

Robert W. Riley, Jr.

Graduating with an MA in Economics from the University of Central Florida, Orlando, where he worked as a graduate research and teaching assistant, Mr. Riley began his career as a Program Manager for communications systems manufacturer Harris Corporation, Melbourne, Florida. Motivated as an entrepreneur, Mr. Riley helped found and was a principal in several technology startups in the late 1990's.

In the mid 1990's, Mr. Riley worked in a consulting capacity for NASA at the Kennedy Space Center in Cape Canaveral, Florida, on an initiative to adapt Internet based technologies to STS Shuttle processing. During this period, he began research in mangrove ecosystems and into the failure modes that ubiquitously characterized mangrove restoration projects. He ultimately developed Riley Encased Methodology[®] (REM) for the successful long-term establishment of mangroves in non-native environments. The findings of his research have been published in peer-review journals, which include the research that challenged commonly held conventions in accepted practices and limits of mangrove restoration:

“Riley encased methodology: principles and processes of mangrove habitat creation and restoration”, Robert W. Riley, Jr & Chandra Salgado Kent, *Mangroves and Salt Marshes* 3: 207-213, Kluwer Academic Publishers, December 1999.

Applications of his methodologies in Afforestation have also been successfully applied in humanitarian efforts to establish economic base where indigenous coastal populations are in poverty and suffer due to a lack of natural resources. This groundbreaking development is now a model for sustainable economic development targeted at impoverished regions of the world:

“A Novel Approach To Growing Mangroves On The Coastal Mud Flats Of Eritrea With The Potential For Relieving Regional Poverty And Hunger”, Gordon Sato, Robert Riley, et al. *Wetlands*, The Society of Wetland Scientists, Volume 25: 776–779, September 2005.

Subsequent research guided Mr. Riley in patenting REM methods and technology. These innovative methods for planting mangroves enable the reliable and long-term establishment of reproductively mature, self-sustaining mangroves and mangrove forests. Applications include high-energy shorelines, seawalls, revetments, bulkheads and non-native environments. The technology has particular applicability in areas destroyed or degraded, or where topography and hydrology has been artificially changed, such that physical conditions are no longer favorable for natural mangrove recruitment.

The environmental TV program *Geoambiente* produced a half-hour show featuring the application of REM[®] in the ecological restoration project at Cabo Rojo, Puerto Rico.

In 1996, Mr. Riley established *mangrove.org*[®] with a mission to conduct research and development, promote education and implement REM technology in mangrove afforestation, habitat creation and restoration, shoreline stabilization and erosion control applications. The technology has been successfully applied in water quality improvement, pollution control, coastal resilience and sustainable development projects.