

An aerial photograph of a tropical coastline. The water transitions from deep blue to vibrant turquoise, revealing a coral reef. A lush green mountain with a prominent peak is visible in the background under a blue sky with scattered white clouds.

TABU FOR SUSTAINABLE FISHING

Protect today to have
enough tomorrow



Why are coral reefs so important?

They protect the shoreline from storms and surge water. Barrier reefs reduce waves, buffer the shores and prevent erosion.

They form a protected habitat for a huge variety of fish. Most corals and sponges as well as clams are filter feeders, so they contribute to enhanced quality and clarity of our near shore waters. Communities can achieve a sustainable income from eco-tourism and dive tourism if they have a healthy reef with many attractions (big fish, turtles, sharks)

**No Reef,
No Fish!**

But all around the world reefs are damaged and dying because of:



Global warming



Pollution



Overfishing



Why are Tabu (no fishing) areas necessary?

Communities in the Pacific Islands have successfully managed and protected their coastal marine areas for hundreds of years.



But nowadays the oceans and their fish suffer from global changes like:



increasing human populations



climate change



pollution

Also the local fishing around the islands has changed:



spear guns



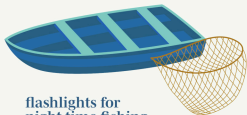
flashlights for night-time fishing



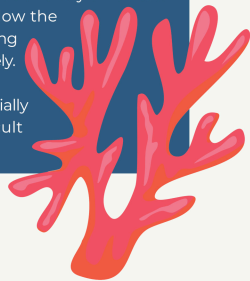
outboards



freezers to store fish

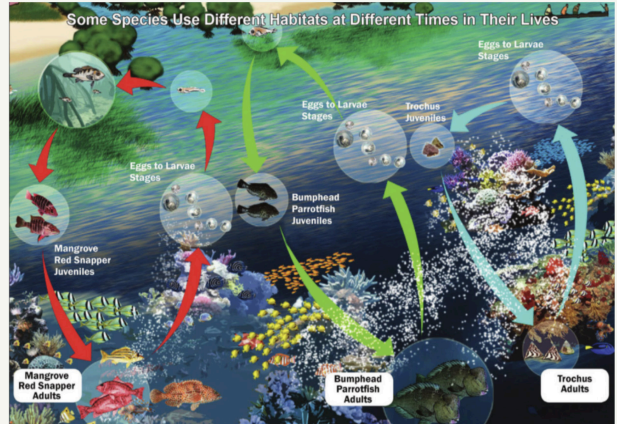


As soon as the fishing is no longer meant to feed the island population, but to **export for profit**, reef fishing is **not sustainable**, because the resources of a reef are very limited! When implemented successfully, **permanent tabu areas ensure fishing remains sustainable** and will provide marine resources for future generations as they will result in **improved catch of seafood** in nearby fishing areas. However, tabu areas must be carefully designed and managed to achieve this goal. They should include a variety of habitats and be big enough to allow the fish to move without leaving the boundaries immediately. When the numbers of fish have already substantially decreased it is also difficult to reverse the process.



Tabu area location

Coral reefs, seagrass and mangroves provide critical habitat for many marine animals, for spawning (e.g. reef fish), feeding (e.g. turtles) and as nursery areas (e.g. for reef fish and sharks). Tabu areas should include habitats that support different life cycle stages. For example many fish babies need the protection of mangrove forests to grow up, later they spend their adult lives on coral reefs.

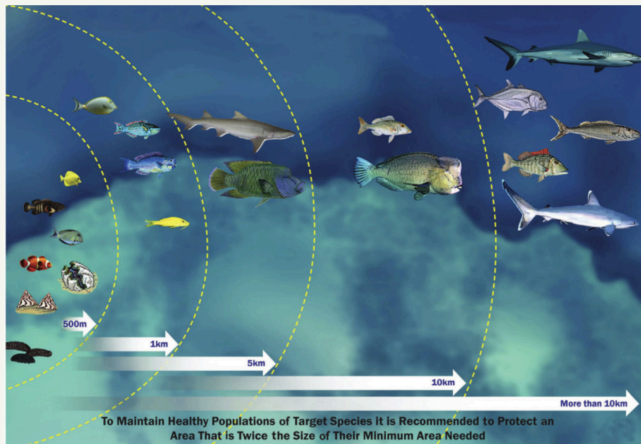


Graph taken from Gombos, M., Atkinson, S., Green, A., Flower, K. (Eds) (2013) Designing Effective Locally Managed Areas in Tropical Marine Environments

The Tabu zone must be big enough!

The size of tabu area is also critical to their success. Tabu areas on fringing reefs should protect from the shore across the reef flat and out past the reef crest to ensure all species in the area are offered protection. The size of the tabu area will depend on the life cycle and natural range of movement of the protected fish species.

If the tabu is not big enough to cover all endangered species it makes sense to protect these species even outside the tabu! For example no shark fishing all around the island, no grouper fishing during the spawning season, etc.

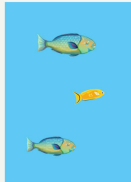


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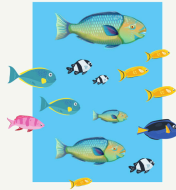
Why do we need a permanent Tabu?

Research shows that only complete, permanent closures are successful. They provide the time species need to grow, breed and in some cases, recover to benefit the region. This can take many years for some species. The benefits of an area closed for several years can be eroded after only one day of being re-opened to fishing. Effective tabu areas need permanent closure to protect big fish that are much more reproductive than small fish (super breeders) and guarantee overflow around the protected zone.

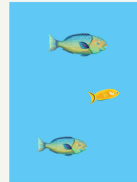
Now



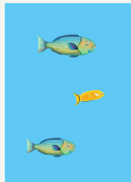
In 5 years



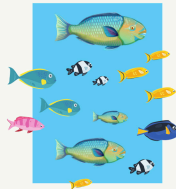
Fishing



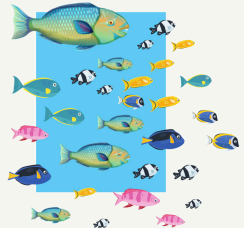
Now



In 5 years



In 10 years



“The key is to protect early enough while there is still a healthy reef with a variety of fish!”

Reefs need a balanced eco-system

Coral reefs support an incredible diversity of fish. Everything from lobsters and octopus to sea turtles and dolphins depend on the reef for food, habitat and protection.

Each animal plays an important role in the reef ecosystem, by filtering water, consuming prolific algae or keeping a particular species under control. These balanced relationships keep the marine ecosystems diverse and abundant with life.

A reef can only recover from damage if it contains a balanced eco-system and if there are enough fish to clean it!

**No Fish,
No Reef!**



Parrotfish play a **crucial role in reef ecosystems** by eating seaweed and algae, which **keeps the rocks clean for coral growth**.

Overfishing disrupts this balance, preventing damaged coral from recovering.

Turtles eat dangerous jelly fish and **keep seaweed under control**.



Sharks eat sick fish and **prevent the spreading of diseases**.



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