

## Resilient corals, resilient communities

*Local marine scientists in Fiji are supporting communities to protect their reef ecosystems by identifying, collecting and propagating heat-resilient corals.*

*This nature-based solution is implemented by Kyeema Foundation and Corals for Conservation and supported by Climate Resilient by Nature, an Australian Government initiative in partnership with WWF-Australia.*



### **The backbone ecosystem**

“I think I would describe the reef as almost the backbone ecosystem for communities,” says Wilson Hazelman. “For a lot of my people here in Fiji, in Rotuma, in the Pacific - whether it's through cultural value or economic - it's really what connects us to the environment and puts food on the table and money in our pockets as well.”

This sentiment rings true for the residents of Uluibau village on Moturiki, an island belonging to Fiji's Lomaiviti Archipelago. It is here where Wilson, a Field Implementer with Corals for Conservation, has been helping manage a community-run coral restoration site.

On Moturiki Island, life revolves around the ocean. Fishing, as well as collecting nama or sea grapes, provides a vital source of income and food for many families. The abundance

of these food sources depends on the health of the surrounding ecosystems, notably coral reefs.

Across Fiji's 844 islands and islets, there is an estimated 10,000 km<sup>2</sup> of reef. Here, research has recorded close to 300 species of coral, over 475 species of mollusc, and almost 2,000 fish species. This makes Fiji's reefs some of the world's most ecologically significant.

However, rising ocean temperatures due to climate change are placing coral reefs under stress, leading to increased coral bleaching. This causes corals to expel their algae, resulting in them turning completely white. Coral bleaching and associated coral death places these once abundant reefs – and the food and livelihood benefits they offer – communities under threat.



L-R: Uluibau village from above; Wilson Hazelman

Supporting communities to become more resilient to climate change and working with them to protect their reef ecosystems is something Wilson, who grew up in a coastal community, is passionate about. With several of his family members working in conservation, he was inspired to follow in their footsteps from a young age.

“When I was really small, I didn't know much about coral, but I remember going to the ocean with them [my family],” Wilson reflected. “It wasn't too deep or anything, but just being around coral reefs and fish was amazing. Seeing the work that they were doing, I was like, I really want to do stuff like this and make an impact.”

“One of the biggest things I'm passionate about is making sure that communities continue to live the way they do and thrive,” he adds.

Through community-led, nature-based solutions, Climate Resilient by Nature, Kyeema Foundation and Corals for Conservation are working to enhance the climate resilience of coral reef ecosystems in the Pacific Islands. As part of this, training sessions were conducted for local marine scientists, including Wilson, on the UNESCO-endorsed methodology, Reefs of Hope.

This methodology involves identifying corals in ‘hot pocket’ reefs that have survived warming temperatures and bleaching events. These heat-adapted corals are then collected and moved to nurseries in cooler water to prevent their demise and maintain genetic diversity.

This training enabled Wilson to spring into action and support community members on Moturiki two years ago when a mass bleaching event hit.



*L -R: Wilson and Eremasi planning the new nursery; Identifying fish located around the current nursery*

### **It takes a village**

“As far as you can see, it is just white everywhere,” says Wilson, as he recalls the 2023 bleaching event. “For someone who's passionate about coral work, it is really disheartening to see that and really breaks my heart, especially when you know what the state is when it's not bleached.”

“And so, we went out with a couple of youth from the community and checked out the bleaching and if there were any resilient coral colonies around. Then we fragmented the colonies that were still fully coloured because they would be more resilient, whereas the other ones around them were bleached.”

These heat-adapted corals selected by Wilson and the community were then moved into an interim nursery situated within a wider tabu area on the reef. Tabu is a traditional practice whereby a community decides on the temporary or indefinite closure of a fishing ground. Establishing a tabu or no-take zone, in turn, creates a sanctuary for reefs to regenerate and fish to replenish, making it an effective tool to sustainably manage natural resources.

Wilson and his wife, Laisani, who was also trained on the Reefs of Hope methodology, returned regularly to monitor the nursery and support the local coral gardeners in the community on their conservation efforts.

“One thing that we noticed was that the corals we had selected have been thriving more than the surrounding reefs, especially during the hotter seasons when the water is also hotter,” says Wilson. “We also noticed more fish around the nursery and around the reef generally.”



