

Living Shorelines

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As Florida's shorelines continue to erode, Dr. Mark Clark and his team have developed ways to build "living shorelines" to preserve the ecosystems that the shorelines support. In Clark's words, a living shoreline is a manmade shoreline that imitates a natural ecosystem. Clark is a faculty member in the Soil and Water Sciences Department at the University of Florida (UF). He is also a State Specialist in Wetlands and Water Quality and works with the Nature Coast Biological Station (NCBS) on developing ways to combat shoreline erosion and the continuing destruction of shoreline ecosystems. The typical response to receding shorelines is to pour in concrete where the shoreline used to be, which Clark calls "the gray approach." Although this response solves part of the problem, it does not necessarily ensure that the ecosystems on the shoreline are continuing to thrive. Clark tackled this issue by proposing that living shorelines be utilized instead, in areas where they are possible. A living shoreline may not be attainable if there are not any successful natural shorelines nearby to replicate.

A **living shoreline** is a man-made ecosystem that replicates surrounding areas to ensure that the man-made structure is suitable for the local flora and fauna to adapt. This strategy makes the living shoreline most conducive to success because the living shorelines is replicating natural areas that are prepared for uncertain conditions.

In addition, Clark notes that stability may look different for each instance: "If you have a massive hurricane, they are going to be damaged just like natural shorelines are damaged. ...They are going to develop the way they want to develop, not necessarily the way you want them to develop," explained Clark. Clark discussed how although the living shorelines seem to ensure a healthy continuation of shoreline ecosystems, they are still not a permanent solution. Climate change is constantly altering factors such as temperature, sea level, and number of natural disasters, all of which will affect Florida's shorelines. As a result, even the most well-designed living shoreline will not last forever.



(Photo/Dr. Mark Clark, UF/IFAS and NCBS)

"These living shorelines are buying time, but they are not necessarily going to be the end all protection, especially in areas that are just inevitably going to succumb to sea level rise," said Clark.

Because the success of living shorelines is such a limited situation, Clark urges everyone to contribute to the project's success. Contributions can be as simple as educating yourself on your local shores, taking actions to ensure you are not contributing to the problem, and advocating for shoreline preservation.

To learn more about Clark's living shoreline project, visit:
<https://ncbs.ifas.ufl.edu/extension/dealing-with-coastal-erosion/>