

Coral restoration project in Thailand -Results

Sponsor: Omegor

Local Partner: Aow Thai Marine Ecology Center (ATMEC) – Love Wildlife Foundation

Project manager: Mario Passoni

Summary

- During this **first phase** (08 October 2022 April 2023), a total of 308 damaged corals were rescued and actively restored with hopes of rehabilitation. Additionally, a total of 3.95 tons of substrate was deployed for active and passive restoration, which was largely supported by WSF funds. During the first phase, no coral recruitment was observed on passive sites, as anticipated.
- During the **second phase** (September 09 October 2023), monitoring and maintenance work was carried out at both active and passively restored sites. Significant damage and mortality were recorded at both sites, attributed to monsoon storms and human fishing activities. Of the 308 restored corals, only 125 remained alive. In contrast, passive restoration allowed for the recruitment of 601 corals at deployed substrates, with an additional 118 coral recruits documented due to updated monitoring.





Detailed Update

Based on supplementary funds provided, a follow-up monitoring and maintenance period was dedicated immediately after the monsoon period. Over a one-week period, every structure for which active and passive coral restoration has been conducted was surveyed, and coral health was documented.

Active Restoration

Severe damage and entanglement were recorded at all active restoration sites, including on corals that had survived and grown well for a period of two years prior. This has been attributed to particularly severe storms reported during the monsoon season, which were able to flip structures weighed down by over 25kg of substrate, detach slower-growing corals, and inundate structures with loose rope and netting from nearby fishing activities.

Of the 308 restored corals, only 125 were found to have survived. Significant damage was reported on the more threatened and fragile groups, such as the genera *Pocillopora* and *Pavona*, which contributed to the greatest proportion of mortality.

Likely, the combination of turbidity due to storms, damage to structures, and the already stressed condition of corals before rescue contributed to their low survival (which is supported by similar mortality of these same genera at older structures).

However, the threatened coral *Acropora* showed greater survival, which remains a positive outcome of active restoration efforts.





Passive Restoration

Despite several passive restoration structures being damaged and overturned by monsoon storms, coral recruitment on these structures remained prolific and exceeded predictions. Supplemental funds for monitoring allowed for a comprehensive inventory of coral recruitment within the past 12 months, revealing a total of 601 corals recruited onto structures supported by WSF sponsorship. Additionally, supplemental support enabled an updated assessment of earlier structures deployed by ATMEC, resulting in an increase of 118 recruited coral colonies/individuals.



Conclusion

Based on the total funds provided, the final results after 12 months of restoration and maintenance are as follows:

- 308 corals rescued with active restoration: 125 corals surviving.
- 3.95 tons of substrates deployed resulting in 601 corals recruiting.
- Total active restoration corals supported by 308 (125 alive).
- Total passive restoration corals supported by WSF = 719 corals.