L- R: Corals in the nursery; Wilson monitoring corals in the nursery

### **A resilient future**

Fast forward to March 2025. With the corals growing strong, Wilson returned to Uluibau to help build a new nursery. With Laisani on maternity leave after recently giving birth to a daughter, Wilson and Eremasi, a Uluibau resident and coral gardener, are leading the work this time around.

Eremasi works on his family’s farm in Uluibau, but like most residents, the sea is a critical part of his day-to-day life and a key source of food.

“The reason we protect our natural resources is for the next generation,” explains Eremasi. “To me, the coral’s important because it’s home for the fish. There used to be many fish in the sea back then. Now, there are not a lot.”

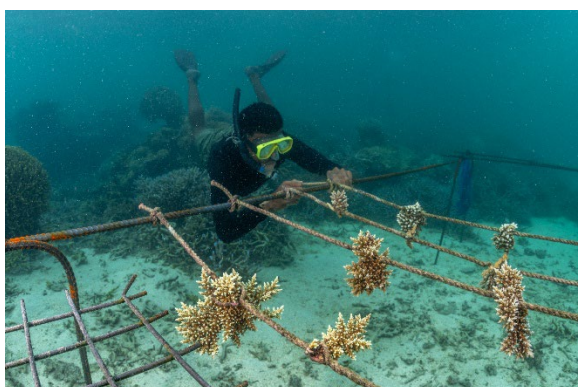
“That is how important the sea is. It helps us in our lives. With no resources in the sea, we’ll suffer. I think if we keep working on this, we can bring the fish back.”

Together, Eremasi and Wilson carefully loaded the materials for the nursery into their boat, and at the new location, they dive in and busily work underwater, hammering the structure together.

“The tables will be used for larger coral colonies, which will help with fish coming into the nurseries and help with maintaining the nursery,” Wilson explains, pointing to the structure. “And then the ropes will have smaller fragments, which will be used for out-planting and spreading the resilient genes back out onto reefs to make it more resilient.”

Ultimately, this project’s vision is to work with nature to restore compromised reef ecosystems. As Eremasi and Wilson have attested, these efforts are essential for ensuring

food security and livelihoods for communities. Reefs also offer a range of other benefits, including what's known as 'protective climate-related services'. This notably refers to a healthy reef's ability to act as a natural barrier that can help protect and reduce the vulnerability of coastal communities to shocks such as sea level rise, storm surges and coastal erosion, all of which are increasing with climate change.



L – R (row 1): Eremasi in Uluibau village; Eremasi and Wilson constructing the new nursery  
L – R (row 2): Eremasi moving corals; Annelise, Corals for Conservation in the nursery

### A holistic approach

Regenerating nature takes time and cannot be done in isolation. That's why this nature-based solution includes supporting initiatives that aim to build resilience, both ecologically and socially.

Community-led mangrove restoration activities are also underway in Uluibau, with Eremasi leading on planting and monitoring the growth of saplings. Mangroves act as nurseries and habitats for many marine species, including those found on coral reefs. Mangroves also offer protective climate-related services and buffer coral reefs from excess sediments and nutrients. As functionally interlinked ecosystems, efforts that ensure healthy mangroves also ensure healthy reefs, and vice versa.

Another initiative is supporting communities to pursue new and diversified livelihood opportunities. This enables families to reduce their reliance on catching fish, which in turn eases pressure on the reefs.

As part of this, chicken keeping has been identified as an activity that can generate additional income and supplement food for families. Currently, there are two lead chicken farmers on the island supported by Climate Resilient by Nature. The idea is that these leads can train and support others in the community to also take up this activity.

Although it is early days, Lavenia, the lead chicken farmer in Uluibau, is thinking about the future. “I’ll be expecting them to lay one egg each day. So from that, I can feed my family, and I will be able to sell eggs and chickens to the villages or supply them to the shops,” she says. “For me, in the next five to ten years, I would like to see myself empowering other women in the village to be successful chicken farmers.”

Supporting local livelihoods in this manner is all about diversification – ensuring communities have accessible and viable options available when it comes to food and income, while efforts are undertaken to regenerate the reefs and safeguard all the benefits they offer.

“I think one of the biggest things is that we protect the reef so that it continues to support the communities and their livelihoods,” says Wilson.

**Nature is our greatest ally to help build community resilience to climate change, socially, economically, and ecologically. Learn more about this project [here](#).**



L – R: Wilson and Eremasi with mangrove saplings; Lavenia

**The article was originally published on [ClimateResilientbyNature.com](https://ClimateResilientbyNature.com).**

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