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# SUCCESS STORY

## Paradise Saved

### *Supporting traditional marine conservation in Papua New Guinea*



Leonard Bamaba, Marida Ginisi and Kidilon Bamaba are leaders in the family that now combines traditional and contemporary conservation practices on Wiyaloki Island in Milne Bay.

Photo: USAID CTSP / Tory Read

*“Wiyaloki was doing their own management long before CI came to them.”*

— George Aigoma, CI

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The ideas behind community-based resource management are not new to the Kisakisa clan, owners of Wiyaloki Island in Milne Bay Province, Papua New Guinea. Since 1997, matriarch Marida Ginisi and her brothers Kidilon and Leonard Bamaba have used *bubuli* traditional practices to control fishing and harvesting on their reefs. They place temporary bans on the collection of specific species in certain areas by decorating a pole with coconut fronds and capping it with a sample of the forbidden item. This system has allowed them to rebuild fisheries that had been depleted under the oversight of previous generations.

When the family learned of the community marine management area around Nuakata Island, which was created with assistance from USAID’s Coral Triangle Support Partnership (CTSP) in support of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), they saw an opportunity to respect tradition while modernizing management and enforcement. “Wiyaloki was doing their own management long before CI came to them,” said George Aigoma, who leads community engagement for Conservation International (CI), a CTSP partner in Milne Bay. The improvements around Wiyaloki drew the interest of the two nearby islands of Nautale and Panabala, and together these communities requested CI to help them take similar actions. They have now completed training for monitoring reefs and fish, taught by three men from Nuakata who took the original CI training classes. They have begun monitoring 16 sites, and they are already noticing increases in coral and fish in the “no take” areas.

Of the monitoring training, Kidilon said, “We learned about the types of fish, clamshells, and corals. They are good teachers. They taught us in a way where they took us down to the reef plenty times and showed us each thing.” The best students were selected to do the monitoring. They are now eager for further training so that they can pass on the techniques to other communities that are asking to be included.

Kidilon, who went through the trainings along with his son, is now the chairman of the Community Marine Management Area for the three islands. He coordinates the quarterly monitoring, oversees patrolling of the “no take” zones and plans for the future. He has spoken with the elected manager for his local government district about adopting an environmental law like the one passed with CTSP support by the neighboring Maramatana local level government, and he is leading community work on a management plan, in collaboration with CI. All of this work in monitoring and resource management planning is directly linked to Papua New Guinea’s CTI-CFF National Plan of Action.

Marida’s family members drew a line in the sand and committed themselves to the regeneration of the marine resources around their home. The success of their efforts convinced their neighbors to join them and to formalize management of the resources. Now, they are working together to keep the reefs healthy and productive for future generations, and they are disseminating marine protection ideas throughout the neighboring islands. *Conservation International is a lead implementing partner for CTSP and the US CTI Support Program in Milne Bay, Papua New Guinea.*



# SUCCESS STORY

## New Law Protects Resources and Rights

**Government and NGOs collaborate in Milne Bay to pass a landmark environmental law**



*This fisherman's livelihood will be protected when current efforts to pass an environmental law in the Wiyaloki Island area bear fruit, using the Maramatana law as a template.*

Photo: USAID CTSP / Tory Read

*"Everyone wanted this law. It is valuable because it involves local people in protecting the environment themselves instead of government and NGOs doing all the work."*

— Simon Alberic, Provincial Legal Advisor

After a decade of work, a local government in Milne Bay, Papua New Guinea, has passed a law that recognizes community-based marine protected areas and makes it possible to prosecute poachers. Conservation International (CI), a partner in the six-country Coral Triangle Initiative on Coral Reefs, Food Security and Fisheries (CTI-CFF), worked closely with the government and communities to bring the law into being. Officials in the provincial government strongly support the landmark environmental law, adopted in 2012 by Maramatana District, and they are ready to work with other districts throughout the province to craft similar laws. "Everyone wanted this law," said Provincial Legal Advisor Simon Alberic. "It is valuable because it involves local people in protecting the environment themselves instead of government and NGOs doing all the work. In other cases, locals are left to be bystanders in their own back yards." The new law is a local building block supporting the goals of the CTI-CFF National Plan of Action.

The long legal drafting process involved multiple workshops and consultations with coastal and island communities and local government officials. In the end, Alberic was able to build on the work of other lawyers to draft a template law that includes language local people can understand and that other local governments can easily copy and adapt. "Other local governments are watching this closely, they want to use it in their own areas," said Alberic.

