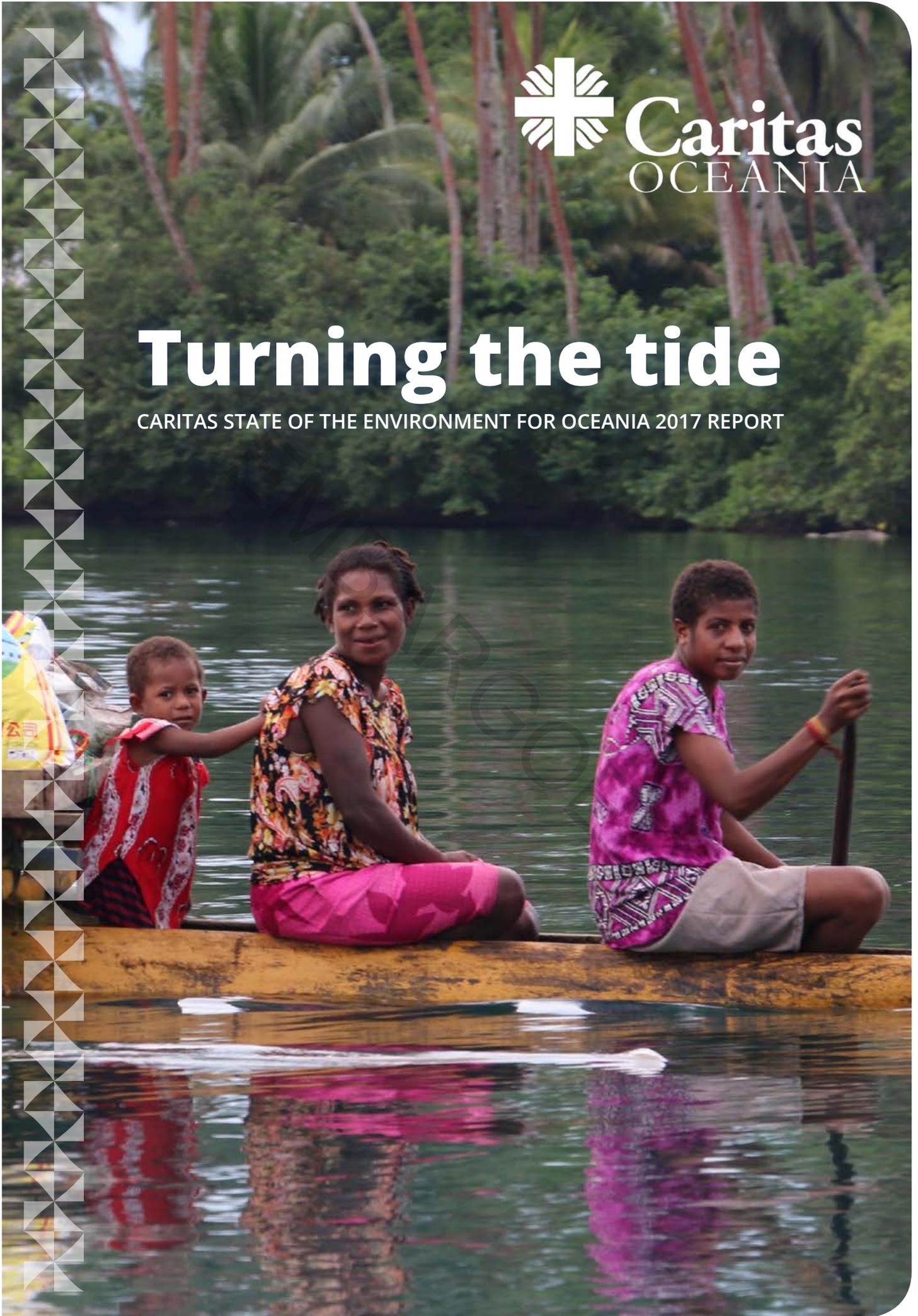




Turning the tide

CARITAS STATE OF THE ENVIRONMENT FOR OCEANIA 2017 REPORT





Caritas Kiribati Youth Group
planting mangroves to protect
their coastline in South Tarawa.

Turning the tide

CARITAS STATE OF THE ENVIRONMENT FOR OCEANIA 2017 REPORT

Our common ocean is teeming with life and goodness

EXECUTIVE COMMITTEE OF THE FEDERATION OF CATHOLIC BISHOPS
CONFERENCES OF OCEANIA (14 AUGUST 2017)

FEAST OF ST FRANCIS OF ASSISI
4 October 2017



Produced by Caritas Aotearoa New Zealand on behalf of Caritas Oceania members and the peoples of Oceania.



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About the Oceania environmental report series

The *State of the Environment for Oceania* report is a voice from Oceania highlighting what is happening to our common home, and the actions and responses required to protect it for the poor and future generations.

As far back as 2001, Pope John Paul II said to men and women of the Church, and all the lay faithful, in *Ecclesia in Oceania*, that it is the “special responsibility” of the governments and peoples of Oceania to protect our precious environment. We are “to assume on behalf of all humanity stewardship of the Pacific Ocean”, which contains over one half of the earth’s total supply of water and covers one third of the world’s surface.

In May 2015, Pope Francis reinforced Pope John Paul II’s call for everyone on the planet to undertake an “ecological conversion”. In his encyclical letter on care for our common home, *Laudato Si’*,¹ Pope Francis calls the whole human family to come together to advance sustainable development. “A true ecological approach...must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor.*”² To care for the earth is to express our concern for the common good, and for our neighbour, which is to say everyone on this planet.

Our purpose is to convey these messages to present and future generations. It is also to advocate for ways that all of us, governments, institutions and people, may put our love into action. One of our first actions is kaitiakitanga, guardianship, stewardship, care for Te Moana-nui-a-Kiwa, care for the Pacific Ocean. Many of our stories come from Te Moana-nui-a-Kiwa. We also follow how what happens beyond these borders affects us here at home, for everything is connected. Concern for the dignity of the human being means we must have concern for the world around us.

Since Caritas’ foundational report on voices from Oceania in 2014, we have shared our journey on each 4th October (the Feast Day of St Francis, the patron saint of ecology). By sharing our research and story-gathering, we seek to mobilise and amplify the voices of Oceania in solidarity with the lives and livelihoods of the most excluded, and the most vulnerable communities, as they face multiple environmental challenges, not least of all being those that result from the harmful impacts of climate change on the human environment.

In *Laudato Si’*, Pope Francis, throws down an urgent challenge to all of us. “Together”, he says, we have the ability to work tirelessly to make a difference: to hear and respond to both the earth and the poor. By protecting our common home, we protect that which we all share. Caritas Oceania has picked up this challenge for our region. We do so by tracking five key environmental issues: coastal erosion; coastal flooding and sea level rise; environmental impacts on food and water; extreme weather; offshore mining and drilling; and climate finance.

Caritas Aotearoa New Zealand publishes this year’s *State of the Environment for Oceania* report in collaboration with Caritas Tonga, Caritas Australia, Caritas Papua New Guinea and Caritas Samoa, and in association with our partners and networks across Oceania.

1 Pope Francis, *Laudato Si’*, May 2015.

2 Ibid.

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Caritas expresses our sincere appreciation for all the people and communities who feature in this year's *State of the Environment for Oceania* report – in photos, stories and other contributions. We are also grateful to those who assisted in any way, including those noted below:

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Caritas acknowledges the passing away during the year of Robert Frank, former Caritas Coordinator for Daru-Kiunga Diocese, Papua New Guinea, and contributor to both 2016 and 2017 reports.



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Taiwan TROPIC OF CANCER

Philippines

PHILIPPINE SEA

Northern Mariana Islands

Saipan

Guam

Marshall Islands

Federated States of Micronesia

Kolonia



ARCHBISHOP OF RABAUL, FRANCESCO PANFILO, PAPUA NEW GUINEA, FOR THE PEOPLE OF POMIO: *Where will we plant our gardens in the future?*



NENISA IBAK OF KARKAR ISLAND, PAPUA NEW GUINEA: *You are the ones who can stand up and fight against any developments that are not effective to our environment and communities.*

Banaba

Nauru

Indonesia



AHLWIN WILLIAM, PETATS ISLAND, PAPUA NEW GUINEA: *The sea is washing away and almost reaching our homes.*

Papua New Guinea

New Ireland

Carteret Islands

New Britain

Bougainville

Solomon Islands

Honiara

TORRES STRAIT

Port Moresby



ARCHBISHOP OF PORT MORESBY, CARDINAL SIR JOHN RIBAT, PAPUA NEW GUINEA: *It is vital we highlight the importance of our lives in association with the sea.*



GEORGE ALABENI, MALAITA, SOLOMON ISLANDS: *The sea is very hot sometimes...and it is not pleasant.*

Vanuatu

Port-Vila

New Caledonia

Noumea

Australia



MAYOR FRED GELA, TORRES STRAIT ISLANDS, AUSTRALIA: *It's almost like having your heart ripped out of your chest, because you are told you're not able to live on your land.*

Kingston
Norfolk Island

Canberra

TASMAN SEA



JULIANNE HICKEY, AOTEAROA NEW ZEALAND, ON SEABED MINING: *Going ahead could undermine the world's goals for the 2030 Sustainable Development Agenda.*

Aotearoa New Zealand

Dunedin

Turning the tide in Oceania 2016/2017: Voices from the edge

Hawaii



ASO IOAPO, TUVALU: *We miss all of our local foods, because in Tuvalu they really need the fish every day.*



BISHOP OF TARAWA & NAURU, PAUL MEA, KIRIBATI: *For me, the deep sea mining is an evil that should be never allowed to take place.*



CARITAS KIRIBATI YOUTH GROUP, KIRIBATI, ON EROSION AT BERU ISLAND, KIRIBATI: *Things changed and very quick.*



SIAFAFO MALO, SOLOSOLO, SAMOA: *I grew up in that house and now it is abandoned...falling to pieces.*



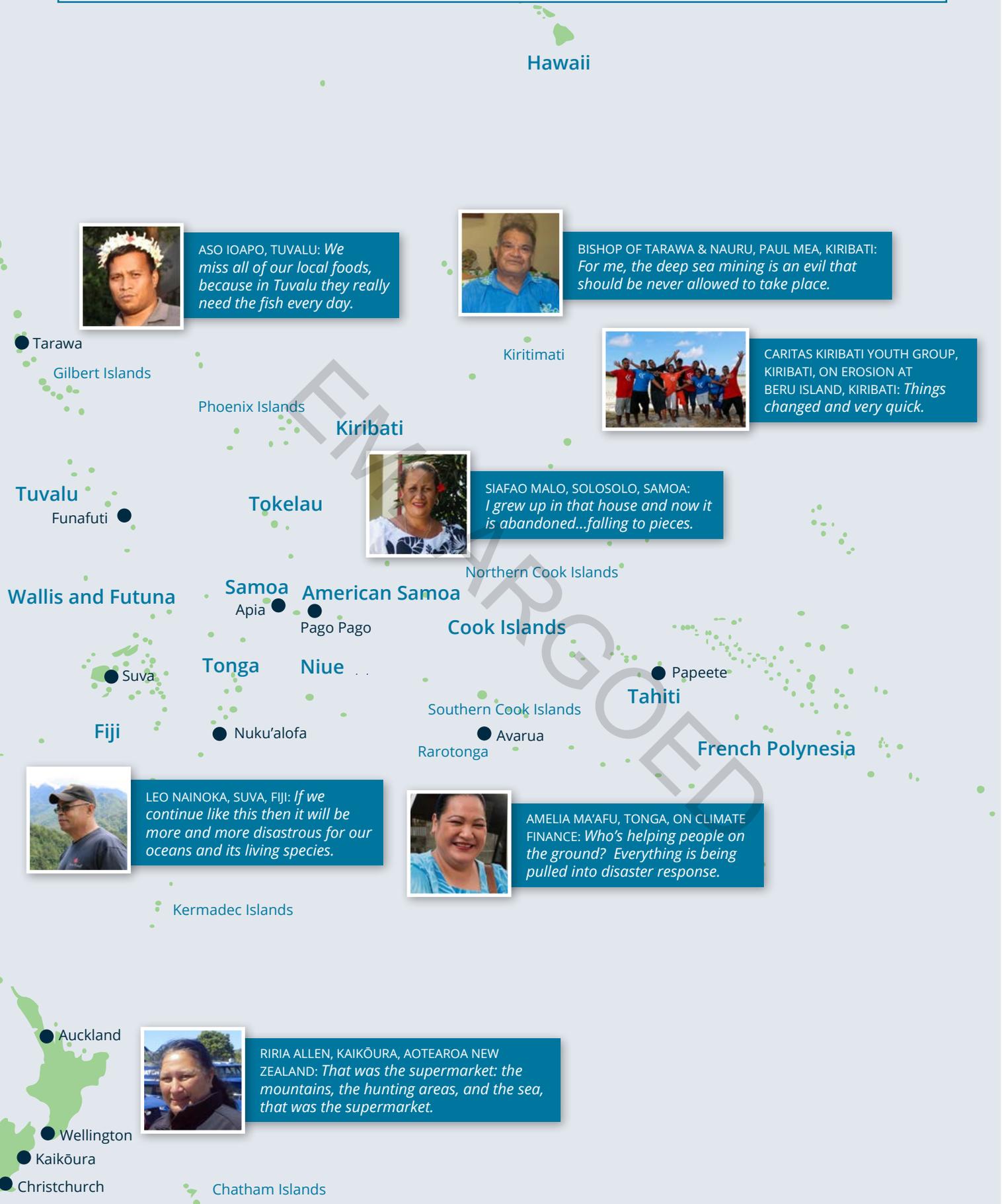
LEO NAINOKA, SUVA, FIJI: *If we continue like this then it will be more and more disastrous for our oceans and its living species.*



AMELIA MA'AFU, TONGA, ON CLIMATE FINANCE: *Who's helping people on the ground? Everything is being pulled into disaster response.*



RIRIA ALLEN, KAIKŌURA, AOTEAROA NEW ZEALAND: *That was the supermarket: the mountains, the hunting areas, and the sea, that was the supermarket.*





Introduction

This year's *State of the Environment for Oceania* report focuses on people's changing relationship with the seas that surround us, and how Oceania communities and governments are responding to today's environmental challenges.

Beneath the surface of the waves, the temperature, volume and chemistry of our oceans is changing. A major report by the International Union for Conservation of Nature said the world is 'completely unprepared' for the impact of warming oceans on marine life, ecosystems, and people. Ongoing sea level rise is displacing people from their homes, with seemingly little coordinated support or accurate assessment on how many people are affected in many places.

Caritas reports from Papua New Guinea show at least 30–35 coastal communities during the year had had people move away or lose homes due to worsening coastal erosion, while the Caritas Kiribati Youth Group continues to document the concerns about erosion, salination of water and loss of food on different Kiribati atolls, as well as help villagers adapt to change.

The year 2016 was the warmest year on record – the third consecutive year to break records.³ Record-breaking temperatures hit Australia in February 2017, while three extremely powerful late season cyclones impacted Vanuatu, New Caledonia and Australia.

