Reef Restoration in the PBPA

WHAT HAVE WE DONE;
AND WHAT HAVE WE LEARNED?

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Why is C-CAM involved in Reef Restoration

1. **Corals are the building blocks of the reef upon which much of the marine biodiversity in the Portland Bight depends**

2. **The corals in the PBPA have declined significantly in the last few decades**

3. **C-CAM is committed to protect the marine resources for several reasons e.g.**
   - **Protect and improve the income of local fishers**
   - **Conserve important biodiversity**
   - **Food security and nutrition for Jamaica**
   - **Adaptation to Climate Change – building climate resistant habitats**

Introduction to Coral Restoration

Several methods of coral propagation have been tested but the focus has been on branching corals (**Acroporids**)

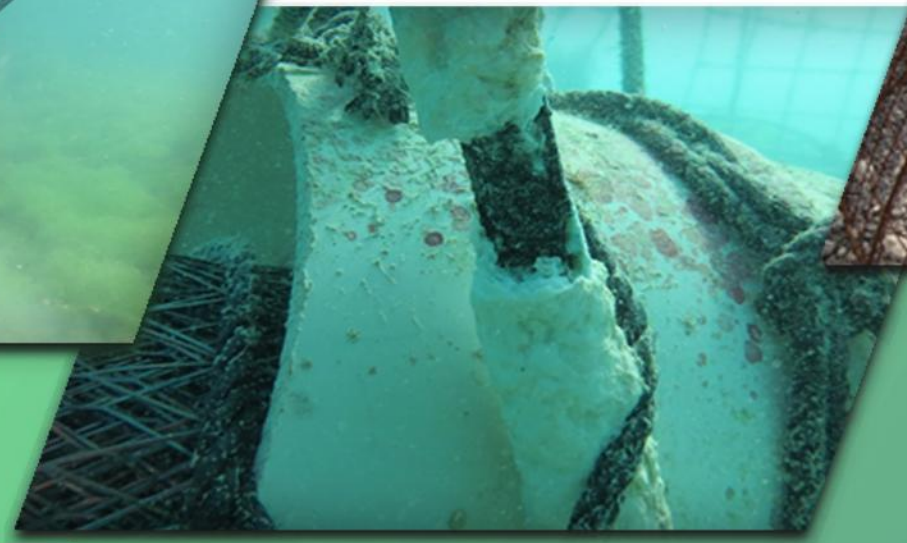
There are two types of propagation Asexual and Sexual

- **Asexual** – existing coral colonies are broken into smaller fragments that are allowed to grow into a separate colony

- **Sexual** – gametes are collected from spawning corals and combined to produce embryos which are grown to a stage (beyond settlement) where they can be transplanted.

Most restoration projects have focused on asexual propagation as it is much cheaper and far less technical.