Deputy Provincial Governor James Rabini, who is also President of Maramatana District, was another key player in the process. He explained that he and CI have been working on the law for many years, and that support from USAID's Coral Triangle Support Program (CTSP) enabled them to take the work to the finish line. CTSP funded several different lawyers to review and refine the document, and CTSP supports ongoing CI community-level awareness programs to educate people about the value of this legal tool in protecting their natural resources.

Lindsay Alesana, the district administrator for Alotau and former area manager for Maramatana, has personally seen the deterioration of the fisheries, and he is particularly keen for marine resource protection throughout the province. "At the last gathering before we passed the law, representatives from around the province came to hear about the law, and they captured the message."

All three men singled out the positive cooperation between government and NGOs in this effort as an important factor, countering the common perception that these two must be antagonists. "In our local government, we don't have expertise in environment and marine resources," said Rabini. "CI provided that. Without CI, I don't think we'd have the law in place. We cannot do this kind of work alone." *Conservation International (CI) is the lead implementing partner for CTSP and the USCTI Support Program in Milne Bay, Papua New Guinea.*



# SUCCESS STORY

## On the Front Line of Climate Change

### **Coastal communities on Manus Island take action against rising seas**



*Community members of Lopahan show off mangrove shoots from their mangrove nursery that they are using to resist the encroaching lagoon*

Photo: USAID CTSP / Tory Read

*“We saw the downfall of the shore and very big erosion taking place and saw the effects of climate change, especially at the King Tide. So we decided to get along with the process for the good of future generations.”*

— Francis Tapo, Deputy Chairman, Lopahan CBO

When the sea is literally at your doorstep, you’re likely to focus on why this is happening and what to do about it. Three neighboring villages on Manus Island in Papua New Guinea—affected by coastal erosion and salt intrusion in their gardens and water sources—are facing this challenge with support from USAID’s Coral Triangle Support Partnership (CTSP) and the PNG national Coral Triangle Initiative for Coral Reefs, Fisheries, and Food Security’s (CTI-CFF).

The community of Lopahan, hard hit by sea-level rise and an unusual high tide event that flooded the village, reached out to CTSP for help. “We saw the downfall of the shore and very big erosion taking place and saw the effects of climate change, especially at the King Tide. So we decided to get along with the process for the good of future generations,” said Francis Tapo, deputy chairman of the Londra Community-Based Organization. Members of Londra (named from the two neighboring villages: Lopahan and Ndrakot) are writing a joint resource management plan addressing the problems sea level rise is creating in their communities. They received training to enhance their traditional conservation methods that is helping them adapt to the effects of climate change on their shores and water supply.

The people of Lopahan have jumped wholeheartedly into climate change adaptation activities. Forty-five young people are now tending mangrove seedlings and replanting deforested mangrove areas. Meanwhile, the women in the village are tackling food security issues using a variety of techniques, including atoll farming, planting new taro and sago, removing trash from mangrove areas to allow crabs and fish to flourish, composting sea grass and leaves to enrich the soil, and filling in flooded areas with household waste to create new garden land.

A national Learning and Training Network, one of the national activities mandated by and now supporting PNG’s National Plan of Action is offering training. Several community members previously trained now teach others and organize the activities. Chris Tapo heads the mangrove and sago efforts and has run three awareness trainings for area villages. He knows his stuff and shares his knowledge, and he has even drafted a proposal to fund the mangrove project. “If we don’t act now, it will be too late,” he explained.

All of these efforts are yielding positive results. Taro, sago, and garden vegetable supplies are increasing, fish and crab stocks are recovering, and erosion is slowing down. Neighboring villages of Ndrakot, and Powat are paying attention. Powat is adopting many of the same adaptation methods as Lopahan and seeking further training. Together, these three villages are helping Manus adapt to climate change-induced environmental problems and are increasing food security for their growing populations. *The Nature Conservancy is the lead implementing partner of USAID CTSP in Manus, Papua New Guinea.*



# SUCCESS STORY

## Women’s Work

### *For women on Manus Island, food security is personal*



One of the goals of the Women in Conservation committees in Manus is to increase clam production by improving the health of the mangrove stands.

Photo: USAID CTSP / Tory Read

*“My vision is that in five years, we have enough food to feed all our families.”*

– Roselyn Posing, Chairman, Powat WIC committee

It’s no surprise that women play a vital conservation role in communities around Manus Island, Papua New Guinea. They’re the first to know if there’s not enough food to feed their families. Recently, inshore fisheries and village gardens have not been producing enough for women to keep food on the table, so they’re expanding their traditional roles to help their families and their villages cope with the effects of growing populations and sea-level rise on food production. “We are doing this work to benefit our communities,” said Elizabeth Naron of Lopahan village. “We do not have enough food, so we must learn to produce more.” Elizabeth is the driving force for the Women in Conservation (WIC) group in her community on the northern coast of Manus. The Nature Conservancy (TNC), a partner in USAID’s Coral Triangle Support Partnership (CTSP), supports the group’s work. Papua New Guinea is a country member of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF).