People are still living with the impacts of earlier events such as cyclones Ian in Tonga 2014, Pam in 2015, and Winston in 2016. However, long-term resilience programmes have been put in place following such events, such as water tanks in Tonga and PNG, while recovery of older water sources or reservoirs has also played a role.

Offshore, the oil, gas and mineral exploitation continues with growing opposition from Indigenous groups and the Church in the Pacific. At the United Nations High-Level Political Forum in New York in July on the Sustainable Development Goals (SDGs), Caritas Oceania joined the Caritas Internationalis network to focus on progress towards SDG 14: to conserve and sustainably use the oceans, seas and marine resources on protecting our ocean ecosystems, promoting the positive examples of Marine Protection Areas, as well as the dangers posed by seabed mining.

At the United Nations Ocean Conference in June 2017, Cardinal Peter Turkson, Prefect of the Dicastery for Promoting Integral Human Development, said, "A more sustainable, productive use of marine resources must be encouraged at the global and local levels, while international and national regulatory norms must be robust to minimise harmful activities."

Striking the same note in our region, the Executive Committee of the Federation of Catholic Bishops Conferences of Oceania said in August 2017: "Members of Parliament and local Governors and other civic authorities have a particular duty to promote long term economic and social development and to be vigilant in guarding against any attempts by international businesses to exploit our common resource."

As we look forward to the next United Nations climate conference, COP 23, chaired by Fiji in Bonn, Germany; Caritas and the Catholic Church in Oceania stand alongside those who suffer hardest from our abuse of the Earth, of the good things God has given us in soil, water, air and ocean.

"A more sustainable, productive use of marine resources must be encouraged at the global and local levels"

CARDINAL PETER TURKSON

³ <https://www.ncdc.noaa.gov/sotc/global/201613>

Caritas assessment of environmental impacts

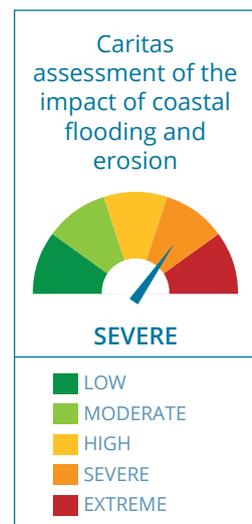
Below is the Caritas assessment of the impact on people and communities on the five issues Caritas is monitoring through our *State of the environment for Oceania* reports. Our assessment takes into account data and official reports where these are available and known, but is primarily based on the experiences and observations of people in the field (our staff, partners, the communities we work with, and Caritas associates across the region). It aims to reflect the impacts experienced by people at the grassroots and coastal edges of Oceania⁴ from July 2016 to June 2017 (2016/2017).

Coastal erosion, flooding and rising seas

The Caritas assessment for the overall impact on people of coastal erosion, coastal flooding and groundwater salination or rising water tables associated with relative sea-level rise moved from high to **severe** in 2016 and remains there in 2017. Our assessment is based on Caritas and partners' experience during the year. It takes into account:

- Numbers of people affected, for example: by relocation of houses or displacement to other centres;
- Loss of food or water sources; and
- Scale or frequency of disruption (for example: regular high tides that flood houses or surroundings).

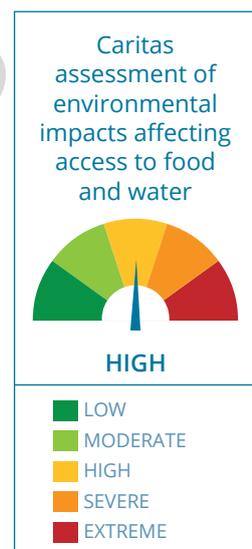
In 2016/2017 Caritas witnessed more evidence of widespread displacement and disruption of people in Oceania from longer term coastal flooding and sea level rise, especially around Papua New Guinea. There is little documentation of actual numbers of people affected, and wide variation in the level of assistance offered by central and local government. Other land use practices, such as deforestation – of mangroves and forests – are also contributing to coastal erosion and making some places more susceptible to flooding. There has been less obvious impact from king tides and storm surges, but the longer term implications of changes we are witnessing are severe.



Environmental factors affecting people's access to safe food and drinking water

This indicator relates primarily to environmental factors affecting access to safe and healthy, locally sourced food and water. The Caritas assessment for the overall impact on people of environmental factors affecting people's access to safe healthy food and drinking water was **high**, scaled back from severe in 2016. Our assessment, based on Caritas and partners' experience during the year, takes into account:

- Numbers of people affected by unsafe or inadequate food or water, for example: deaths, illness, loss of livelihoods, educational impacts, community and family stress
- Geographic spread
- Severity of immediate impacts
- Severity and length of time for ongoing impacts.



⁴ The region covered by the Federation of Catholic Bishops Conferences of Oceania, which includes most of the Pacific Islands (excluding Hawaii), Papua New Guinea, Solomon Islands, Australia and Aotearoa New Zealand. This is the definition of Oceania referred to in the report.

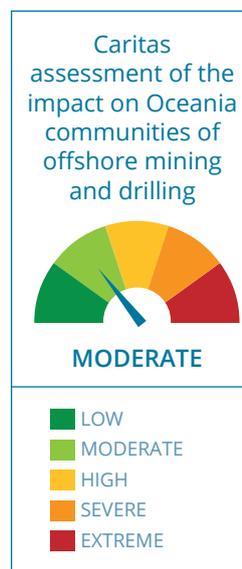
A changing ocean is already having an impact on fisheries, but some local fishing practices and land uses are also damaging the health of local food supplies on the coasts and inland. Our experience in 2016/2017 is that it is becoming increasingly difficult to maintain the health and integrity of these sources – especially after a disaster. The poor are most affected when local supplies are disrupted – they often cannot afford to buy food and water from other sources.

Offshore mining and drilling

Caritas assessment for the overall impact on people of offshore prospecting, exploration, and commercial exploitation of oil, gas and minerals remains at **moderate** for 2017. Our assessment, based on Caritas and partners' experience during the year, takes into account:

- Numbers of people and communities affected by offshore activities
- Impact on food sources
- Impact on traditional and cultural connection to the sea

Lack of consultation and respect given to coastal communities and Indigenous peoples most likely to be affected by offshore activities. Caritas and Oceania's Catholic Bishops continue to be encouraged by the strength of community opposition to seabed mining. Proposals for mining and legislation continue across the Pacific, with insufficient attention paid to the precautionary principle and full, prior and informed consent of local communities and Indigenous peoples. There is little consideration for what will happen and what kind of remedies are available if planned exploration/exploitation severely disrupts the environment. The ocean is a global commons. It belongs to us all; and we are all affected by changes in it.

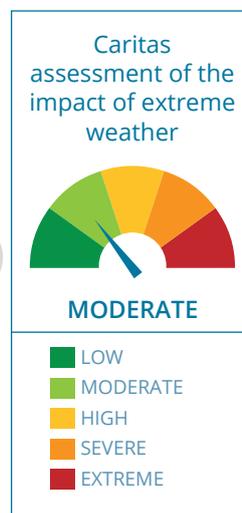


Extreme weather

The Caritas assessment of the overall impact on people of extreme weather events (for example: drought, heavy rain, floods, extreme winds, frosts) has moved to **moderate**, two down from severe this year. Our assessment, based on Caritas and partners' experience during the year, takes into account:

- Numbers of people affected, for example: deaths, illness, displacement, loss of livelihoods
- Geographic spread
- Severity of immediate impacts
- Severity and length of time for ongoing impacts.

Our assessment reflects the relatively 'quiet' year in most of the Pacific Island region. Oceania as a whole was less affected in 2016/2017 by extreme weather events compared to the previous two years, though vulnerability of poorer people to compounding effects was shown. Cyclones and other extreme weather caused significant damage to public infrastructure in Australia and Aotearoa New Zealand. Disaster preparation and planning in a number of places proved effective for the extreme weather events that did hit. Greater priority is still required to the most vulnerable communities and those in isolated areas, as well as better coordination and involvement of people at the grassroots.



Climate finance

The Caritas assessment for the overall impact on people of climate finance (for adaptation to climate change and mitigation of greenhouse gas emissions) is in three categories: quantity, quality, and support for the most vulnerable.

ASSESSMENT OF QUANTITY

There is an encouraging, significant rising tide of climate finance into the Pacific, particularly evident through the Green Climate Fund. However, relative to what is needed on an annual basis, Caritas considers overall levels remain **inadequate**. It will take time to see the impact of projects on the ground, but there is a clear indication that the number of climate finance pledges and commitment to support Oceania is increasing. This is a good sign. Albeit Aotearoa New Zealand, which could be playing a pivotal role in Oceania, still seems to be lagging and even reducing its commitments to the Pacific. There are lots of funders and mechanisms, but there has been difficulty getting accurate figures; and some obscurity about amounts at both the regional and national levels. We consider support to local communities is still below what is needed.

ASSESSMENT OF QUALITY

The Caritas assessment for the overall quality of finance (how well it supports inclusive, carbon-neutral development) remains **inadequate**. While Oceania has shown a deep commitment to *mitigation* (good progress in renewable energy programmes continue), more work is required on *adaptation*. Many island communities are having to adapt while others are making longer term migration plans, such as Fiji who is welcoming neighbours threatened by rising seas. Climate finance funds, such as the Green Climate Fund, are recognising the challenges given the increasing number of adaptation projects to support the Pacific.

SUPPORT FOR THE MOST VULNERABLE

The level and the degree to which climate finance offers tangible and practical support to the most vulnerable people affected by climate change is clearly **inadequate**. There is a strong focus on infrastructure and renewables at the expense of current adaptation needs and preparing to adapt in the future. We are still to see climate finance reaching the most vulnerable and a clearer link between climate finance, the oceans, sustainable development and poverty reduction. Many people around the Pacific face uncertainty – over the security of their local food and water sources, future weather, and the long-term viability of their homelands. There is a need for clarity and safe and secure options for the future.

Caritas
assessment of
climate finance –
quantity



INADEQUATE



Caritas
assessment of
climate finance –
quality



INADEQUATE



Caritas
assessment of
climate finance –
support for the
most vulnerable



INADEQUATE





Recommendations

Coastal erosion and sea level rise

- **The global community** must create legal protections for people who are forced to relocate internally or across borders because of climate change or other environmental degradation.
- **Oceania governments** should establish a Pacific Framework for Climate Mobility as called for by the 2016 Regional Civil Organisation Forum to allow for environmental migration with justice and dignity where required, in accordance with human rights.
- **An appropriate regional body** should oversee the mapping of specific communities and locations in Oceania currently affected, or likely to be affected within the next few decades, by coastal erosion or rising seas. This may come within the Pacific Framework above.
- **National, regional and local level governments** need to identify their populations most at risk from sea level rise. From that information, they need to identify options, then develop strategies and solutions with local communities. Greater coordination is needed between all levels of government.
- **We can all** become aware of the current impact and future threat of sea level rise on the most vulnerable communities in our localities and countries, and call for appropriate responses from local and central governments.

Food and water

- **Oceania governments** must take immediate steps to implement the United Nations' Sustainable Development Goals; in particular, Goals 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture), 6 (Ensure availability and sustainable management of water and sanitation for all), and 14 (Conserve and sustainably use the oceans, seas, and marine resources for sustainable development).
- **Oceania Governments and community organisations** must continue to work together to enhance food and water security for the most vulnerable, including encouragement of agricultural practices and crops that are resilient to extreme weather events; forward planning to preposition supplies and identify vulnerable populations; and effective distribution of food and water aid in times of emergency.
- **All Pacific Island governments** should prioritise development projects that ensure food and water security for vulnerable communities, especially where people are living with the impacts of climate change and extreme weather.
- **Australian and New Zealand official development assistance** should prioritise climate-resilient investments in agriculture, fisheries and water that directly assist Pacific communities to access sustainable local sources of food and water.
- **Governments, farmers, corporations and individuals** should adopt practices that avoid or minimise the use of inappropriate chemicals and fertilisers that are polluting our environment and entering the ocean.
- **We can all** become aware of where our food and water come from, and associated impacts of production and sourcing. Many of us could consider growing more of our own food, and supporting locally sourced food, rather than depend on imported, processed products.

Mining and drilling the ocean floor

- **The global community** needs to implement a moratorium on seabed mining and exploration until more is known about the impacts on ecosystems and communities.
- **Oceania governments and others implementing legislative frameworks** for seabed mining



need to ensure they give proper recognition to human and environmental rights. This should include free, prior and informed consent by affected communities; effective environmental impact statements; and appropriate remedies for damage.

- **Businesses** undertaking offshore prospecting activities in Oceania need to ensure they are adhering to the principles of corporate responsibility contained in the United Nations Global Compact, and the Guiding Principles for Businesses and Human Rights.
- **We can all** become better informed about plans for offshore oil and gas exploration and seabed mining in our own countries and throughout our region, monitor activities, share our concerns with decision-makers, and express solidarity with communities facing the most immediate challenges.

Responding to and preparing for extreme weather

- **Oceania governments** need to all endorse and fully implement the Strategy for Resilient Development in the Pacific (SRDP), and monitor and evaluate its progress in preparing communities for greater impacts of climate change.
- **Oceania governments and regional bodies** should establish a Regional Coordination Mechanism for Humanitarian Response to maximise regional support, and integrate community-based groups into both planning and response.
- **Government and non-government agencies** need to build resilience and preparedness for extreme weather events through programmes focusing on food security and small income generating projects.

Climate finance

- **Pacific island governments** should explore further opportunities for the private sector, civil society and philanthropic funds to be part of the National Climate Funds;
- **Donor countries and funders** should engage with local communities and increase climate finance for adaptation to the negative impacts of climate change while not threatening food production or livelihoods;
- In its chairing of COP 23, the **global community** (countries, NGOs, civil society) should support Fiji to advocate for:
 - Full implementation of the Paris Agreement and climate finance to “hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change”;
 - Making climate finance flows consistent with a pathway towards sustainable development and poverty reduction;
 - Participation of local communities and local civil society in decision-making;
 - Putting climate finance for loss and damage on the agenda;
 - Parties to commit to an integral ecological approach towards climate finance for mitigation, adaptation, and loss and damage that upholds social and cultural integrity while advancing livelihoods and providing for long preparedness.
 - Integral climate finance, which would include, for example, putting a halt to ocean acidification and seabed mining on the basis of the precautionary principle and the potential for disrupting marine ecosystems; removing fossil fuel subsidies; and imposing polluter-pays levies.



**Building a sea wall at Okaba village,
Merauke, West Papua in Indonesia.**

CARITAS



CARITAS INDICATOR

Our assessment of the impact of coastal flooding and erosion in Oceania

Read more on page 21

1 Move up or move out: difficult choices in the face of rising tides

We cannot adequately combat environmental degradation unless we attend to causes related to human and social degradation. ... rises in the sea level mainly affect impoverished coastal populations who have nowhere else to go. – Pope Francis, *Laudato Si'*, para 48

Coastal erosion and movement of people is happening more rapidly and more widely than previously thought – but the statistics are still not in. Some communities are responding through temporary measures such as sandbagging, building their own sea walls or moving to higher ground. Stories from Papua New Guinea and West Papua in Indonesia show Church and community doing what they can with limited resources. Examples from Samoa and the Torres Strait Islands in Australia show how longer term planning and harnessing of community resources seeks to help people face an uncertain future with hope.