The Biorock artificial reef system



Combines coral restoration with fish habitat

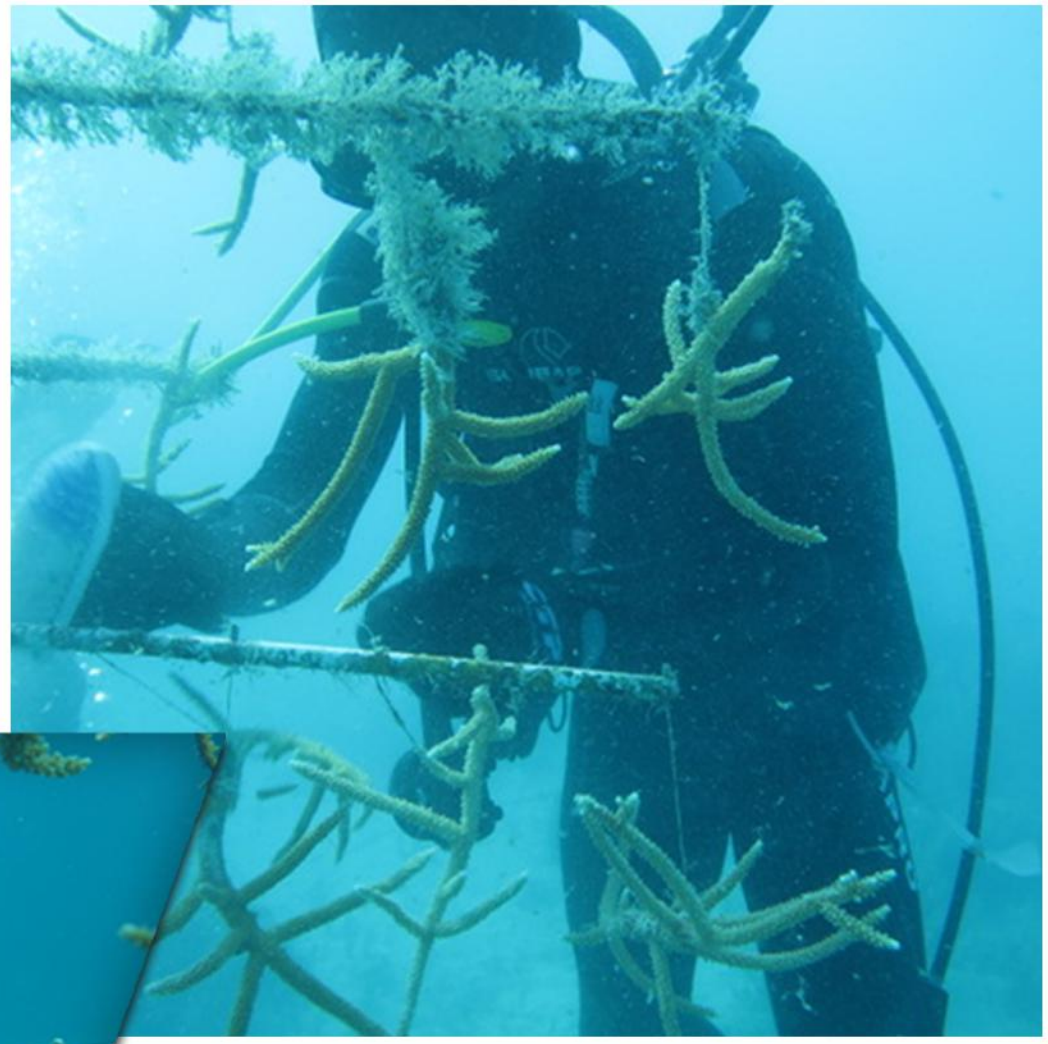
Large domes were constructed from steel and erected in the Three Bays Fish Sanctuary

It was intended to provide electrical power using solar panels


Due to theft and vandalism we were forced to try different methods to power the project e.g. battery power.

Mini-dome Reef at Sandy Bank

The Coral Nursery



Coral trees to
Grow Acroporids

CARIBBEAN COASTAL AREA MANAGEMENT FOUNDATION
(C-CAM)

These activities are about to get increased support

The Carsif Project

- This project will involve local fishers and will increase the number of coral trees to five.
- We hope to be able to engage fishers in a long term effort to assist C-CAM to maintain our coral nursery as well as the coral gardens we will establish
- We will also include Staghorn Coral ***A. palmata*** fragments and eventually other species on the new trees.

The JCP Project

- This project will further increase the number of coral trees and species in different locations.
- It will also increase the number of Biorock steel structures in the sanctuary.
- We will be testing the use of inexpensive (homemade) wind turbines to provide power for these new structures.
- Once power is available we will also include fragments of corals on the Biorock to improve the habitat quality for fish and increase to coral population.

NEXT STEPS

C-CAM hopes to expand our reef rehabilitation efforts to include all our sanctuaries as well as outside the sanctuaries.

We hope to include other species as well as using more advanced techniques (including sexual propagation)