In neighboring Powat, WIC Coordinator Jenny Songan said the women’s committee she organized there six months ago is “piloting women’s empowerment in Manus.” Twelve women—four officers plus one representing each Powat clan—meet once a month to discuss ideas, report on projects and discuss each clan’s needs. Together, the women make plans to overcome the

challenges of overharvesting their dietary staple sago, the decrease in cultivable land, and declining fish and shellfish takes.

The women of Lopahan, Powat, and other villages are busy with climate change adaptation activities they have learned about from TNC and from other villages via the Manus learning and training network (called MECCN), created with support from CTSP and the national Learning and Training Network (LTN), a project under PNG’s CTI-CFF National Plan of Action. Rising sea levels have increased flooding, filling formerly protected lagoons behind the villages with brackish water. The women are using a mix of household waste, shells, and coconut husks topped with soil and compost to create new gardening space near their homes. “When the northwest winds blow, the sea is rough, and we can’t reach our sago and taro gardens by the river,” said Clara Sak, secretary of Powat’s WIC committee. “We need more garden land close to the village.”

Sea water is also adding salt to village soils and groundwater, so the women are “atoll farming,” building rings around food-producing plants and trees and filling them with organic materials to create raised beds. To enhance fish nurseries and improve yields of mangrove crab, mussels, and clams, they clean existing mangrove stands, using the waste gathered as landfill in the reclamation project. And instead of burning leaves, the women are composting them with previously unused sea grass and waste from sago processing to turn trash into valuable compost. Many of the women also help the men raise and plant new mangrove seedlings to protect the shore and the boundary area between the lagoon and the village. “My vision is that in five years, we have enough food to feed all our families,” said Roselyn Posing, the Chairman of the Powat WIC committee. *TNC and WWF are the leading implementing partners of CTSP and USCTI Support Program in Manus.*



# SUCCESS STORY

## An Ecosystem Approach to Marine Conservation

### *Pere village in Manus adopts integrated resource management*



The community of Pere depends on the sea, and its people are applying EAFM principals to manage their resources.

Photo: USAID CTSP / Tory Read

*“When you want to look after the fish to increase populations, you also must look after the ecosystem, the mangroves and the reef.”*

— Piwen Langarap, Program Coordinator, MECCN

The island community of Pere in Papua New Guinea, separated from the main island of Manus by a narrow channel, is at the forefront of marine conservation and climate adaptation. The community is among the first in the country to apply the “ridges to reefs” concept promoted by The Nature Conservancy (TNC), a partner in USAID’s Coral Triangle Support Partnership (CTSP). Pere’s success is kindling a flame in other Manus communities and around the Bismarck Sea through CTSP and the six-country Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF).

The story starts in 1997, when provincial fisheries authorities visited Pere to raise awareness about the Live Reef Food Fish Trade’s exploitation of fish spawning sites. When Pere villagers understood the threat of these activities to their livelihoods, they created “no take” zones in key areas. In less than a year, local fishermen saw improvements in their catch, so they put more sites under management and created a locally-managed marine area. Pere wrote a marine resource management plan in 2006 to govern the LMMA. The local government that oversees Pere heard about the village’s success, and a year later, it adopted an Environment and Conservation Law that recognized the community’s right to manage its marine resources.

Meanwhile, local youths learned to monitor the reefs, and Pere worked through a long consultative process to create a village governance committee that everyone respected and followed. In 2010, CTSP funds supported new trainings in Pere on climate change and on the “ridges to reef” approach to conservation. As a result, community members realized that managing their fish was not enough. “When you want to look after the fish to increase populations, you also must look after the ecosystem, the mangroves and the reefs,” said Piwen Langarap, a Pere community member. “The people in the mountains must look after what they do, because what they do in the river ends up in our marine area.”

To make a broader plan that incorporates this Ecosystem Approach to Fisheries Management (EAFM), Pere took the lead to bring communities from up-river into its management and training process. Coastal villages routinely trade fish with inland neighbors for garden and forest crops. Once the inland people realized that their behavior directly affected the fish they depended on, the communities became partners in conservation. In 2013, Pere launched a new, integrated resource management plan that incorporates climate change, “ridges to reefs” and Marine Protected Areas—all designated as key conservation activities under PNG’s CTI-CFF National Plan of Action. And the National Fisheries Authority, part of PNG’s CTI-CFF National Coordinating Committee, pitched in by donating a fish aggregation device, or FAD, which takes the pressure off inshore reefs by luring pelagic fish and fishermen to the area around the device.