Across the region – people on the move

WILHELM TAONG



Ahlwin William.

“The sea is washing away and almost reaching our homes even though we are creating local method of sea walls to protect our fronts. Yet it’s washed away by high tides or king tides which are experienced every year,”⁵ says Ahlwin William of Petats Island, north of Bougainville, **Papua New Guinea**.

This is just one of many offshore islands round Bougainville that is starting to see rapid coastal erosion, exacerbated by sea level rise. Together, the Petats, Taiof and Teop Islands are home to almost 9,000 people. They have experienced increasingly destructive king and high tides since the year 2000, according to the Diocesan Caritas Coordinator for Bougainville, Wilhelm Taong.

Women’s Representative and Community Leader for Taiof Island, Bridget Kotsia, says her home has faced slow-onset climate impacts since her grandparents’ day. But it is faster now: Taiof is “getting smaller” every day.

Tanga Island in Kavieng Diocese is another where higher wave heights and coastal erosion is impacting. “The coastline or seashore is now moving up to where the people’s houses had been located and people are building their houses further up, about 30 metres away from the seashore,” says Caritas Kavieng Coordinator Patrick Kitaun in a March 2017 report on the situation.⁶

“The coastline or seashore is now moving up to where the people’s houses had been located...”

PATRICK KITAUN

5 Wilhelm Taong Diocesan Caritas Coordinator for Bougainville, March 2017.

6 Patrick Kitaun: *Disaster Relief Management: Rising sea level in Tanga Island, New Ireland province*, 9 March 2017.

The low down on sea-level rise

- “Over the last century, the average sea level around the world has risen by about 20 centimetres. The Intergovernmental Panel on Climate Change (IPCC) expects it to rise about another 30 centimetres or so by the middle of the century and up to a metre by the end of the century.”⁷
 - “Rates of sea level rise, however, are not uniform across the globe and large regional differences have been detected including in the Indian Ocean and tropical Pacific, where in some parts rates have been significantly higher than the global average. In the tropical western Pacific, rates up to four times the global average (approximately 12 mm yr) have been reported between 1993 and 2009. These are generally thought to describe short-term variations associated with natural cyclic climate phenomena such as El Niño-Southern Oscillation (ENSO), which has a strong modulating effect on sea level variability.”⁸
 - “By 2100, levels could be 50–100 centimetres higher than now. Recent scientific studies say if some Antarctic ice sheets collapse more rapidly it could lead to 2–2.5 metre sea level rises by 2100.”⁹ “More than 2°C of global warming is very likely to lead to irreversible melting of the West Antarctic ice sheet, with major implications for global sea levels.”¹⁰
-

Since 2015 we have followed the ongoing migration of Carteret Islanders to mainland Bougainville. Ursula Rakova, Executive Director of the Carterets’ Tulele Peisa community organisation, has long advocated for greater assistance for small island communities in Papua New Guinea facing the long-term threat of sea level rise.

At the Caritas Papua New Guinea Forum in February 2017, Diocesan Caritas Coordinators identified that 12 out of 19 dioceses in Papua New Guinea had ongoing problems with coastal erosion or coastal flooding.¹¹ The Coordinators estimated 30–35 communities had been affected by coastal erosion and coastal flooding in the 2016/2017 year, and the total number of households affected was well over 2,000.

Since our foundational report, *Small yet strong: voices from Oceania on the environment* (2014), Caritas has related how people in Papua New Guinea have been struggling to hold back the sea. This year, Caritas found similar do-it-yourself initiatives in **West Papua** in **Indonesia**.

7 Parliamentary Commissioner for the Environment (NZ), *Changing Climate and Rising Seas: Understanding the Science*, November 2014, p 5.

8 IPCC, Fifth Assessment Report 2014, p 1619.

9 National Oceanic and Atmospheric Administration Technical Paper, February 2017.

10 NOAA Tech paper; DeConto, R. M., and D. Pollard, 2016: Contribution of Antarctica to past and future sea-level rise. *Nature*, 531, 591-597; Golledge, N. R., D. E. Kowalewski, T. R. Naish, R. H. Levy, C. J. Fogwill, and E. G. W. Gasson, 2015: The multi-millennial Antarctic commitment to future sea-level rise. *Nature*, 526, 421-425.

11 Survey of Diocesan Caritas Coordinators – Caritas Papua New Guinea Forum, February 2017.

Catholic Church supports Okaba village in West Papua, Indonesia to hold back the tide

Coastal erosion since the early 2000s at Okaba village in the Merauke Archdiocese, West Papua, Indonesia, has caused several houses and local shops to fall into the sea. The Okaba Catholic church sits a few metres from the ocean. In 2013, the community, Church agency SKP KAME and Malind tribal representatives met local parliamentarians with a video demonstrating their coastal erosion challenge, but little action was taken by the local government.

SKP KAME



Filling sandbags



The church behind its sea wall

In 2013, the Archdiocese of Merauke paid for sandbags which villagers filled – but it proved ineffective. After a September 2015 storm left leaving the church building exposed, the parish lined about 150 metres of the coast with wooden posts. These have worked better, but sand is starting to erode behind the posts – and the total length of the coast affected is about four kilometres long and threatens about 60 houses. Harry Woersok from Caritas Merauke says their next move is mangrove planting in front of the posts.

In **Kiribati**, the Caritas Youth Group has documented environmental changes on a number of islands, as noted in previous reports. In 2017, they visited Beru Island at Easter, where mangroves had died due to changing sea levels and higher sea temperatures. The building of a causeway between some of the islets had also impacted on the main lagoon. “Things changed and very quick,” the Youth Group reported. For five of the island’s eight villages, coastal erosion is a problem.

“Things
changed and
very quick”

CARITAS KIRIBATI
YOUTH GROUP

Malo and Levi face disrupted lives in Samoa's Solosolo

Muliagatele Siafao Malo and her family had to relocate from the coastal part of Solosolo due to constant floods. They still hold strong ties to the land of their ancestors, but this land is disappearing and that takes an enormous emotional toll on new generations. "I grew up in that house and now it is abandoned...falling to pieces," says Siafao.



Malo's old house.

CARITAS

Ioane Levi and his family of eight are among the few who remain along the coast at Solosolo. Their fale (house) is about 10 metres from the sea wall and their outdoor kitchen, with the traditional umu (cooking pit), less than 1.5 metres from the wall. Ioane's family makes panikeke (pancakes) at home and sells them in the capital, Apia. "There's a lot of waves often," Ioane explains. During high tide, strong waves flood their kitchen, putting both food security and their already weak financial stability at risk.

Most of the coastal families own land uphill but do not have the funds or resources to build new houses higher up.



Left: Ioane with two of his grandchildren. Above: Ioane's outdoor kitchen next to the sea wall.

CARITAS

Stories from **Samoa** and the Torres Strait Islands in **Australia** show more effective action in facing the challenge of sea level rise.

Sea level around Samoa has risen by about 4 millimetres per year (4 centimetres per decade) since 1993. It is expected to rise another 7–17 centimetres by 2030, relative to the 1986-2005 average level.¹² Solosolo, on the northeast coast of the main island of Upolu, is among many coastal villages facing more extreme storms and ongoing sea level rise.

Until a few decades ago, most of Solosolo’s population lived on a small peninsula extending out into the sea. However, now 60 percent of the village has relocated to higher ground above Vai Namo or moved abroad due to the higher seas, according to Karen Anaya, a Caritas Samoa researcher who lives in the village. A sea wall built in 2006 is slowly sinking, due to erosion hastened by sand mining and loss of mangroves.

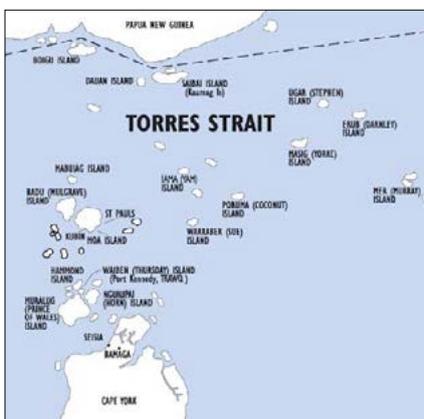
“It is vital to integrate local assessments with traditional knowledge,” says Karen. “Caritas is linking the community’s rich knowledge and inherent resilience with technical assessments and climate funding to guide adaptation efforts.” The Solosolo community is planning for an emergency shelter, construction of houses inland, introduction of new crops for income, and intends to plant mangroves along the coast.

“We are determined to ease the transition of these families and not only foresee, but also work together with the community to come up with solutions to their future hurdles,” says Karen. “Their future livelihoods depend on their ability to prepare and adapt to the reality of a changing climate.”

“It is vital to integrate local assessments with traditional knowledge”

KAREN ANAYA

Torres Strait Islanders bolster defences, prepare for relocation



Australia’s Torres Strait Islands lie between the mainland and Papua New Guinea. These small sand and coral islands are experiencing more coastal erosion and higher king tides, says Torres Strait Island Regional Council (TSIRC) Mayor Fred Gela.

Mayor Gela says the changing climate and sea levels are the major reasons for the significant increase in erosion and flooding. Mayor Gela says sand bagging and temporary sea walls have offered some protection, but scientific assessment of sea

level projections for the next 50-60 years has identified 15 island communities as at risk. Large 1.2 metre high sea walls with earth-bundling behind them are planned for the most at risk communities of Boigu, Poruma, Iama, Masig, Warraber and Mer Island to protect communities.

But some residents are still facing relocation. While communities have responded well to ideas about relocating to date, it’s hard to say goodbye to land that is your birthright, says Mayor Gela. “It’s almost like having your heart ripped out of your chest, because you are told you’re not able to live on your land. It’s been difficult to negotiate, but the resilience of many people has been amazing.”



Fred Gela.

“It’s almost like having your heart ripped out of your chest”

FRED GELA

12 Pacific Climate Change Science Program (PCCSP) http://www.pacificclimatechangescience.org/wp-content/uploads/2014/07/PACCSAP_CountryReports2014_Ch12Samoa_WEB_140710.pdf

Creeping coastline at Ha'apai, Tonga

Only the foundations remain for a beachside home Caritas has tracked since 2009 in Pangai, Lifuka in the Ha'apai island group of Tonga. Despite this, a new house (with different owners) has been built just beyond it. The first beachfront house was built in 2003, at that stage about 50 metres from the sea. The family moved out in 2011 after regular flooding, and eventually relocated inland in a land swap with the government. Such land swaps are quite common after disasters, says Caritas Tonga staff member Amelia Ma'afu, though she considers not a very robust option. "The procedure is very long and tedious, and may not be best or preferred by families concerned."

The area was affected by subsidence in a 2006 quake, now worsened by sea level rise and storm surges. Four options are being considered by the community for longer-term adaptation: relocation, building houses higher, sea walls, and/or beach restoration.

The Ha'apai group of islands is being considered for greater protection in Tonga's application to the Green Climate Fund for coastal adaptation.



June 2012



May 2014



May 2017: Foundations only



CARITAS INDICATOR

Our assessment of the impact of coastal flooding and erosion in Oceania

■ LOW ■ MODERATE ■ HIGH ■ SEVERE ■ EXTREME

Conclusion

In 2016/2017, Caritas partner communities have experienced less impact from king tides and storm surges compared to the preceding two years, due in part to fewer severe storms. However, we have seen increasing evidence of coastal erosion and sea level rise causing both local displacement and people moving further away. There is little documentation of actual numbers of people affected, and wide variation in the level of assistance being offered by central and local government.

Recommendations

- **The global community** must create legal protections for people who are forced to relocate internally or across borders because of climate change and other environmental degradation.
- **Oceania governments** should establish a Pacific Framework for Climate/Environmental Mobility as called for by the 2016 Regional Civil Organisation Forum to allow for environmental migration with justice and dignity where required, in accordance with humanitarian and human rights standards.
- **An appropriate regional body** should oversee the comprehensive mapping and documenting of specific communities and locations in Oceania affected by coastal erosion or rising seas. This would complement and support the Pacific Framework above.
- **National, regional and local governments** need to identify their populations most at risk from sea level rise. From that information, they need to identify options, then develop strategies and solutions with local communities. Greater coordination is needed between local, regional and national governments in all countries of Oceania.
- **We can all** become aware of the current impact and future threat of sea level rise on the most vulnerable communities in our localities and countries, and call for appropriate responses from local and central governments.

Ntara Baitai with her nephew at Teauraereke, Kiribati, in April 2017. The Caritas Kiribati Youth Group developed this garden which provides food and extra income.



CARITAS



CARITAS INDICATOR

Caritas assessment of environmental impacts affecting access to food and water in 2016

[Read more on page 29](#)

2 Safeguarding our food and drinking water sources

The violence present in our hearts...is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. – Pope Francis, *Laudato Si'*, para 2

Pacific Islanders are seeing the long-term impact of warming oceans on food and water supplies: Caritas partner communities are noticing fewer fish and fish that are making people sick. Oceans and coastal food sources are also being affected by extractive and unsustainable land use practices that flush mud, silt, chemicals and unwanted nutrients out into the sea. Drinking water is under stress.

“The sea is very hot sometimes...and it is not pleasant,” says George Alabeni from Airahu Rural Training Centre on Malaita, a Caritas partner in **Solomon Islands**. Older people have not seen it like this before. “The world is changing, everything is changing,” says George. “Before you just go down to the shore and might take fish and see a lot of seashells, crabs and the beauty of the sea; everything. Good temperature. There are birds all around the beach, very white beach.” Now seabirds’ coastal homes are being destroyed, and dead fish are washing up on shore. “We don’t expect it, and it’s new to us. We have never seen those things happening.”



CARITAS

George Alabeni.

World “completely unprepared” for changing oceans and ecosystems

The International Union for the Conservation of Nature says the world is “completely unprepared” for accelerating changes to food, ecosystems and human life that ocean warming is bringing about. The world’s oceans have absorbed more than 93 percent of human-induced global warming since the 1970s. “If the same amount of heat that has gone into the top 2000m of the ocean between 1955-2010 had gone into the lower 10km of the atmosphere, then the Earth would have seen a warming of 36°C,” said their September 2016 report.

Changing ocean temperatures are causing the ranges of many marine species to shift. Some planktons have moved up to 10 degrees latitude (around 1,110 kilometres), while some fish species are shifting tens or hundreds of kilometres each decade in search of suitable temperatures – with flow-on effects to entire ecosystems. Ocean warming is also increasing the spread of tropical disease in plants and animals, along with harmful algal blooms that can cause neurological diseases like ciguatera when humans eat affected fish.

Increased sea surface temperatures fuel storms, and at the same time, ocean warming weakens some marine ecosystems that shelter coastal communities from storms and erosion. The report calls for rapid and substantial cuts to greenhouse gas emissions to try to minimise harm to marine life.

