

Improving the Outcome of Efforts to Protect and Restore Wetlands

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Salt Springs, Florida

Probability of Success

...high

Estuarine marshes

Coastal marshes

Mangrove forests

Freshwater marshes

Freshwater forests

Groundwater/Seepage Slope Wetlands

Seagrass Meadows

...low

Probability of Success

...high

ALL THESE WETLAND TYPES AND MANY OTHERS HAVE BEEN SUCCESSFULLY MANAGED OR RESTORED WHICH CONFIRMS THAT THE TECHNOLOGY IS THERE TO DO THE JOB RIGHT – BUT THE CORRECT APPLICATION OF THAT TECHNOLOGY OFTEN DOES NOT TAKE PLACE

...low

Probability of Success

...high

Estuarine marshes

Coastal marshes

Mangrove forests

Freshwater marshes

Freshwater forests

Groundwater/Seepage Slope Wetlands

Seagrass Meadows

...low



2000



2003



January 11, 2007



Figure 2. Some examples of the less successful mangrove enhancement initiatives in the Philippines, mainly planting *Rhizophora* at the seafronts: (a) under a prolonged period of immersion, *Rhizophora* seedlings planted at the lower intertidal zone may “drown,” causing massive mortalities in Tayabas Bay (16, pers. obs.); (b and e) macroalgae and other debris may cause defoliation of the broad-leaved *Rhizophora*; (c and g) planting between pneumatophores (c) of *Sonneratia* and aided by bamboo stakes (g) did not prevent many *Rhizophora* seedlings from dying (g; i.e., < 50 of the ~1000 seedlings planted survived; Agdangan, Quezon); (d and h) part of 10-ha mangrove plantation (carbon-sink) effort in which *Rhizophora* seedlings mostly (i.e., > 95% of the seedlings within sampling plots) died after only about 9 months, apparently because of the mechanical stress of wave action and substrate erosion; and (f) seedling stems serving as substrates for oyster colonization.

From Sampson and Rollon 2008

The 20 Year Effort To Restore Mangroves In The Philippines, USD\$ 17.6 Million, Over 44,000 Ha, Failed



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From Sampson and Rollon 2008

WETLAND CREATION



AND



RESTORATION

THE STATUS OF
THE SCIENCE

Edited by
Jon A. Kusler
Mary E. Kentula



Foreword by
Senator
George J. Mitchell

1990



COMPENSATING FOR
WETLAND LOSSES
UNDER THE CLEAN
WATER ACT

2001

NATIONAL RESEARCH COUNCIL



An aerial photograph showing a residential development with several houses and a large, dense forested area. A pond is visible in the lower-left quadrant. The text is overlaid on the image.

PAVING

Paradise

Florida's Vanishing Wetlands
and the Failure of No Net Loss

Craig Pittman and
Matthew Waite

2008

An aerial photograph showing a residential development with several houses and a large, dense forested area in the center. The houses are arranged in a grid-like pattern, and the forest is a mix of green and brown trees. The text is overlaid on the image.

PAVING
Paradise

Florida's Vanishing Wetlands
and the Failure of No Net Loss

Between 1990 and 2003,
there was a net loss of 84,000
acres of wetlands in Florida
due to urbanization

Craig Pittman and
Matthew Waite

2008

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JEWELLERIA FOUNDATION



THE FUTURE?

- **Can We Really Achieve No Net Loss?**
- **The Technology Is There, The Information Transfer is Not**
- **Compliance Monitoring and Enforcement of Permit Conditions Are Not Meeting Minimum Criteria to Ensure “Success”**
- **How Do We Teach All Those That Need Not Just the First Course, but Also the Updates (In Service Training)?**
- **We Do Not Really Have A Trained and Respected Cadre Of Wetland Professionals That Are Acknowledged And Used in Lieu of Less Knowledgeable Consultants**
- **Successful Management and Restoration Of Wetlands Is Much More Likely To Help Meet A No Net Loss Or Net Gain Goal Outside Of A Regulatory Program**