Assessing Coastal Wetland Condition and Avifauna Response (WQ MYP)

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Research Goals

- Ecological Structure
  - Plant species richness

- Tier 2: Rapid Onsite Assessment
  - Plants: Species, Dominance, Root morphologies
  - Soil: Volume, Bulk density, pH
  - Hydrology: Water table elevation, salinity

- Tier 3: Detailed Field Evaluation
  - Plant functional traits

Research Results

Examples of Detailed Field Evaluations (Tier 3)

Table 3: Relationship between soil and plant structure

Soil texture

<table>
<thead>
<tr>
<th>Soil texture</th>
<th>Plant structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>Fine</td>
</tr>
<tr>
<td>Clay</td>
<td>Coarse</td>
</tr>
</tbody>
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Figure 11: Relationship between soil and plant structure

Figure 12: Relationship between soil and plant composition

Figure 13: Relationship between soil and plant diversity

Figure 14: Relationship between soil and plant health

Future Directions

- The study results indicate the importance of considering the ecological structure of salt marshes for effective habitat assessment and management.

- Future research could focus on developing more refined assessment methods that incorporate additional environmental variables and implications.

- Collaboration with stakeholders and local communities is essential for the successful implementation of these assessment tools.

Impacts and Outcomes

- The Tier 2 Rapid Onsite Assessment method provides a rapid and cost-effective way to assess coastal wetland condition.

- The Tier 3 Detailed Field Evaluation approach offers a more comprehensive understanding of the ecological structure and function of salt marshes.

- The results of these assessments can be used to inform management decisions and conservation efforts.