13 International Union for the Conservation of Nature: Ocean warming: causes, scale, effects and consequences (Executive Summary), September 2016



Land use practices are also having an impact on the sea and coast. Clear-felling and oil palm plantations are forcing wild animals toward coastal areas and covering coastal reefs and corals with mud, says Tony Inikre, Caritas Coordinator for Vanimo Diocese in northwestern **Papua New Guinea**.

Elsewhere in Papua New Guinea, weather events are combining with large-scale resource extraction such as mining; oil and gas production; logging or oil palm production to damage local food sources. Diocesan Caritas Coordinators, at their annual Forum in February, almost all reported food and water supplies being affected by weather events and large scale resource extraction.

CARITAS



Doug Tennent.

The Catholic Church in East New Britain is fighting to protect food and water sources for the people of Pomio, where landowners were pressured to sublease land to a local subsidiary of a transnational forestry company for oil palm plantations. Landowners have lost subsistence gardening sites and access to water supplies. The Archbishop of Rabaul Francesco Panfilo, supported by Caritas volunteer Doug Tennent from Aotearoa New Zealand have petitioned and sought legal mediation for a fairer deal for landowners.

“Where will we plant our gardens in the future?”

THE PEOPLE OF POMIO, PAPUA NEW GUINEA

In a submission on Pomio, the Archdiocese said, “the majority of people living in the West Pomio area require land for gardening, to be able to access fresh water, fish and other food from the forest. ... They see the land being lost to oil production and the population growing. The question which gets continually raised is ‘where will we plant our gardens in the future?’”

Pollution of waterways and water sources from sprays was also contaminating drinking water and depleting fish life. The Archdiocese called for the company to install one new permanent water supply each year for villages in the project area.

However, the company has not been willing to negotiate and in July 2017 put pressure on the government to expel Doug Tennent temporarily from Papua New Guinea.

During Easter 2017, the Caritas **Kiribati** Youth Group documented local and global impacts on food and water supplies on Beru Island. Highly prized lakes at the northern end of the island produce edible algae suspended in muddy water at different depths. The algae are traditionally called ‘tebokaboka’ which means ‘mud’. Most favoured are the ‘red eyes of kings’ – ‘takarokaron mataia uea’ and the green ‘te makano’. The people of Beru treasure this food resource, but it is threatened by sea level rise, warmer ocean temperatures and erosion.

Villagers also said the loss of mangroves from changing oceanic levels and temperatures had led to fewer fish, while their salt resource was also declining due to changes in the dry season and coastal erosion.

A governmental report on **Aotearoa New Zealand’s** marine environment in 2016, said ocean acidification and ocean warming are the two most serious threats to the marine ecosystems and the commercial and recreational fishing and aquaculture they provide. But, at this stage, “the full implications of ocean warming for marine ecosystems are not clear”.¹⁴

14 Ministry for the Environment/ Statistics New Zealand: *Our Marine Environment 2016*.

Protecting drinking water supplies

Drinking water continues to be threatened by salination, pollution and contamination around Oceania.

A survey of women from Teitoiningaina (the Catholic Women's Association of **Kiribati**) in mid-2016 indicated six islands had reasonably good supply and quality of water, and six indicated problems such as inadequate supply, saltiness, or risk of contamination requiring water to be boiled before drinking.

A visit by Caritas Kiribati Youth Group to Tabiteuea Meang island in late 2016 found 10 of the island's 13 villages had salty or brackish groundwater, and recommended installation of rainwater tanks to help provide freshwater.

Drinking water quality and supply have caused a number of concerns in **Aotearoa New Zealand**. A campylobacter contamination in Havelock North in August 2016 was linked to three deaths, made 5,000 people ill, and sparked a government inquiry into drinking water infrastructure that has changed water care around the country.¹⁵ A report by New Zealand's Ministry for the Environment and Department of Statistics said 50 of 70 groundwater sites (71 percent) did not meet the drinking water standards for E.coli at least once, while 47 of 361 sites (13 percent) failed the drinking water standard for nitrate levels at least once.¹⁶



CARITAS

Terita collecting water in South Tarawa, Kiribati. This well is now contaminated, and only used for washing. The community now rely on rainwater collected in tanks.

Dynamiting for food and profit

CARITAS



Angela Tofe.

Though global changes are disrupting marine-based food, local behaviour is also affecting fish stocks and marine ecosystems. For example, in **Solomon Islands**, Angela Tofe from Langalanga Lagoon, south of Auki, lives with 300 other families on an artificial island built early last century.

To get more income, some local people are using dynamite to kill fish. "When people want to sell a lot of fish in the market, they use dynamite," she says, "because they can kill a lot of fish that way.... We have restrictions but not enforced. They can do blasts that don't make a noise you hear, so police can't pick it up." Blasting damages reefs and ecosystems, and kills off immature fish. As a result, there are fewer fish to catch by traditional methods.

15 New Zealand Herald, 10 May 2017; The DominionPost: "Napier chlorination to stay for 3 months", 27 July 2017; <http://www.radionz.co.nz/news/national/323594/tests-reveal-source-of-havelock-north-water-contamination>

16 Ministry for the Environment/Department of Statistics: *Our Fresh Water Environment 2017*, p 55.



CARTAS



Tony Raymond, a fisherman and teacher from Pele Island near Port Vila, Vanuatu. He says fish are getting smaller and the local reef is dying due to silt washed down from the highlands.

In **Fiji**, Leo Nainoka from Caritas partner Social Empowerment Education Programme (SEEP) foresees problems from farming chemicals and pesticides flowing into the sea. "If we continue like this then it will be more and more disastrous for our oceans and its living species – that will not be good for communities," he says. "Already certain types of fishes that never used to be poisonous are now poisonous. Earlier this year four people died in the island of Gau from fish poisoning. The fish they ate never used to be poisonous before." He says research is needed to find out the cause of poisoning – it could be ciguatera poisoning which arises from coral dieback, or "it may be from farm chemicals, from other stuffs like plastics, may be from toxins from mining".

"Already certain types of fishes that never used to be poisonous are now poisonous."

LEO NAINOKIA, FIJI

SEEP is supporting communities to keep sustainable, traditional fishing practices, such as placing taboos on certain fishing grounds for a certain period of time. "For example, in the community of Nakoroni in the village of Delakado, there are taboos for certain creeks and upstream rivers earmarked for their Slow Food Day in August. According to the community members, if you go in deep to these pools and creeks you will encounter huge number of prawns."



CARTAS

A fish market in South Tarawa, Kiribati.

Sustainable fishing practices are also practiced through Fiji's locally managed marine area network – now covering 2,765,000 hectares and 466 local villages.¹⁷ In July 2017, Caritas Aotearoa New Zealand Director Julianne Hickey highlighted the role of Marine Protection Areas in contributing to sustainable use practices in the region at the United Nations High-Level Political Forum on the Sustainable Development Goals.

17 United Nations Development Programme: Making Waves: Community Solutions, Sustainable Oceans, June 2017, p 47.

Kaikōura earthquake disrupts local food supplies

It was the animals that sensed it first. “You better go and attend to your cows – they’re going crazy,” Jaana Kahu’s dad told her – then they felt the 7.8 magnitude just past midnight on 14 November near Kaikōura, **Aotearoa New Zealand**. The quake killed two people, damaged many homes and cut transport links to the coastal tourist town on the South Island’s east coast. The main road and rail link north of the town was still being cleared at time of writing.

The seabed in the area rose 2–4 metres in places. While protecting the town from medium-term sea level rise, it also destroyed shellfish beds and disrupted other marine life. A ban on gathering shellfish and seaweed in the area most affected was extended to 20 November 2017 to allow coastal life to recover, particularly the lucrative pāua (abalone) industry. Further restrictions are possible.

CARITAS



Riria Allen.

Riria Allen, Manager of Caritas partner Te Tai o Marokura in the town, says poverty was a bigger issue in winter, and by mid-July 2017 the number of families accessing food parcels for that time of year was up. Recipients were all families that would normally access wild foods, especially kaimoana (seafood). Many locals rely on kaimoana and wild inland food for sustenance as well as extra income. Land-based wildfoods, such as wild pig and venison, were also harder to access, due to dammed rivers and streams.

“That was the supermarket: the mountains, the hunting areas, and the sea, that was the supermarket. I don’t think I know any family that haven’t used that as a resource for food,” says Riria.



A pāua bank left high and dry by the earthquake.

JAANA KAHAU

Natural disaster has also contributed to changes in diet in **Tuvalu**. According to climate justice advocate Aso loapo, most crops were damaged by storm surges and flooding from cyclone Pam in 2015. “Now it’s very hard for people in Tuvalu to replant their food crops. Since the cyclone they have had to use more imported food, from stores, including chicken, meat, because our food was destroyed in the cyclone.”

“Imported food is very new for us in our lives...we miss all of our local foods, because in Tuvalu they really need the fish every day...you have breakfast, morning, lunch and dinner with the fish.”

Restoring Porirua Harbour and environs

Last year, Matt Crawshaw was helping build a concrete sea wall round Fenua Fala village in Tokelau. Now he's back home in **Aotearoa New Zealand** working with his family, local community and Porirua City Council to enhance the environment at Bothamley Park – part of a water catchment flowing into Porirua Harbour near Wellington. The Council has assisted with fruit tree and riparian planting to protect the waterway. A blackberry patch has been retained as a local food source.

The Bothamley Park stream is among several monitored annually by the Porirua Harbour and Catchment Community Trust for environmental health. Their report for the year ending December 2016 says, "While the stream that flows through Bothamley Park is not part of the [regional council] monitoring programme it is clear that the water quality of all streams in the Porirua Catchment continue to decline." The report also rated the overall ecological health of the harbour as "Fair to Good" (3-4 on a 1-5 scale from Very Poor to Very Good).

Trust chairperson Grant Baker says the harbour is probably healthier than it was 30 years ago, but heavy industrial metals such as lead, copper and zinc linger in parts of the harbour floor; and increased urbanisation is adding extra pressure again.

However, the Trust's 2016 report says there is "a strong, coordinated and increasing commitment from councils and agencies for the harbour strategy programme", and Grant says there are many good examples of the restoration of polluted waterways. "If they're left to their own devices, they can repair themselves."



SHONA SHEARER

The Crawshaw and Shearer families plant a magnolia tree to symbolise their vision for Bothamley Park as a "beating heart" for Porirua City, where children and young people can join with their elders to share in the kaitiakitanga (care and guardianship) of their "combined back yard".

Whanganui river recognition provides hope

A growing understanding of our relationship to waterways and nature is signalled by the legal recognition of the Whanganui River in Aotearoa New Zealand as a 'person', and the establishment of a formal partnership of care between local iwi (tribes) and the New Zealand government.¹⁸

CARITAS



Sr Makareta Tawaroa.

In Caritas' foundational 2014 environment report, Sister of St Joseph Sr Makareta Tawaroa of Ngā Paerangi on the Whanganui River shared how the River had sustained her people through food gardens and eels. Today she says: "Our communities from the mountain to the sea remain concerned about nitrates and other toxins from farming, logging and tanneries affecting drinking water and traditional food sources. But now, we are cautiously hopeful that the river will once again become a source of life to our people."

As the whakataukī associated with Whanganui iwi Te Āti Haunui-a-Pāpārangi says: "Ko au te awa. Ko te awa ko au – I am the river and the river is me".

¹⁸ http://www.nzherald.co.nz/wanganui-chronicle/news/article.cfm?c_id=1503426&objectid=11818858.



CARITAS INDICATOR

Our assessment of the overall environmental impacts affecting people's access to safe, healthy food and water in Oceania

■ LOW
 ■ MODERATE
 ■ HIGH
 ■ SEVERE
 ■ EXTREME

Conclusion

A changing ocean is already having an impact on fisheries, but some local fishing practices and land uses are also damaging the health of local food supplies on the coasts and inland. Many people in Oceania rely on or enjoy locally sourced food and drinking water supplies. Our experience in 2016/2017 is that it is becoming increasingly difficult to maintain the health and integrity of these sources – especially after a disaster. The poor are most affected when local supplies are disrupted; they often cannot afford to buy food and water from other sources. Water scarcity continues as a serious slow-onset problem throughout Oceania. With the need for preparedness to face disaster response, the Pacific can never have enough drinkable water.

As with the human body, so with our common home, our Mother Earth: Prevention is better than cure. Maintaining good health is better, cheaper and easier than cleaning up or trying to fix things after damage has been done. Energy and investment needs to go into protecting our natural food and water sources – for the sake of the planet, for ourselves, and especially for our mokopuna – our future generations.

Recommendations

- **Oceania governments** must take immediate steps to implement the United Nations' Sustainable Development Goals; in particular, Goals 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture), 6 (Ensure availability and sustainable management of water and sanitation for all), and 14 (Conserve and sustainably use the oceans, seas, and marine resources for sustainable development).
- **Oceania Governments and community organisations** must continue to work together to enhance food and water security for the most vulnerable, including encouragement of agricultural practices and crops that are resilient to extreme weather events; forward planning to preposition supplies and identify vulnerable populations; and effective distribution of food and water aid in times of emergency.
- **All Pacific Island governments** should prioritise development projects that ensure food and water security for vulnerable communities, especially where people are living with the impacts of climate change and extreme weather.
- **Australian and New Zealand official development assistance** should prioritise climate-resilient investments in agriculture, fisheries and water that directly assist Pacific communities to access sustainable local sources of food and water.
- **Governments, farmers, corporations and individuals** should adopt practices that avoid or minimise the use of artificial chemicals and fertilisers that are polluting our environment and entering the ocean.
- **We can all** become aware of where our food and water come from, and associated impacts of production and sourcing. We may need to take steps to grow more of our own food, and support locally sourced food, rather than depend on imported foods.

Joseph Avon Liko from Mioko, Duke of York Islands, East New Britain, Papua New Guinea. As part of the Ririvon Contemporary Cultural Group, he is showing through song, dance and theatre the threat of seabed mining to his people's lives and livelihoods.



NATALIE LOWREY/DEEP SEA MINING CAMPAIGN.



CARITAS INDICATOR

Our assessment of the impact on people and communities of offshore mining and drilling in Oceania

Read more on page 37

3 Mounting opposition to mining the sea floor

We are heartened to learn of the systematic and coordinated opposition to seabed mining which turns the ocean floor into a stage of exploitative destruction of ocean habitats. – Executive Committee of the Federation of Catholic Bishops Conferences of Oceania, August 2017

Seabed mining is a deep concern to many throughout the Pacific, as community leaders, including Catholic Bishops, raise their voice in Papua New Guinea, Kiribati and elsewhere. Plans proceed for the world's first commercial deep sea mine in Papua New Guinea, while Aotearoa New Zealand approves its first seabed mining project – for ironsands. New exploration agreements are made around the Cook Islands and in Pacific international waters. Grasping hands are reaching deep for gold, but is the tide turning in favour of the people?

