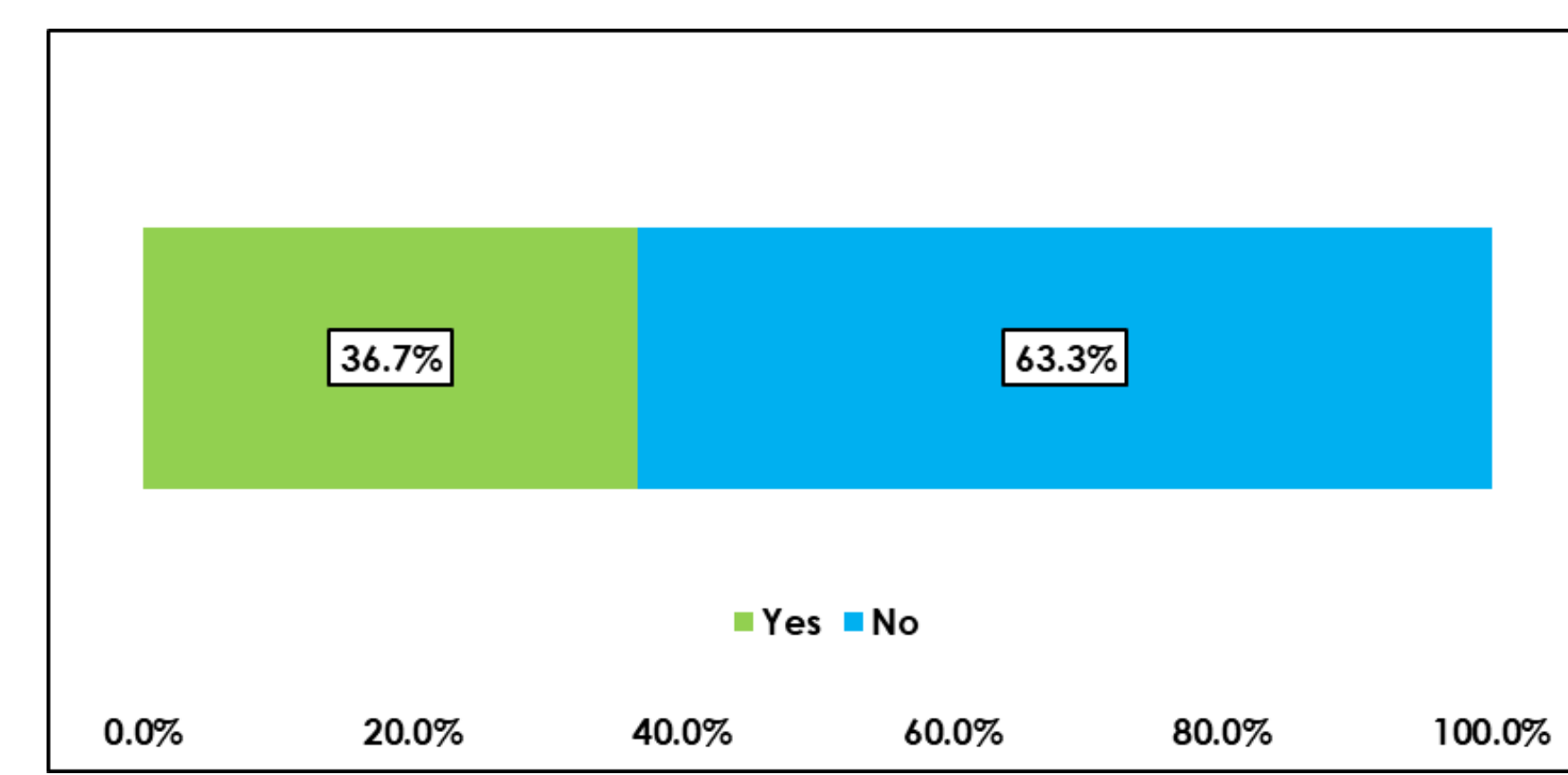


Figure 6. Exposure to flooding from severe weather events in the last year

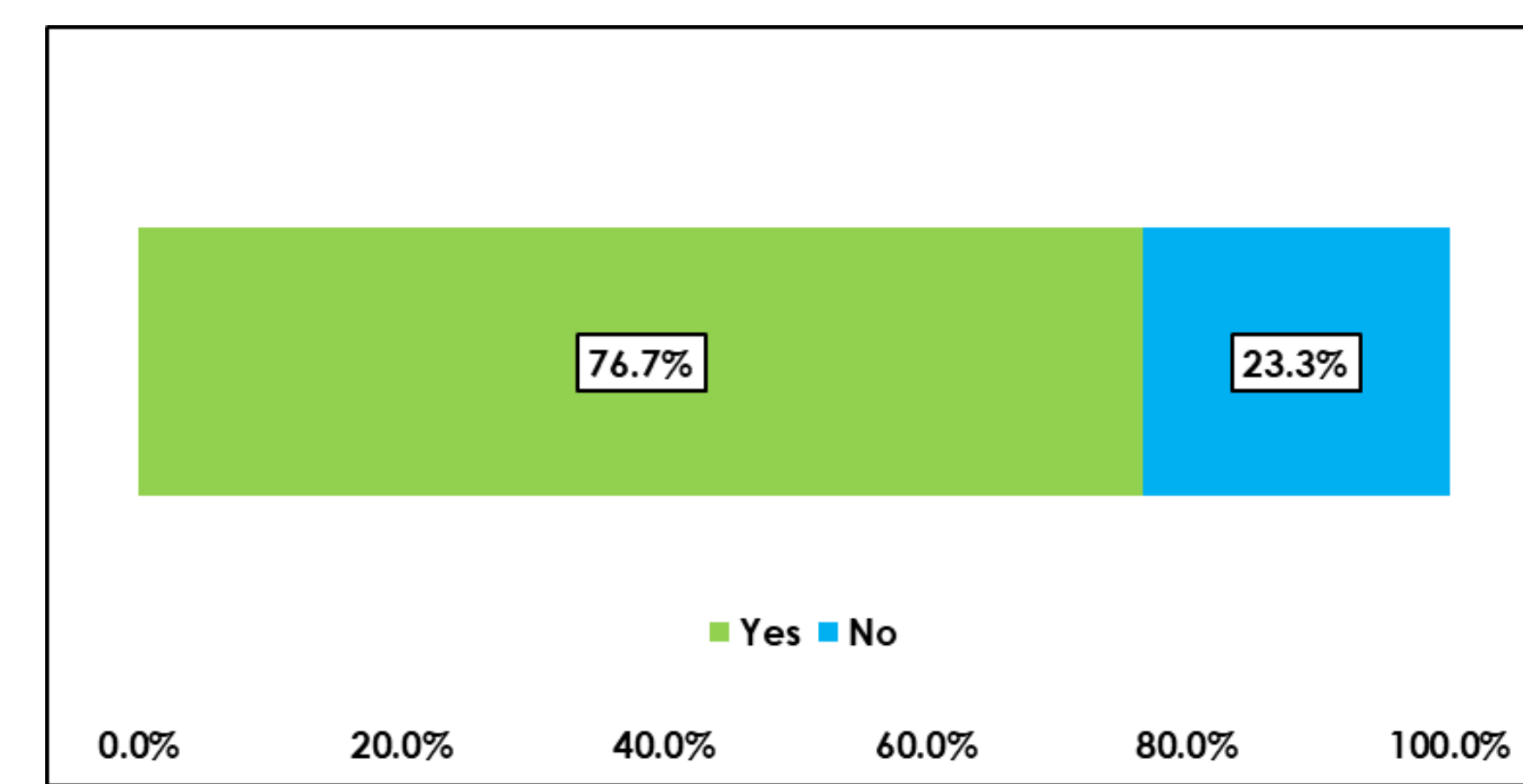


Figure 7. Past exposure to flooding from severe weather events

- Despite the results showing that SBR is a highly flood-vulnerable site, residential stakeholders are not willing to implement the proposed living shoreline protection options and would rather support doing nothing.

Conclusion & Future Work

- Since the decision by the landowners was contrary to what we thought their decision would be based on the results from our study, we think that it would be interesting to provide stakeholder educational workshops where these stakeholders can learn about the benefits and risks of all living shoreline types. Then, we would like to conduct a similar study and compare the results to see if this decision was a result of a misunderstanding of what Living Shorelines will do to an ecosystem, and the ecosystem services they can restore.
- The second phase of this grant required the willingness of landowners to participate, so our project team has shifted our focus from SBR to another high-risk location east of Shell Belt Rd., Coden, AL.



Figure 9. Map of Coden, AL study site



Figure 10. Map of Lightning Point, Bayou La Batre, AL. Photo retrieved from Moffatt & Nichol website.

Acknowledgements

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