PROJECT PANAMA

Coralive

ARTIFICIAL REEFS POWERED BY MINERAL ACCREATION TECHNOLOGY

PORTOBELO

9°33'34.1"N 79°39'26.3"W

PROJECT BASE INFO

Project type: Research on MAT
Partner: Boskalis & Reef2Reef
Donor: Boskalis
Size / Area: 250m^2
Budget: 10000€
Start date: November 2020
Duration: 2 years

BACKGROUND

Coral reefs are globally declining and their valuable ecosystem services are being lost. Implementation of artificial reefs could compensate for the loss and create ecological habitat. Most type of artificial reefs are expensive and take a lot of time to regenerate degraded reefs. Mineral accretion technology (MAT) uses seawater electrolysis to precipitate minerals onto steel structures. Boskalis developed a new type of modular steel artificial reef unit, which has the potential to be implemented on a large scale. This study aims at defining the efficiency of MAT on the Boskalis structures.

OBJECTIVES & OUTCOMES

- To create a comparative setup between mini domes reef structures and Boskalis structures
- To assess the effect of MAT on Boskalis structures
- To assess the effect of MAT on coral growth and survival rates

PROJECT IMPLEMENTATION

APPROACH

Four different artificial reef structures setup have been implemented in order to compare their efficiency in term of coral growth and survival rates. Two of these four setup have been connected to the mineral accretion technology (MAT) to assess the effect of the technology on Boskalis structures compared to the usual structures used with MAT. The implementation of the project will be followed by 2 years of data collection and analysis by the International Maritime University of Panama.

MILESTONES

Month 1:	Implementation of the four artificial reef setups
Month 1:	Attachment of coral fragments onto the structures
Following years:	Data collection and report

DELIVERABLES

- Increased coral cover
- Optimization of the mineral accretion technology
- Optimization of Boskalis structures
- Establishment of guidelines for future large-scale restoration projects

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