In April 2017, newly appointed Cardinal for **Papua New Guinea**, Sir John Ribat, called on all Pacific governments to ban seabed mining. “The ocean is home to people living around coastal areas and islands,” he says, “And that is why it is vital we highlight the importance of our lives in association with the sea.... We also don't know how long it will take for the ocean to heal itself after the destruction the seabed mining will cause.”¹⁹

He was giving renewed impetus to the community and Church voices being raised against seabed mining all around the Pacific, and documented in earlier Caritas State of the Environment for Oceania reports. These have raised concerns about the impact on communities of on-shore mining, near-shore mining, and deep sea mining as well as offshore oil and gas exploitation and exploration. But what's so special about seabed mining – especially in the deep sea?

“It is vital we highlight the importance of our lives in association with the sea.”

CARDINAL SIR JOHN RIBAT, PAPUA NEW GUINEA

An introduction to seabed mining

Seabed mining is mining that takes place on the sea floor. The ventures in deeper parts of the ocean are causing great concern because less is known about the ecology at greater depths. Some Pacific civil society groups have labelled deeper ventures “experimental sea bed mining”, because such mining has not taken place anywhere else in the world.²⁰

In deep sea environments, potential mining interests are interested in three different types of mineral-rich environments: mineral nodules, cobalt-rich crusts, and seafloor massive sulphides (SMS) which provide the richest and most diverse underwater mineral deposits. Large black deposits containing gold, silver, zinc, copper and other minerals form around hydrothermal vents – underwater springs where tectonic plates are pulling apart. Both active and inactive vents are of interest, and both are also home to rich, diverse and often unknown ecosystems.²¹

Coastal communities are concerned about impacts on their shorelines, food sources and livelihoods.

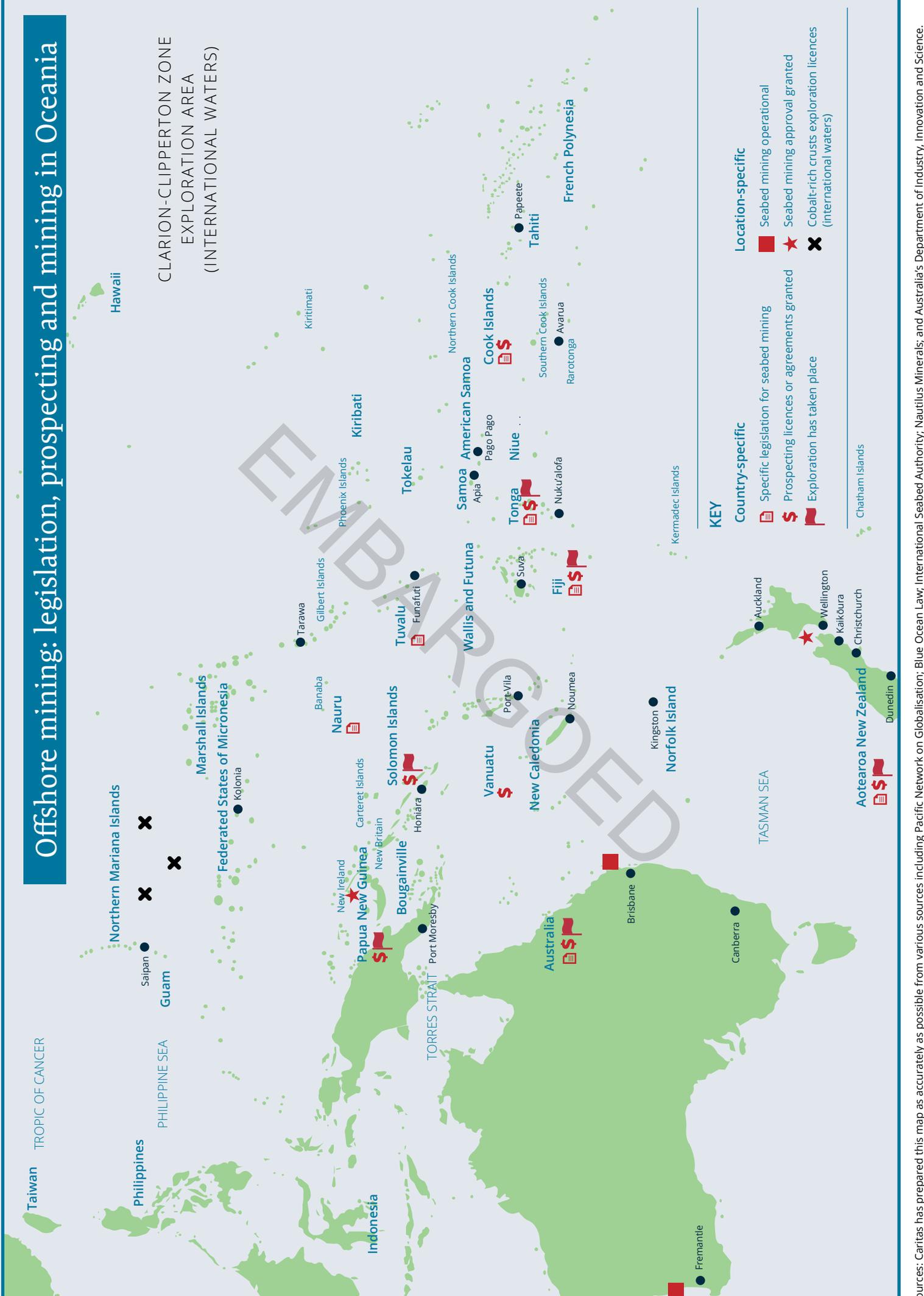
¹⁹ Naomi Wise (11 April, 2017), “Ban seabed mining, says Cardinal” in The National aka The Loggers Times at <https://ramumine.wordpress.com/2017/04/11/ban-seabed-mining-says-cardinal/>

²⁰ <http://www.radionz.co.nz/international/programmes/delinepacific/audio/201765680/pacific-civil-society-wants-stop-to-seabed-mining>

²¹ Dr Tina Hunter and Madeline Taylor: *Deep Sea Bed Mining in the South Pacific: A background paper*. Centre for International Minerals and Energy Law, The University of Queensland, 2014.

Offshore mining: legislation, prospecting and mining in Oceania

CLARION-CLIPPERTON ZONE
EXPLORATION AREA
(INTERNATIONAL WATERS)



KEY

Country-specific

-  Specific legislation for seabed mining
-  Prospecting licences or agreements granted
-  Exploration has taken place

Location-specific

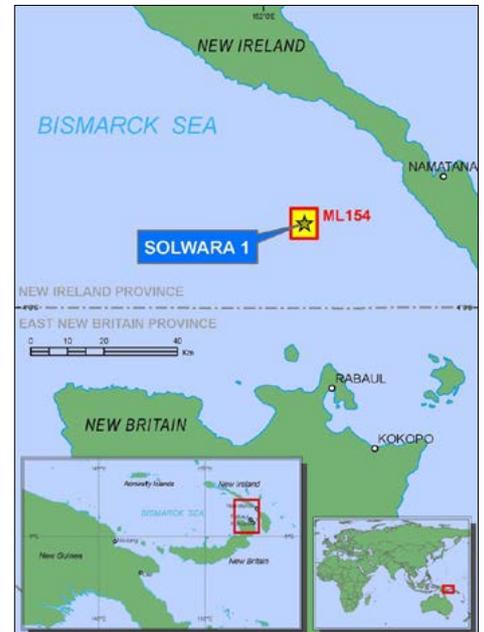
-  Seabed mining operational
-  Seabed mining approval granted
-  Cobalt-rich crusts exploration licences (international waters)

Pacific round-up on seabed mining: What's been happening?

The world's first commercial deep seabed mine, Solwara 1 – a joint venture between Canadian-based Nautilus Minerals and the **Papua New Guinea** government – has been rescheduled to begin operation in the Bismarck Sea between New Britain and New Ireland, Papua New Guinea, in early 2019. Nautilus has delivered some planned machinery to Port Moresby for testing the operation of their machines underwater.

The mine will extract gold, silver and copper from the sea floor. However, Nautilus Minerals confirmed at its Annual General Meeting in June 2017 that the project is a “high” and “significant” risk in financial terms.²² Earlier financial statements said it did not intend to complete a preliminary economic assessment, or a pre-feasibility or feasibility study, before completing first deployment of its Seafloor Production System at the Solwara 1 Project.²³

In February 2017, Caritas Diocesan Coordinators at the Caritas Papua New Guinea forum at Madang called on the Papua New Guinea Government to ban experimental seabed mining. They said Nautilus Minerals had not demonstrated that Solwara 1 was either environmentally sustainable or commercially viable. In addition, the Environmental Impact Statement was not available to stakeholders, and local communities had not given consent.



Location of Solwara 1 site in relation to New Ireland and New Britain.²⁴

Catholic Church cautious on Kiribati government approach



Bishop Paul Mea.

The **Kiribati** government is still considering proposed new legislation and policy on seabed mining and exploration. Catholic Bishop Paul Mea of Tarawa is adamant that no seabed mining should take place around Kiribati:

“Our government has not yet allowed mining to be done in our waters. What the government has allowed is the deep sea mining research. We are happy that our government is taking a precautionary principle as its guiding line. However, when it comes to allowing deep sea mining, then I think it is going to be the time for

the churches to react....Kiribati does not need deep sea mining to be done in our waters, because we don't need those minerals....

“The life in the sea is interconnected, and once you destroy one part, say the reef, you will affect the whole life of the sea including the fish. For me, the deep sea mining is an evil that should be never allowed to take place.”

“...the deep sea mining is an evil that should be never allowed to take place”

BISHOP PAUL MEA,
KIRIBATI

22 http://www.deepseaminingoutofourdepth.org/nautilus-agm-solwara-1-deep-sea-mining-venture-remains-a-speculative-pipe-dream/?utm_source=Ban+Experimental+Deep+Sea+Mining&utm_campaign=2f7b10a4f5-EMAIL_CAMPAIGN_2017_06_29&utm_medium=email&utm_term=0_c4419d759e-2f7b10a4f5-227378717.

23 Nautilus Minerals, 17 March, 2016: *Annual Information Form for the Fiscal Year Ended December 31, 2015*, p 52.

24 <http://www.nautilusminerals.com/irm/content/png.aspx?RID=258>.

“Ban seabed mining” loud and clear from PNG

The Catholic Church in the places that have most to lose from Solwara 1 project has supported the local community against seabed mining. The Diocese of Kavieng on New Ireland held an open forum on seabed mining on World Oceans Day, to inform people about the Solwara 1 seabed mining project. It was held in partnership with the West Coast Development Foundation, with support from Caritas Aotearoa New Zealand. Across the water in East New Britain, Archbishop of Rabaul Francesco Panfilo also hosted a seabed mining forum attended by about 250 people.

Kavieng Diocesan Caritas Coordinator Patrick Kitaun says, “The deep sea is a place of myth and mystery, filled with weird and wonderful life forms, and vital to the survival of our planet. But now, this mostly unknown world is facing large-scale industrial exploitation.”

He says the Catholic Church in **Papua New Guinea** and elsewhere in the Pacific is concerned about the impact of seabed mining on nature and on people living near the coast. “Where the full impacts of new environmental activities are unknown, the precautionary principle and protection of the environment must take priority.”

Ms Nenisa Ibak from Karkar Island challenged those present: “You New Irelanders, you are the ones who can stand up and fight against any developments that are not effective to our environment and communities.”



Participants at the Diocese of Kavieng's open forum on seabed mining.

NATALIE LOWREY/DEEP SEA MINING CAMPAIGN

Aotearoa: Offshore iron sands mining proposal

Caritas Aotearoa New Zealand along with local iwi were deeply disappointed at New Zealand's Environmental Protection Authority (EPA) granting a 35-year marine consent to Trans-Tasman Resources Limited (TTR) to mine ironsands 36 kilometres offshore from South Taranaki in **Aotearoa New Zealand**. The split decision came three years after an earlier application by TTR was rejected by the EPA, a decision Caritas said was a good exercise of the precautionary principle – that where potential adverse effects are not fully understood, activities should not proceed.

Commenting on the 2017 decision, Caritas Aotearoa New Zealand said the EPA's consent did not appropriately consider the impact on people, communities, and values essential to an integral ecology. In caring for our common home, everything is interconnected. There had been no "authentic encounter" with iwi in consultation about the application, and face to face dialogue with appropriate tikanga (protocol) was yet to take place.

Caritas Aotearoa New Zealand Director Julianne Hickey said, "Going ahead could undermine the world's goals for the 2030 Sustainable Development Agenda that New Zealand has signed up to." Sustainable Development Goal 14 is about conserving and sustainably using the oceans, seas and marine resources – this is threatened by seabed mining.

"It is not credible to talk about so-called 'best-practice' regulatory regimes in the Oceania region."

JULIANNE HICKEY

Other exploratory moves

In addition to its Papua New Guinea venture, Nautilus Minerals has also conducted exploration around **Tonga, Solomon Islands** and **Fiji**, and has exploration licences for **Vanuatu** and **Aotearoa New Zealand**.

Nautilus Minerals told Caritas Tonga in mid-2017 that they are still in exploration phase, but no exploratory drilling has yet taken place.²⁵ The Chair for Ha'apai's Caritas Committee, Sailosi Alofi, says marine protection areas act not only as restoration areas for fish and marine life, but as a way to keep seabed miners from harming ocean ecosystems.

In September 2016, the **Cook Islands** government granted exclusive access for 12,000 square km of its seabed to United States company Ocean Minerals to explore for minerals, as well as first-option on other high-value areas of the seabed.²⁶ According to Pacific Islands Report, Cook Islands Seabed Minerals Authority Commissioner Paul Lynch said Ocean Minerals was primarily seeking rare earth elements used in day-to-day electronic devices and military equipment. He said the United States Department of Defence had granted almost a million dollars to Ocean Minerals to seek new sources for rare earth elements.²⁷

Additionally, *Cook Island News* reported that a "joint venture agreement" was signed with the Belgian company GSR to explore and utilise the Cook Islands seabed minerals.²⁸

Caritas took Oceania's concerns about seabed mining to the United Nations High-Level Political Forum on the Sustainable Development Goals (SDGs) in July 2017. On behalf of Caritas Oceania, Julianne Hickey called for an immediate halt to all deep-sea mining. "The technology involved is in its infancy and it is not credible to talk about so-called 'best-practice' regulatory regimes in the Oceania region. The fact is that many of the countries in which multinational mining corporations are seeking licenses do not have established regulatory scrutiny of such activities."

25 Amelia Ma'afu, 2 August 2017.

26 Ocean Minerals – Media Release: September 9, 2016. (At <https://www.oceanmineralsllc.com/news>).

27 Pacific Islands News: "Cook Islands Earns More Than \$62,000 From Deep Sea Minerals Agreement" 15 May, 2017. At <http://www.pireport.org/articles/2017/05/15/cook-islands-earns-more-62000-deep-sea-minerals-agreement>.

28 <http://www.radionz.co.nz/international/pacific-news/314512/us-company-to-explore-cook-islands-seabed-for-minerals>.