Pere’s multi-faceted approach is yielding noticeable results. Fish are spilling over from healthy “no take” zones into surrounding open areas. Mangroves and sago are coming back, and neighboring communities are learning what they can do to address their own issues. TNC is a lead implementing partner for CTSP and the USCTI Support Program in Papua New Guinea.



# SUCCESS STORY

## The Latest FAD in Papua New Guinea

### *Fish aggregation devices increase catch, relieve pressure on reefs*



Fishermen from Pere and surrounding communities gather each morning and evening around this FAD to catch fish for their families and to sell at the market.

Photo: USAID CTSP / Tory Read

*“Do not think about fisheries management only. Think outside the box. Focus on the big picture. We want to develop EAFM to practical status.”*

— Leban Gisawa, Inshore Fisheries manager, NFA

Papua New Guinea’s (PNG) National Fisheries Authority (NFA), a semi-autonomous agency of the government, has come up with a winner in marine conservation. With support from USAID’s Coral Triangle Support Partnership (CTSP), NFA developed an inexpensive Fish Aggregation Device (FAD) designed to attract both pelagic fish and local fisherman to offshore areas, reducing pressure on reefs. Under the guidance of Inshore Fisheries Manager Leban Gisawa, NFA has tested FADs at several sites and is deploying the devices in multiple coastal provinces.

What is a FAD? It is surprisingly simple: a large float anchored to the sea floor with old fishing nets dangling from it, placed in near-shore areas away from reefs. The nets grow algae almost immediately, attracting small reef fish. These small fish attract medium fish, and the pelagic species such as tuna and mackerel follow. At one test site near Pere Island in Manus Province, local fishermen reported catching 4000 fish in one day, using hand lines only. Results like these have drawn fishermen away from their over-used inshore reef areas, allowing these ecosystems to recover from years of hard use.

NFA deployed the first FAD in 2012 after completing two years of design, policy, and baseline survey work. Based on early positive results for local fisherman and reefs, NFA is deploying 20 new FADs around Manus Island, with plans for more throughout the maritime

provinces. Villages in Milne Bay and Manus, where CTSP partners are working on marine protection and climate change adaptation, are clamoring for more.

NFA is also working on other projects inspired by the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF). The FAD project is part of a larger CTI-CFF effort to apply an Ecosystems Approach to Fisheries Management (EAFM), and NFA, a member of the PNG CTI-CFF National Coordinating Committee, is also attempting to forge coherence in marine programs at the national, provincial, and local levels. To this end, NFA administrators have met with provincial fisheries leaders to determine their needs and set up a financing system for implementing Papua New Guinea’s CTI-CFF National Plan of Action at the provincial level. Gisawa told the provincial officials, “Do not think about fishery management only. Think outside the box. Focus on the big picture. We want to develop EAFM to practical status.”

Under the leadership of NFA, marine resource management policies, funding and practical local-level applications are coming together in Papua New Guinea with help from CTSP partners. The “fad” for FADs is a just one example of a simple marine conservation idea that is dramatically improving life and nature in coastal communities. *WWF, The Nature Conservancy (TNC) and Conservation International (CI) are the lead implementing partners for CTSP and the USCTI Support Program in Papua New Guinea.*



# SUCCESS STORY

## She's Her Own Boss

### *Tourism and marine conservation in a Milne Bay village*



Isabel O'Connor is the owner and operator of the ecotourism lodge in Divinai village in Milne Bay. She is implementing marine conservation with CI.

Photo: USAID CTSP / Tory Read

*“Even though I am starting small, I believe my work contributes to the whole picture of what everyone is doing in the Coral Triangle. Environment is very important, and I want to contribute to sustaining and preserving it. If we lose it, it is gone.”*

— Isabel O'Connor, Divinai Lodge Owner

Isabel O'Connor wanted to start a small lodge on her family's land in Divinai, a community less than an hour east of the Milne Bay provincial capital of Alotau in Papua New Guinea. She noticed that the beach in front of her land was eroding at a rapid rate, the water was dirty, the reef was deteriorated, and the fish were scarce.

When she heard about the success of the communities on Nuakata and other nearby islands in addressing similar issues as part of the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), she went to the Conservation International (CI) office in town to find out more. CI is a partner in USAID's Coral Triangle Support Partnership (CTSP).

