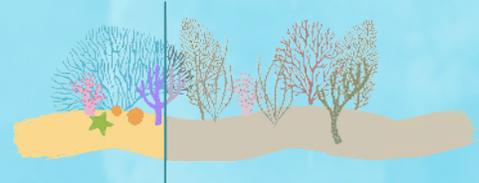


# Philippine Reeflections

A Primer on Philippine Reefs & Restoration

## State of the Philippine Reefs

A coral reef is a large, natural structure built by corals that stretches thousands of kilometers, covers thousands of square kilometers, and takes thousands of years to fully form.



Current average live coral cover : **25.7%**

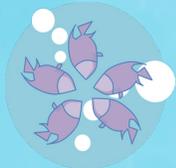


Reefs with "Excellent" live coral cover : **Zero**

**505**

coral species are found in the Sulu Sea bioregion—the richest in the world for corals.

### Importance of Coral Reefs



Fisheries Support



Vital for Medical Innovations



Habitat for Biodiversity



Protection of White Sand



Eco-tourism



Protection of Coasts

### Threats to Coral Reefs



Road Building



Typhoon Damage



Cyanide Fishing



Irresponsible Tourism



Blast Fishing



Unmanaged Coastal Development

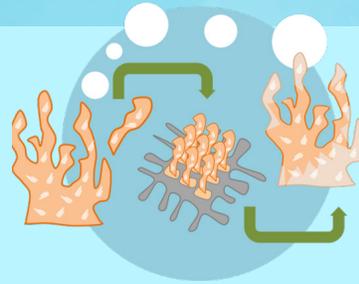


Ocean Warming & Coral Bleaching

# Common Ways to Rehabilitate a Reef

## Active

Direct intervention is made to aid in reef recovery, e.g., coral gardening, coral transplantation, bio-rock, microfragmentation, etc.



### EXAMPLE Coral Gardening

Also known as coral planting, Coral Gardening involves transferring coral from a donor reef to damaged one, either directly or after being grown in a nursery.

Some efforts use live fragments naturally broken off and scattered, called Corals of Opportunity (COP).



## Passive

Minimal to no intervention is undertaken to allow natural recovery of reefs, e.g., coastal or reef management.



### EXAMPLE Marine Protected Areas

A Marine Protected Area (MPA) is any marine area that has been reserved by any effective means and is governed by specific rules to manage the activities and protect the enclosed coastal and marine environment.

## NATURAL RECOVERY RATES

Palawan

6.8% per year

87 Marine Protected Areas

Occidental Mindoro

3.4% per year

27 Marine Protected Areas



# Coral Gardening Issues

Coral gardening has become the go-to method in rehabilitating or saving our reefs. However, every seateizen must also be aware of the issues behind this “reef-saving” method.



## Too few & too small

280,112 COPs of 5cm radius are needed to increase hard coral cover in a hectare of reef from 0%–22%, the current national HCC average.

A gardener needs to search 6 to 47 hectares of reef to get enough COPS to make a significant change to a hectare of damaged reef.



## Not cost-effective

Cost or expense per COP is USD 0.3–0.4 (PHP15 to 20), or a total of PHP4.2–5.6 million per hectare.

The average cost of administering a single well-managed protected area of around 15 hectares is PHP1.6 million.



## Corals are animals

With our reefs' high diversity, changing the landscape by placing only one or two species may be detrimental to the colonies already existing on the reef.

Unknowingly, gardeners might cultivate competing corals or might place corals beside a competitor. Worse, they might be unknowingly handling an endangered coral species.



## Species choice

Although common to most areas, branching *Acropora* species are sensitive to environmental changes and are prone to mass coral bleaching.

Transplanted *Acropora* corals typically have higher mortalities in the initial stages, and have slower growth and lower reproductive rates than corals left intact in their natural habitats.



## Unrealistic

The Philippines has an average of 22% hard coral cover, 10% lower than was reported in the 1990s. Most local reefs may not tolerate further loss of corals from harvesting for gardening.



## It can be illegal

Republic Act 10654, amending the Fisheries Code, states that all coral farming and propagation activities require an Aquatic Wildlife Farm Permit issued by the Department of Agriculture.



## Threats remain

The coral crisis cannot be solved by artificial reefs if human impacts are not controlled and ocean warming continues to intensify.

# Coralboration

How can we help the corals?



## Be a good seatizen.



### Clean the seas.

Reduce your waste by refusing single-use plastics and buying only what you need.

Pick up wastes in the sea or by the beach, even if it's not yours.

Start your own campaign by downloading any (or all!) of the Save Philippine Seas Waste Watch Toolkits at [www.savephilippineseas.org/toolkits](http://www.savephilippineseas.org/toolkits)



### Check the reefs.

Train to become a citizen scientist to further understand our coastal and marine ecosystems.

Train to become an EcoDiver to help monitor and report on reef health through the use of the scientifically robust Reef Check survey method.

Join Reef Check's Adopt-A-Coral program and donate to the cause: <http://reefcheckphilippines.org/donate>



### Speak up!

Help raise awareness about the importance of coral reef ecosystems.

Report illegal activities to authorities.

Report coral bleaching to the **Philippine Coral Bleaching Watch**.