Seabed licences in Pacific international waters

The Caritas *State of the Environment for Oceania* report for 2015 noted 15 seabed mineral prospecting licences had been granted by the International Seabed Authority (ISA), the United Nations body charged with monitoring and licensing seabed exploration and mining in international waters. Since then, a further four licences have been granted:

| Contractor | Contract signed | Contract expires | Sponsoring state(s) | Area (km ²) |
|--|-----------------|------------------|--|-------------------------|
| Licenses for polymetallic manganese nodules in the Clarion-Clipperton Fracture Zone, northeast Pacific | | | | |
| China Minmetals Corporation | 12 May 2017 | 11 May 2032 | China | 75000 |
| UK Seabed Resources Ltd | 29 March 2016 | 28 March 2031 | United Kingdom of Great Britain and Northern Ireland | 75000 |
| Cook Islands Investment Corporation | 15 July 2016 | 14 July 2031 | Cook Islands | NA |
| Licenses for cobalt rich crusts in Western Pacific Ocean | | | | |
| Ministry of Natural Resources and Environment of the Russian Federation | 10 March 2015 | 9 March 2030 | Russian Federation | NA |

Source: International Seabed Authority at <https://www.isa.org/jm/deep-seabed-minerals-contractors>

Oil and gas exploration – Aotearoa New Zealand

Since 2013, Caritas has supported members of Ngāti Kuri iwi, based at Kaikōura, **Aotearoa New Zealand**, in raising concerns about the impacts of offshore oil and gas exploration on marine mammals, on which the local community and tourism businesses depend. The earthquake of November 2016 that hit central Aotearoa New Zealand put another twist in the tale. Ngāti Kuri's environmental protection body, Te Korowai o te Tai o Marokura, wrote to New Zealand Petroleum and Minerals about the government's 2017 Block offer for oil and gas exploration licences. In the letter, Te Korowai said:

The natural disaster has impacted ecosystems and kaimoana in the marine area. It is a more fragile area than normal and will take some time to come back to an equilibrium. We believe that unnecessary, intrusive and disruptive exploratory techniques should not operate in such a region recovering from a major natural disaster.

Offering parts of the area for exploration will further undermine the kaitiakitanga of Te Korowai o Te Tai o Marokura. This kaitiakitanga has most recently been damaged by emergency legislation for recovery from the Kaikōura quake. We do not wish further threats to our responsibility to protect kaimoana and other sea resources.

The emergency legislation is but one further example of lack of consultation with tangata whenua where resource decisions are being made about our rohe without our involvement. The Block Offer is another way in which kaitiakitanga is being undermined.



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The Kaikōura tourism industry and community rely on offshore whale-watch activities.



CARITAS INDICATOR

Our assessment of the impact on people and communities
of offshore mining and drilling in Oceania

■ LOW ■ MODERATE ■ HIGH ■ SEVERE ■ EXTREME

Conclusion

Though Caritas is encouraged by the strength of community opposition to seabed mining, proposed legislation continues to be rolled out across the Pacific, with insufficient attention being paid to the precautionary principle and full, prior and informed consent of local communities and Indigenous peoples.

There is little consideration for what will happen and what kind of remedies are available if planned exploration/exploitation severely disrupts the environment. Many Pacific countries interested in offshore mining potential have a history of poor judicial processes as well as policy decisions being influenced by corruption.

The ocean is a global commons. It belongs to us all; and we are all affected by changes in it.

Recommendations

- **The global community** needs to implement a moratorium on seabed mining and exploration until more is known about the impacts on ecosystems and communities.
- **Oceania governments and others implementing legislative frameworks** for seabed mining need to ensure they give proper recognition to human rights and environmental rights. This should include free, prior and informed consent by affected communities; effective environmental impact statements; and appropriate remedies for damage.
- **Businesses** undertaking offshore prospecting activities in Oceania need to ensure they are adhering to the principles of corporate responsibility contained in the United Nations Global Compact, and the Guiding Principles for Businesses and Human Rights.
- **We can all** become better informed about plans for offshore oil and gas exploration and seabed mining in our own countries and throughout our region, monitor activities, share our concerns with decision-makers, and express solidarity with communities facing the most immediate challenges.



Paul Bruce, an agricultural trainee, with crop-resistant rice in Tupa Parish, Mt Hagen, Papua New Guinea - in the aftermath of the El Niño drought.



CARITAS INDICATOR

Our assessment of the impact of extreme weather in Oceania 2015

Read more on page 45

4 Weather takes extreme turns – and threatens more

The world's poor, though least responsible for climate change, are most vulnerable and already suffering its impact. – Pope Francis, Message for the World Day of Prayer for the Care of Creation, 1 September 2016.

Overall, 2016–2017 was a much quieter year weather-wise in Oceania than the previous two years, though cyclones had a 'sting in their tail' for Australia and Aotearoa New Zealand in particular. Infrastructure was tested in these countries, while community stories from Tonga, Samoa and Aotearoa New Zealand show the value of preparedness. But long-term drought in Australia's Torres Strait Islands is straining water and community resources – and leading to long-term reliance on desalination plants. Successive coral bleaching episodes on the Great Barrier Reef bodes ill for the long-term health of our oceans.

“Totally reliant on nature”

“We're totally reliant on nature and what the rain brings,” says Torres Strait Island Mayor Fred Gela. “But now, that whole cycle of rainfall we normally expect, does not happen like that anymore.”

These Islands, at the northern end of Queensland, **Australia**, have been experiencing prolonged drought for the last three to four years. Mayor Gela says most communities rely on water lagoons constructed and lined with plastic to collect rainwater. These usually fill up during the rainy season of December to January, then in June/July for a light top-up.

However, in November and December 2016, 13 of 15 island communities were on water restrictions, which meant water supply was available for about eight hours per day. People were unable to flush toilets or wash their hands during certain times of the day, posing a potential risk to personal and public health.

While a few communities have had fixed desalination plants for a decade or more, the Torres Strait Island Regional Council (TSIRC) bought seven more mobile plants since 2015 to help supplies, and relied on those plants to provide additional water to five of the islands critically low on water.²⁹ Desalination plants are costly to run and unsustainable as a long-term solution.



Water lagoon – Torres Strait Islands.

²⁹ Executive Managers of Housing Services, John Coyle, and Engineering Services, David Baldwin, via Email (18 May 2017) from Margaret Rosta, Senior Executive Assistant to the Mayor & CEO, Torres Strait Island Regional Council.

Weathering the year: regional round-up of significant events

While the Torres Strait Islanders had insufficient water, too much water knocked over Auckland City's supplies in **Aotearoa New Zealand** in March 2017. Heavy rain overwhelmed the city's water treatment plant in the hills – with silt, slips and erosion making water treatment difficult. Auckland residents were told to cut consumption by 20 litres a day for over three weeks.³⁰

Late season cyclones Cook and Debbie hit **Australia** and Aotearoa New Zealand hard, but also impacted **New Caledonia** and **Vanuatu** in April 2017. They were followed by Category 5 Cyclone Donna outside the cyclone season (November-April), and the strongest cyclone ever recorded for May in the Southern Hemisphere. This damaged homes in Vanuatu's northwest.³¹

Cyclone Debbie in Australia killed three people and caused huge flooding across the Fitzroy River catchment – an area almost the size of Texas.³² The Australian Bureau of Meteorology said some areas had received about half a year's worth of rain – about 1,000 millimetres – in just 48 hours.³³

Sydney and Brisbane had their hottest summers on record, in an "Angry Summer...characterised by intense heatwaves, hot days and bushfires in central and eastern Australia, while heavy rainfall

and flooding affected the west", according to the Australian Climate Council. Extreme heat led to nearly 100 bushfires across inland New South Wales, Australia.³⁴

Above-average sea surface temperatures in the Western Pacific this summer triggered a second consecutive bleaching outbreak on the Great Barrier Reef, straight after its worst mass bleaching event in 2016.³⁵ This is unprecedented, and raises concerns about the reef's long-term future.

"Angry Summer ...characterised by intense heatwaves, hot days and bushfires..."

AUSTRALIAN CLIMATE COUNCIL

TSIRC



Flooding at Boigu, Torres St Islands, Australia February 2017.

Thunderstorm asthma shows complex relationship between environment and health

A sudden thunderstorm in **Australia** during the year shows the complex interrelationship between natural events, human changes to the environment, and health. On 21 November 2016, a sharp change in the weather brought thunderstorms to Melbourne, Victoria. The heavy rain broke rye grass pollen into smaller pieces which caused asthma for some people who don't normally get the condition. It led to nine deaths and about 8,500 hospitalisations in the city.³⁷

30 <http://www.stuff.co.nz/auckland/90257264/watercare-urges-aucklanders-to-reduce-water-use-in-wake-of-torrential-rain> (9 March, 2017).

31 <http://www.newshub.co.nz/home/world/2017/05/cyclone-donna-now-category-5-breaks-global-record.html>

32 <http://www.bbc.com/news/world-australia-39470971>.

33 <http://media.bom.gov.au/releases/351/ex-tropical-cyclone-debbie-tracking-southwards-today-bringing-torrential-rain/>

34 <https://www.climatecouncil.org.au/angry-summer-report>.

35 Ibid.

36 <http://www.abc.net.au/news/2017-01-25/thunderstorm-asthma-ninth-death-in-victoria/8212096>; <http://www.abc.net.au/news/2016-11-22/what-is-thunderstorm-asthma/8044920>



ROBERT LE BORGNE

Impact of the Houailou landslide, New Caledonia, November 2016.

Heavy rain in the Houailou district of **New Caledonia** in November 2016 caused dramatic flooding and killed nine people from two villages, according to Robert Le Borgne of Secours Catholique (Caritas in New Caledonia). The bodies of three of the dead had not been recovered, by August 2017. “Landslides like that have never happened before,” said Jacqueline Johnston of the French Red Cross. About a month’s rainfall fell in 24 hours, and the heavy rain’s effects were made worse by hillsides denuded of trees from bushfires.³⁷

Flash flooding in **Fiji** in December 2016 forced about 3,000 people living in tents after Cyclone Winston back into evacuation centres. Fijian journalist Joe Yaya says people displaced by Winston were already asking for Government assistance. The cost would add to the already estimated bill from Cyclone Winston of US\$1.9 billion.³⁸

Cyclone Cook forced some people to evacuate as a result of flooding, and damaged infrastructure and crops mainly on Efate in **Vanuatu** in early April 2017. Though damage to crops was minimal compared to Cyclone Pam in March 2015, Vanuatu’s Chamber of Commerce urged farmers to plant more cyclone-resistant crops for greater food security.³⁹

In **Aotearoa New Zealand**, a huge bushfire on Christchurch’s Port Hills in February 2017 destroyed 11 homes, claimed the life of a helicopter pilot, and took 66 days to put out completely. The rural firefighting costs alone added up to nearly NZ\$8 million.⁴⁰

Extreme drought in the **Marshall Islands** in April 2017 affected eight atolls and an estimated 6,400 people. The Government declared a State of Emergency for 31 days in the affected areas.⁴¹

37 <http://www.radionz.co.nz/international/programmes/delineapacific/audio/201825191/new-caledonia-landslides-calamity-not-seen-since-19th-century>

38 <http://www.abc.net.au/news/2016-12-19/fiji-flooding-after-tropical-depression-4/8132420>

39 <http://www.radionz.co.nz/international/pacific-news/328668/vanuatu-still-assessing-damage-from-cyclone-cook>

40 <https://www.stuff.co.nz/national/94346662/high-rural-firefighting-costs-for-the-port-hills-fires>

41 <http://reliefweb.int/report/marshall-islands/asia-and-pacific-weekly-regional-humanitarian-snapshot-25-april-1-may-2017>

Table: Impact of severe weather in Oceania July 2016 – June 2017

| Date | Event | Location | Deaths | Displaced | Total people affected/ Loss and damage |
|---------------|----------------------|--|--------|-----------|---|
| October 2016 | High winds | Victoria, Australia | 1 | | 120,000 properties without power |
| November 2016 | Thunderstorm | Victoria, Australia | 8 | | 8,500 hospitalised |
| November 2016 | Flood and landslides | Houailou, New Caledonia | 9 | | About 1000 people affected |
| December 2016 | Floods | Fiji | | 2327 | 50,000 |
| January 2017 | Flood | French Polynesia | 1 | 1200 | 5000 |
| February 2017 | Bushfires & heatwave | New South Wales, Australia | | | 143 |
| March 2017 | Cyclone Cook | Australia/New Zealand/ New Caledonia/Vanuatu | 1 | 120 | 87,500 homes |
| April 2017 | Cyclone Cook | New Caledonia mainland | 0 | | Destroyed houses and plantations |
| April 2017 | Cyclone Debbie | Australia/New Zealand | 6 | 2470 | 164,270 homes |
| April 2017 | Drought | Marshall Islands | | | 6,400 |
| May 2017 | Cyclone Donna | Vanuatu | 0 | 10,290 | 2,700 |
| May 2017 | Cyclone Donna | North of Loyalty Islands, particularly Lifou, New Caledonia | 0 | | Destroyed houses and plantations |

Sources: Caritas has prepared this table from various sources as accurately as possible, but cannot take responsibility for the completeness of data. Sources include EM-DAT – the International Disaster Database run by Centre for Research on the Epidemiology of Disasters (CRED) at University of Louvain, Brussels, Belgium; UN OCHA – United Nations Office for the Coordination of Humanitarian Affairs; Reliefweb (www.reliefweb.int), and reliable news sources.

Preparedness the key to the future

In **Samoa's** capital, Apia, the Vaisigano catchment is home to many poorer households, and susceptible to flooding. The last big flood was when Cyclone Evan hit in 2012, temporarily displacing 7,500 people and damaging 2,088 houses.⁴² While the Samoan government is addressing flooding through a Green Climate Fund project (see page 54), the Archdiocese of Apia has also helped relocate 50 at-risk families from the area to nearby Moamoa, further inland. The Archdiocese has provided the land free, and is helping with funding to relocate and build.

Climate change projections for Samoa predict more frequent and extreme rainfall events, but also more frequent and longer drought events.⁴³ Caritas Samoa is working with the Red Cross to build communities' disaster risk awareness. Project Manager Fuatino Muliagatele-Ah Wai says "the program is designed to help people save lives. We are working through churches, and the response has been very good; the participation from the community has been increasing each day, especially for the youth."

In **Papua New Guinea**, the 2015-16 El Niño had had a significant impact on the highlands. More than three quarters of the food consumed in the country is locally grown and eighty percent of the population is semi-dependent on rain-fed subsistence farming. Growth of staple crops, particularly sweet potato (kaukau), was severely impacted and stocks rapidly rotted, with other crops were affected by pest infestation. It led to food and water shortages. Caritas partners from Papua New Guinea, Australia and Aotearoa New Zealand helped meet immediate needs and longer term measures to reduce the impact of future droughts.

⁴² Post-Disaster National Assessment (PDNA) 2013.

⁴³ Australian Commonwealth Scientific and Industrial Research Organization (CSIRO)



The recovery from the severe El Niño drought of 2015-2016 was complicated by heavy rain episodes. A survey in February 2017 of 19 Diocesan Caritas Coordinators indicated eight dioceses suffered severe impacts from rain or flooding, such as loss of food gardens and houses, and transport links cut. Some people died in landslides in the Mt Hagen area. This was in addition to deaths arising from malnutrition and disease from the drought.

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Sr John Mary FIHM.

