Infusing More Science About California’s Coastal Wetlands to Create Effective Informal Educational Resources

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Introduction
- California’s coastal wetlands provide vital functions for local animal and human populations.
- These functions are supported by scientific concepts that are often difficult for the general public to understand.
- This miscommunication can lead to a lack of desire to protect coastal wetlands.
- In order to inspire the public to join the conservation effort, the scientific concepts must be communicated more effectively.

Methods
- Gather relevant literature/scientific evidence that provides concrete support for the important functions of wetlands.
- Extract the most useful data that supports the claim.
- Translate this data into real-life comparisons and analogies that all ages can easily grasp.
- These comparisons can be visual or workable analogies in an educational script.
- Educational materials should be created by professionals experienced in scientific communication, then passed on to non-profits, schools, etc.

Results From Literature

Nurseries

![Graph showing nursery habitat distribution of juvenile halibut along the San Diego, CA coastline from Fodrie and Mendoza (2006).](Image)

Wave Attenuation

![Graph showing storm surge attenuation relative to wetland-water ratio and plant composition.](Image)

Nutrient Absorption

![Graph showing seasonal nitrogen sequestration by salt marsh halophytes.](Image)

References


Acknowledgement

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Special thanks to Dr. Michel Boudrias for advising this project, and Nima Farchadi for design assistance.

Proposal/Educational Translation

- Without these vital nursery habitats, adult stocks of many commercially important fish will decrease.
- A decrease in adult stock of commercially important fish can have economic consequences, especially in areas that rely on the seafood market.

- The amount of wetlands, as well as the plant composition, play an important role in reducing both wave energy and flood waters.
- This function helps to protect human coastal communities and businesses.

- Salt-loving species of plants that live within wetlands are successful at capturing nutrients that enter the water system, especially in the winter.
- Just like a sponge, these plants clean the water of excess nutrients, making direct contact and eating seafood much safer.

Proposed activity: Experimenting with food webs

“Have you ever tried to make a slip-n-slide on concrete?”

Proposed activity: A wetland model, food dye, and a sponge.

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Bolsa Chica Conservancy

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