Soon, with CI and CTSP support, she traveled to the capital city of Port Moresby for a Learning and Training Network (LTN) workshop on Community Managed Marine Areas. LTN is a national program that is an outgrowth of the country's National Plan of Action created as part of Papua New Guinea's participation in the six-nation CTI-CFF.

Back home, Isabel is applying the lessons she learned at the workshop, developing her lodge business and working to protect the marine resources around her village. Isabel, who earned a diploma in Tourism &

Hospitality from Divine Word University in Madang, has built an attractive three-bedroom lodge and set up a marketing system with hotels and tourist agencies in Alotau. At the same time, she has contracted to take full control of the marine resources on nearby Gahilame Island, and she's brought CI and CTSP in to do baseline surveys of reef and fish and to help her set up a monitoring program. "CI gave me a snorkel and flippers, and I go out there by the beach, I find interesting things," she said.

Isabel has even convinced the local government to add a conservation position to its development committee, which she hopes will help build local support for marine resource management. Most recently, Isabel has asked CI staff to teach her how to conduct workshops to increase understanding of marine resource conservation in the three villages in her area, and she is planning a visit to Nuakata Island to learn first-hand from what they are doing to manage their coastal resources. "I want to go there and see exactly what they have done, interview them," she said.

"Even though I am starting small, I believe my work contributes to the whole picture of what everyone is doing in the Coral Triangle," she added. "Environment is very important, and I want to contribute to sustaining and conserving it. If we lose it, it is all gone." She understands the issues and is excited about her role in addressing them locally and the positive effect her work will have on her livelihood, earned through resource-based ecotourism. *Conservation International is the lead implementing partner for CTSP and the USCTI Support Program in Milne Bay, Papua New Guinea.*



# SUCCESS STORY

## From Vision to Reality in Milne Bay

***Community members in Papua New Guinea monitor reefs and train others to do it, too***



Trainers from the Nuakata-Labam-Palele Marine Management Area pass along their knowledge of marine resource protection and monitoring to residents of Wiyaloki and neighboring islands.

Photo: USAID CTSP / Tory Read

*“In the next five to ten years, I want to see that when a community wants training, the guys we have worked with will be the ones to do it.”*

— Noel Wangunu, Conservation International

Distressed by reef and fish monitoring programs that failed to truly engage local communities and that relied on NGO staff to do the work, Noel Wangunu, a marine biologist, was sure there had to be a better way. Believing that the best hope for long-term monitoring continuity was to put communities in the driver’s seat, he worked through the Alotau office of Conservation International (CI), with support from USAID’s

Coral Triangle Support Partnership (CTSP) to create a program in 2009 that trains islanders to do their own monitoring. He found that once community members understand that reef monitoring benefits them, and the young adults see that volunteering as monitors gives them status, it isn’t difficult to create a self-sustaining monitoring system. His definition of success? “In the next five to ten years, I want to see that when a community wants training, the guys we have worked with will be the ones doing it,” taking CI out of the loop, he said.

Less than four years into the program, success is at their doorstep. The first training started with funding from CTSP, and more than 50 young people from Nuakata, Labam, and Palele Islands attended. Two workshops and many field trips and study sessions left only the strongest and most committed volunteers. Less than five months later the first monitoring of 16 stations was underway. Following 100-meter transects and recording what they saw every five meters,

the monitors counted and categorized corals, fishes, and invertebrates. They’ve done so every quarter since then.

Three star pupils—Joel Araea, Jameson Solipo, and Simeon Isaac—have volunteered to train monitors on other islands. They have also learned how to enter data from their monitoring activities into computer spreadsheets and interpret the results to share at village and government meetings. The three of them recently ran workshops for communities in the neighboring Bwanabwana district southeast of Nuakata, and monitoring has already begun there at 16 new sites with full local involvement. The new monitors are eager to spread their knowledge further. The value of scientific resource management, combined with traditional closure methods, is clear to the participants. Recently the National Fisheries Authority recognized their expertise by hiring them to conduct local sea cucumber surveys for the national database.

Nedson Isako, the chairman of the local community-based organization and one of the students at the first trainings, observed, “CI really helped us. They saw what we did not see, then showed us how to stop over-harvesting.” Now, he and others like him want to share this knowledge with other communities in Milne Bay and perhaps beyond through the Learning and Training Network process enabled under the country’s National Plan of Action created as part of the six-country Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF). *Conservation International is the lead implementing partner of CTSP and the USCTI Support Program in Milne Bay, PNG.*