Sr John Mary FIHM, Wabag Diocese's office secretary, reported on the situation in Enga Province: "The majority of the people in Enga Province depend on the river, waterfalls and creek water for their daily use. Sometimes it is not good for drinking because the same water is used by animals, people for the laundry and shower," Now the water situation has improved through distribution of 114 water tanks and 2500 water cans to the main parishes, as well as remote villages and mountains in Enga Province.⁴⁴ This was supported by various non-government organisations such as Missio Aachen, MSC mission Australia and Caritas members from Australia and Aotearoa New Zealand. Caritas partners from Papua New Guinea, Australia and Aotearoa New Zealand helped support alternative

agricultural techniques and plants better able to withstand drought, and also improved other water supplies. This has involved both recovery and restoration of old boreholes, and provision of rainwater tanks.⁴⁵

Summing up the El Niño experience of Papua New Guinea, Caritas PNG Director Raymond Ton said many families depended on food crops for both sustenance and income. "Assistance from government wasn't timely enough as it is often the case. They come in far too late, while in other cases, they are inadequate. These actions and inactions of our Government trigger other related problems hence further compounding and intensifying the substantive problem.

"In a country endowed with so much natural wealth many rural people struggle every day. When a natural disaster hits them, it is truly a disaster of the worst kind. If people can be more self-reliant in sustaining themselves, it would have been better. Both government and non-government agencies have a responsibility to build people's resilience by improving long-term food security and income generation."



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Sorting the good from the bad among drought affected kaukau (sweet potato). Tambul, Western Highlands, Papua New Guinea.

⁴⁴ Sr John Mary, Caritas Coordinator.

⁴⁵ Mark Mitchell 28 February 2017, "Drought in PNG" - Presentation.



CARITAS



This new house in Ha'apai has been built using cyclone-resistant materials and techniques.

Torrential rain in March 2017 in **Tonga** forced people from their homes on the small island of Fonoifua in the Ha'apai group. "It's very unusual for Fonoifua to have such extreme flooding," says Amelia Ma'afu of Caritas Tonga. People used kayaks, small boats, chilly bins and empty containers to get out of their homes. Amelia says it showed the value of Caritas' pre-positioning of emergency supplies, community preparedness, and a swift response by emergency teams.

Caritas has also been working with the people of Ha'apai to provide long-term water supplies and strong housing, following

Cyclone Ian in January 2014 and long droughts. Caritas Aotearoa New Zealand Programmes Manager Murray Shearer, visiting in May 2017, said taking time to make good decisions on housing standards has been worth it. The houses are well built, robust and suitable for the families they are designed for.

Severe weather that hit **Aotearoa New Zealand** in April and July 2017 tested civil defence in South Dunedin, a city which featured in last year's report following severe flooding in 2015.⁴⁶ Caritas Board member Fr Gerard Aynsley is part of a new stakeholders group building community resilience, and says both infrastructure and community were better prepared.

Civil Defence took no chances when heavy rain threatened in April: setting up information centres, preparing for evacuations, checking on residents, filling sandbags, monitoring the rainfall, streams, tides, and the mud tanks which, due to poor maintenance in 2015, had made flooding much worse.

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Fr Gerard Aynsley

More heavy rain in July led to prolonged flooding in the nearby Taieri plains, including new subdivisions, but South Dunedin was again well-prepared both organisationally and with infrastructure. "One of the positives of having the stakeholder group meet is that there is much better communication and also an avenue for the Council to hear of areas that were impacted by flooding that they were not aware of," says Fr Gerard Aynsley.

At the regional level, the Pacific Humanitarian Partnership (PHP) over the last decade has built on a United Nations-developed 'cluster system' for emergencies to apply year round, says Mark Mitchell, Humanitarian Programmes Coordinator for Caritas Aotearoa New Zealand. Based on bringing humanitarian and local agencies round clusters of different activities such as water and sanitation, food security and shelter, they are building relationships between emergency responders and developing systems for enhanced Pacific-appropriate responses.

A **Regional Civil Society Organisation Forum** in September 2016 held in the Federated States of Micronesia called for Pacific Islands leaders to endorse and implement the Strategy for Resilient Development in the Pacific (SRDP), covered in earlier Caritas' Oceania environment reports. The Forum also called for a Regional Coordination Mechanism for Humanitarian Response to mobilise and coordinate Pacific regional support by governments, civil society and the private sector to affected member states. "This regional support should be the first port of call for affected Member States, with assistance from outside the region, being coordinated to complement existing regional efforts," said a statement from the meeting.⁴⁷ Such a Regional Coordination Mechanism could build on the PHP to strengthen agencies already working in the area.

⁴⁶ Caritas 2016: State of the Environment for Oceania 2016.

⁴⁷ Regional Civil Society Organisation Forum, September 2016.



CARITAS INDICATOR

Our assessment of the impact of extreme weather in Oceania 2016

■ LOW
 ■ MODERATE
 ■ HIGH
 ■ SEVERE
 ■ EXTREME

Conclusion

Oceania as a whole was less affected in 2016/2017 by extreme weather events compared to the previous two years. However, heavy rainfall events in several countries showed the impact of cumulative events – whether those following in quick succession such as cyclones Cook and Debbie on parts of Australia and Aotearoa New Zealand; or compounding effects of medium level event on places in long-term recovery from a major disaster – such as heavy rain in Fiji in December 2016 further affecting people displaced by cyclone Winston in March. The cyclones caused significant damage to public infrastructure in Australia and Aotearoa New Zealand. Caritas’ experience in a number of places highlights the value of disaster preparation and planning, and involving the community. This needs to be translated into long-term preparation for hitherto unknown weather regimes, and greater priority to be given to the most vulnerable communities and those in isolated areas. There still needs to be better coordination and involvement of people at the grassroots – subsidiarity and participation are key.

What can we do?

- **Oceania governments** need to endorse and fully implement the Strategy for Resilient Development in the Pacific (SRDP), and monitor and evaluate its progress in preparing communities for greater impacts of climate change.
- **Oceania governments and regional bodies** should establish a Regional Coordination Mechanism for Humanitarian Response to maximise regional support, integrate community-based groups into both planning and response, and build on the Pacific Humanitarian Partnership.
- **Government and non-government agencies** need to build resilience and preparedness for extreme weather events through programmes focusing on food security and small income generating projects.

Flying solo for the next generation at Bishop Koete Rural Training Centre, Solomon Islands (see page 52)
The innovative single-blade design from New Zealand company Powerhouse Wind is suited for island conditions: cheaper and lighter to transport than alternative designs, and can be lowered or disengaged for high strength cyclones.



BILL CURRIE



CARITAS INDICATOR

Our assessment of the adequacy and quality of climate finance in Oceania

Read more on page 55

5 Turning the tide on climate finance: what future for Oceania?

We look to the common good and thus advocate for an integrated approach to development where local customary practices are respected and communities are assisted to grow employment opportunities. – Executive Committee of the Federation of Catholic Bishops Conferences of Oceania, August 2017

We've seen progress but remain concerned about how climate finance is helping people in our region manage and thrive. The Caritas environment report series has shown a clear and consistent trend: at first, little climate finance reached people most in need and funding was insufficient. Pledges then increased but it was still difficult to assess how people benefited at the grass roots. Significant climate finance focused on infrastructure and mitigation, but little on adaptation and the ocean where the people of Oceania live. New Green Climate Fund developments, amongst others, are increasing pledges to adaptation projects. Linking these initiatives to the Ocean, the 2030 Agenda on Sustainable Development, the Addis Ababa Action Agenda on Financing for Development and the Samoa Pathway (SIDS Accelerated Modalities of Action) remain critical for the next United Nations climate conference COP 23, to be chaired by Fiji in Bonn, Germany in November 2017.

One of the hottest topics around climate finance concerns 'what is it'? For our purposes, climate finance refers to:

- a) local, national or transnational financing flows, technology transfer and capacity building,
- b) which may be drawn from public, private or alternative sources of financing; and
- c) is used to support mitigation and adaptation projects.

Supporting the “Pacific Way”

Earlier chapters have shown our concern about the harmful impacts of climate change on the ocean and the people of Oceania. In response, we recognise the important role of the Paris Agreement adopted by 195 signatories under the United Nations Framework Convention on Climate Change (UNFCCC) in 2016. (The Paris Agreement has 160 parties today).⁴⁸

Beyond developed countries helping developing ones to finance “new and additional” information compliance reporting, and upholding earlier commitments to capacity building and technology transfer, the Paris Agreement builds on the Convention’s umbrella support in a number of ways.⁴⁹ Sustainable development and poverty eradication will be put in context when strengthening global responses to the threat of climate change and making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. The preferential option will give particular attention to least developed countries and small-island developing states, in the areas of both mitigation and adaptation, based on local priorities. By harmonising relationships between individuals and societies,

⁴⁸ As at 24 August 2017, UN Treaty Depository; https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=en STATUS AS AT : 24-08-2017 05:00:36 EDT

⁴⁹ See the United Nations Framework Convention on Climate Change of 1992, Article 4(3).



Installing solar power in the Solomon Islands.

access to climate finance and readiness support should become easier, especially for the least developed countries and small island developing States. And finance should be in the context of national climate strategies and plans (rather than imposed from outside in such a manner that ignores the needs of local communities or has no to little room for NGO and faith based organisation accompaniment).⁵⁰ Developed country Parties should continue to take the lead in mobilising climate finance from a variety sources, through a variety of actions while taking

into account the needs and priorities of developing countries. Such mobilisation of climate finance should represent a “progression” beyond previous efforts. The Paris Agreement also provides for active participation. Insofar that it reinforces provisions for technology transfer and capacity building to be country-driven, climate finance should foster country ownership at national, subnational and local levels; and engage in effective iterative participatory processes that are cross-cutting and gender-responsive.

This said, while the global community’s commitments reflect fairness and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, how much finance goes to Oceania from multilateral, bilateral and alternative sources? And how are the people of Oceania faring?

How much climate finance goes to Oceania?

In its most recent two-yearly assessment and overview of climate finance flows, the UNFCCC’s Standing Committee on Finance states, “Of the climate-related finance reported by OECD DAC, 42 percent supports projects in Asia and Oceania.”⁵¹ However, there was no further breakdown for Oceania except one graph on geographic distribution for bilateral (country-to-country) climate finance. Even so, the Standing Committee said, “Finance was also directed to a large number of projects (though a smaller total volume of finance) in the Pacific, largely focused on adaptation and often in the context of efforts to support fishery management, water resource management, disaster risk reduction and environmental management.”⁵² How large is large?

In January 2017, authors of a Stockholm Environment Institute report, analysing climate finance flows to the Pacific, concurred: “there is very little synthesised data on climate finance in the Pacific”. They also said analysis was needed on the quality and longevity of outcomes, something Caritas has been trying to address through its environmental advocacy and research.

“there is very little synthesised data on climate finance in the Pacific.”

STOCKHOLM
ENVIRONMENT INSTITUTE

50 Paris Agreement 2015, Article 9(9).

51 UNFCCC Standing Committee on Finance 2016 Biennial Assessment and Overview of Climate Finance Flows Report, p 64-65, para 237.

52 Ibid.



The Secretariat of the Pacific Regional Environment Programme (SPREP) is one of several regional bodies and organisations making efforts in this area. SPREP is enhancing its hosted donor database of climate finance initiatives, which includes information from the Green Climate Fund, the Adaptation Fund, the Global Environmental Facility (GEF) and the Climate Investment Fund. The Pacific Climate Change Portal also includes some information about bilateral funding. As at July 2017, it listed 50 current climate finance projects in the Pacific with financial data for 40 totalling US\$550 million.

Climate finance flows from New Zealand

In early September 2017, **New Zealand's** Ministry of Foreign Affairs (MFAT) told us that climate-related support delivered through the New Zealand Aid Programme in the 2016/2017 financial year was approximately \$44.14 million, including approximately \$33.84 million provided as support for the Pacific region. The climate-related support is on a par with the previous year (\$44.6 million for 2015/2016 financial year), but Caritas remains concerned at an overall downward trend: in previous reports, MFAT has advised annual climate-related support of \$60 million (2013/2014) and \$56 million (2014/2015). MFAT has told us that “New Zealand remains committed and on track to providing at least \$200 million in climate related support over the June 2015–June 2019 period.”⁵³ If so, we would expect at least approximately NZ\$111 million to support climate-related activities by the end of June 2019.

Caritas will continue to advocate for progressive climate finance support, that is over and above existing financial commitments and which benefits the most vulnerable people.

MFAT has emphasised its contribution to renewable energy, saying: “The previous three year funding period (2012/13–2014/15) saw a peak in New Zealand’s considerable contribution to renewable energy initiatives in the Pacific region. At the Pacific Energy Summit in 2013 New Zealand committed funding of \$65 million which was rapidly disbursed in subsequent years. At the Pacific Energy Conference in 2016 the Minister of Foreign Affairs committed a further \$100 million towards renewable energy projects in the Pacific.”

Caritas welcomes such spending as a sign of New Zealand’s on-going commitment to low carbon development, but would like to see a greater emphasis on adaptation funding for the most vulnerable communities already experiencing the impacts of climate change.

In July 2016, an independent UNFCCC expert team provided an assessment of New Zealand’s second two-yearly report, which New Zealand submitted to the UNFCCC on 17 December 2015. The team remarked that “New Zealand remains committed to supporting effective climate outcomes in developing countries. During the reporting period 2013–2014, New Zealand has delivered on undertakings to provide climate-related financial support, both through the financial mechanism of the UNFCCC, and in resources related to the implementation of the Convention through bilateral, regional and other multilateral channels. The New Zealand Official Development Assistance (ODA) allocation includes dedicated climate change funding. For the period 2015/16 to 2017/18 this funding is NZ\$9.5 million. This funding is being directed to initiatives that aim to strengthen the resilience of infrastructure and communities in developing countries. In the absence of an internationally agreed definition of what can be counted as ‘new and additional’, New Zealand’s practical approach has been to report all climate-related assistance for the reporting period. This is the most transparent and appropriate way of communicating resources committed”.⁵⁴

MFAT says that the NZ\$9.5 million “dedicated climate change funding” includes projects aimed at strengthening water security, building resilience to ocean acidification and assisting Pacific Island Countries to access Green Climate Fund financing.⁵⁵

53 MFAT, 4 September 2017.

54 UNFCCC: Report of the technical review of the second biennial report of New Zealand, 11 July 2016.

55 MFAT, 11 September 2017.

Australia needs to make a stronger contribution to fight climate change and its impacts

In last year's *State of the Environment for Oceania* report, we said that **Australia's** aid programme lacks a dedicated climate strategy. Since then, Australia's Department of Foreign Affairs and Trade (DFAT) has committed to developing a Climate Change Action Strategy that will cut across its development programming. We welcome this commitment and look forward to seeing the results.

At the United Nations climate conference in Paris in 2015, Australia announced it would contribute AUD\$1 billion over the next five years to climate finance. Australia has also pledged AUD\$200 million to the Green Climate Fund over four years. Given the size of Australia's economy, these contributions should be aiming for AUD\$3.2 billion a year of public and private funding by 2020, which should be in addition to existing aid commitments and part of a growing aid budget.

As co-chair of the Green Climate Fund, Australia also has a strong role to play in ensuring that the people and communities who are most in need of climate finance are able to access climate financing.

In 2017 the Australian government plans to consider a long term emissions reduction goal post 2030 and is reassessing its climate policies. Caritas Australia calls on the government to ensure its policies align with its stated ambition on emissions reductions and that those ambitions continue to grow over time. This is important to safeguard the future of Pacific Islands. To reach our emissions reductions targets, Australian policies need to rule out any major new fossil fuel projects or the expansion of existing ones, as this would be inherently incompatible with meeting our global climate commitments.

Australia needs to play a strong leadership role in both mitigating climate change and supporting countries in the region to adapt to its impacts.

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Flood protection for the Vaisigano River catchment in Apia, Samoa has been approved for Green Climate Fund finance (see page 54). Over 26,000 vulnerable people are set to directly benefit from upgraded infrastructure, expanded early warning coverage and more resilient building practices in a US\$265.7 million project.

Financing from alternative sources

Consolidated financial information from other sources financing Oceania tends to remain scant. In terms of private sector climate finance, however, an increasingly wide range of new instruments are evident from green bonds to greenhouse gas pricing mechanisms.⁵⁶ Besides the private sector and philanthropic funds, opportunities exist for others to engage. The potential for faith groups in small-island developing Pacific countries to play a part is one example, the role of cities is another.

At UNFCCC COP22 last year in Marrakech, local leaders, including mayors, from 7100 cities announced their commitment to accelerate global progress on meeting commitments undertaken in Paris and highlighted the role of city-climate finance. Cities already account for more than 70 percent of global energy-related green house gas (GHG) emissions and with urbanisation on the rise, this is likely to have flow-through effects to people in Oceania.

We conclude that climate finance is supporting Oceania but more work is required to accurately measure amounts, reduce double counting, and assess how effective projects are, especially to meet the needs of the poorest.

Indigenous land management turns a carbon credit

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Barry Hunter.

The Aboriginal Carbon Fund (ABC) in **Australia** increases Aboriginal engagement in the carbon industry and also deliver good savanna fire management based on traditional Aboriginal practises. It is based on small fires being lit early in the dry season mostly by Aboriginal rangers. The 'cool' burns have reduced greenhouse gas (GHG) emissions and help prevent larger wildfires that release huge emissions and threaten biodiversity, according to Barry Hunter of the ABC.

Last year the fund ran several carbon workshops on Cape York and Northern Territories to help Indigenous groups understand and engage in good carbon practice. This year, the fund launched a core-benefit verification framework, which makes processes transparent for buyers paying a premium price, indigenous communities and rangers. The core-benefit framework is based on an Indigenous-to-Indigenous strategy which includes the generation of income, local jobs and the recognition of traditional ecological knowledge to sustainably manage country.



ALEX ERNST

Dion Koonmeeta of the Southern Aurukun Savanna Burning Project.

⁵⁶ *Trends in Private Sector Climate Finance; Report Prepared by the Climate Change Support Team of the United Nations Secretary-General on the Progress Made Since the 2014 Climate Summit; 9 October 2015.*

Shifting to renewables in Oceania

Many Pacific Islands are shifting to renewable energy such as solar, wind or hydro; and most have energy roadmaps with renewable energy targets. Some, like **Tokelau**, have already reached 100 percent renewable energy, and others, such as the **Cook Islands**, have set similar targets for 2020. Oceania is showing the way, while global energy-related carbon dioxide emissions remained steady at 32.1 gigatonnes for the third straight year in 2016, even as the global economy grew 3.1 percent.⁵⁷ This signals a 'decoupling' of carbon emissions from economic growth is possible.

BILL CURRIE



Raising the wind turbine pole at Bishop Koete RTC.

Powering up for a new generation on Solomon Islands

In July 2017, Caritas Aotearoa New Zealand, supported by the innovation fund from New Zealand's Ministry of Foreign Affairs and Trade, installed solar panels and an innovative wind turbine to provide electricity for the Bishop Koete Rural Training Centre (RTC) on Nggela Island, and neighbouring communities, in the **Solomon Islands**. Caritas considers this a positive example of a community-empowering climate finance project. The installation meant the community went from living on three hours a day of diesel-generated electricity supply to 24 hours a day supply.

Who's helping people on the ground?

According to Caritas Tonga's Amelia Ma'afu, the Climate Change Trust Fund launched in **Tonga** this year with support from the Asian Development Bank is a "wonderful initiative" with an "impressive turnaround". The trust has been set up with 5 million pa'anga [approximately NZD\$3.3 million]⁵⁹ to be invested with 4 million placed in investment; and 1 million pa'anga available immediately for community funding. However, Amelia says Tongan civil society organisations think that should be the other way around. Communities need upfront personal assistance and more funds now. A working group to provide civil society input on the Trust Fund consists of Amelia along with two people from Tonga Trust and two from the Civil Society Forum. Caritas Tonga has been active in this space and helped three communities apply for funds.

"The only thing [says Amelia] is that funding is not enough for all communities affected and there is no room for NGO or faith-based organisation accompaniment... There is a lack of capacity at the national level and a big role for NGOs in monitoring and evaluation." As Amelia explains, "There's a fair amount of money in the country but very little being trickled down to NGOs. I can't see a benefit if funding is caught in institutional or administrative office politics. Who's helping people on the ground? Everything is being pulled into disaster response, but this isn't sustainable and procedures are very tedious. Disasters are fewer now but when they strike they are deadly."

57 International Energy Agency, 17 March 2017, at: <https://www.iea.org/newsroom/news/2017/march/iea-finds-co2-emissions-flat-for-third-straight-year-even-as-global-economy-grew.html>

58 ANZ currency team, 22 August 2017.



Despite the challenges, Amelia has also played an active role on Tonga's National Task Force, which is implementing Tonga's Joint National Action Plan for Climate Change and Disaster Risk Reduction, since end 2016. Also referred to as a technical working group, or roundtable, the taskforce is chaired by the Climate Change Director (Luisa Tuiafitu Malolo) under the auspices of the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change & Communications. The group, which generally meets monthly, also has representatives from forestry, fishing and women's groups.

The Green Climate Fund (GCF), one of the finance funds mentioned above, was established in 2010 to finance climate change projects and programmes that help developing countries adapt to climate impacts and reduce greenhouse gas emissions. As at July 2017, GCF had approved USD 2.2 billion for 43 projects and programmes. Seven of these projects (totalling more than USD 250 million, which represents approximately 11 percent of GCF financing) have been approved for the Cook Islands, Fiji, Papua New Guinea, Samoa, Solomon Islands, Tuvalu and Vanuatu. More recently a GCF Structured Dialogue with the Pacific took place in Tongatapu, Tonga from 18 to 21 July.⁵⁹ The problem though, says Amelia Ma'afu of Caritas Tonga, is that dialogue was inter-governmental, there was no civil society representative from Tonga and the dialogue had very little to do with community development. The international community has made strides in pledging climate finance to developing countries in Oceania, but questions remain about effectiveness.

“the dialogue had very little to do with community development”

AMELIA MA'AFU ON GCF STRUCTURED DIALOGUE

Technology transfer and capacity building assessment

At a United Nations Framework Convention on Climate Change (UNFCCC) meeting in Bonn in May 2017, the Pacific Climate Change Financing Assessment Framework (already applied to **Nauru, Marshall Islands** and **Tonga**) and the UNDP development finance assessments were cited as good practice.

The Bonn meeting highlighted challenges facing Pacific Island States with respect to developing project proposals. Concern was expressed about multilateral agencies parachuting into Oceania, typically for one or two weeks, without really understanding the context and tending to have too high and lofty thresholds for project finance. The Secretariat of the Pacific Regional Environment Programme (SPREP) said such 'assistance' often extracts significant and valuable local resource and makes climate finance less accessible for Pacific SIDs. Solutions must also be found for capacity gaps that exist in national implementing agencies – many local people rarely travel beyond their local villages or tight-knit communities – and yet those are the communities climate finance must serve.

Also coming out of the Bonn meeting was the need for a whole-of-government approach to unify different departmental and agency approaches. Engagement with other stakeholders, such as the private sector and growing civil society, has to improve if needs are to be identified and things done to help climate stressed communities. Donors also need to strengthen coordination, complement their activities and avoid overburdening the administrations of recipient countries. While the growth in civil society interest and engagement in the Pacific has meant stakeholders competing for places in policy dialogue; and a sense of being non-consulted if not at the negotiating table, Caritas Tonga has expressed similar sentiments about institutional failing and the lack of an authentic encounter with local communities.

59 Green Climate Fund: “Bilateral agreement solidifies partnership between Tonga and GCF”, 14 July 2017, at: <http://g.cf/2sWsHRz>

Sample adaptation and mitigation projects in Oceania with Green Climate Fund contributions

| Country | Project | Amount | Benefits (anticipated) |
|---|--|--|--|
| Fiji (adaptation) [Accredited Entity: Asian Development Bank (ADB) Executing Entity: Fiji Ministry of Finance] | Urban Water supply & Wastewater Management upgrade greater Suva (River Rewa new intake station, Kinoya wastewater & sewer improved) | \$222.0m USD Total project investment (7 years project duration) Grants GCF \$USD 85.3m, Fiji Ministry Finance \$USD85.3m Loans \$USD95.7m (ADB & European Investment Bank) | 290,854 people increased resilience. Advance UN Sustainable Development Goal#6 Clean water and sanitation |
| Vanuatu (adaptation) [Accreted Entity: Secretariat of the Pacific Regional Environment Programme (SPREP) Executing Entity: SPREP & Government of Vanuatu] | Climate Information Services for Resilient Development. | \$26.6m USD Total project investment (4.25 years project duration) Grants: GCF USD \$31.0 m; Government of Vanuatu USD \$1.5m; Delivery partners USD \$2.2M Zero debt | Improved science – improved policy & climate related decisions. 260,730 people increased resilience. Gender benefits (55% total beneficiaries expected to be women, representation of women on committees) |
| Samoa (adaptation) [Accredited Entity: UNDP Executing Entity: Ministry of Finance, Samoa] | Integrated flood management for Vaisigano River catchment | \$65.7m USD Total project investment (6 years project duration) GCF Grant USD \$57.7 m Government of Samoa USD \$8m Zero loans | Reduce the effect of recurrent flood-related impacts in the Vaisigano River catchment, which flows through the area of the national capital Apia. Recent extreme weather events in this region have resulted in approximately USD 200 million worth of damage during each event. |
| Pacific Islands (Mitigation & adaptation). [Accredited Entity: Asian Development Bank Executing Entity: Te Aponga Uira and Cook Islands & Asian Development Bank] | Renewable Energy Investment Program, focus on Cook Islands. Help free Cook Islands, Tonga, Republic of Marshall Islands, Federated States of Micronesia, Papua New Guinea, Nauru and Samoa from diesel dependence. | \$26.0m USD Total project investment (15 years duration) GCF grant USD\$17m, ADB \$5m, Govt \$4m (zero loans). | Anticipated beneficiaries: 10,000 Anticipated tonnes of CO2 equivalent avoided: 95.6K Improved household access to electricity & lower costs for electricity |
| Solomon Islands (Mitigation & adaptation) [Accredited Entity: World Bank (IBRD) Executing Entity: Ministry of Finance and Treasury (MOFT) Beneficiary: Ministry of Mines, Energy and Rural Electrification (MMERE) and the Project Company] | Tina River hydropower development Plant, access road, transmission line, technical assistance | \$234.0m USD Total project investment (5 years duration) USD\$72.3 equity funding / USD\$161.7 debt financing | Anticipated beneficiaries: 180,000 Anticipated tonnes of CO2 equivalent avoided: 2.4M Clean energy |

Source: Green Climate Fund at <http://www.greenclimate.fund/what-we-do/projects-programmes>



CARITAS INDICATOR

Our assessment of the adequacy and quality of climate finance in Oceania

■ VERY GOOD
 ■ GOOD
 ■ SATISFACTORY
 ■ INADEQUATE
 ■ WOEFULLY INADEQUATE

Conclusion

The climate finance landscape is dynamic and complicated by a variety of funds and donors all vying for operations within a similar space. Bureaucracy, which is a recurrent theme, saps small island administrative resource. Others are for the short-term, or agency promotion, and thereby miss opportunities to find sustainable solutions to loss and damage. Few link to the well-being of the ocean. Significant work has been done on putting up seawalls; but, these are often only a temporary measure especially for low-lying atolls facing existential threats from king tides and severe weather events. For reef-dependent communities, our partners would like to see increased adaptation projects and an attention to food security. While local communities don't need to understand the complexities of climate finance; they need to see results – results that save lives and protect people's homes and livelihoods.

Recommendations

- **Pacific island governments** should explore further opportunities for the private sector, civil society and philanthropic funds to be part of the National Climate Funds;
- **Donor countries and funders** should engage with local communities and increase climate finance for adaptation to the negative impacts of climate change while not threatening food production or livelihoods;
- In its chairing of COP 23, the **global community** (countries, NGOs, civil society) should support Fiji to advocate for:
 - Full implementation of the Paris Agreement and climate finance to “hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change”;
 - Making climate finance flows consistent with a pathway towards sustainable development and poverty reduction;
 - Participation of local communities and local civil society in decision-making;
 - Putting climate finance for loss and damage on the agenda;
 - Parties to commit to an integral ecological approach towards climate finance for mitigation, adaptation, and loss and damage that upholds social and cultural integrity while advancing livelihoods and providing for long-term preparedness.
 - Integral climate finance, which would include, for example, putting a halt to ocean acidification and seabed mining on the basis of the precautionary principle and the potential for disrupting marine ecosystems; removing fossil fuel subsidies; and imposing polluter-pays levies.



Conclusion

Pacific peoples in many parts of the region face threats to their well-being, livelihoods, and in some places – their very existence. There is widespread evidence from Caritas sources of both slow onset and rapid onset coastal erosion arising from extreme weather and ongoing sea level rise – which may rise 1–2 metres by the end of this century. Most places reporting coastal erosion say erosion has been going on for about two decades.

Te Moana-nui-a-Kiwa (the Pacific Ocean) is changing dramatically: in sea level, chemistry, temperature and with plastics entering the food chain. Land use practices, overfishing and inappropriate fishing practices are also making an impact. We are entering unknown territory.

Now seabed mining poses a new threat, that will add to current stress. It will further undermine the ability of the sea to protect and sustain us, as well as efforts to achieve Sustainable Development Goal 14.

We are heartened by increasing signs of more climate finance to the Pacific, which seems to be listening and responding more to local communities. But much more is needed, including much closer evaluation of how well climate finance projects are meeting the needs of the most vulnerable.

There was good news in the Paris Agreement coming into force before last year's climate change conference in Marrakesh (COP22). There is clearly a groundswell for change; and new technology increasingly available – but it needs to be shared. Global energy-related carbon dioxide emissions have actually stabilised in the last three years, even as the global economy has grown. It shows that together, we can do it.

Our stories show when people come together and identify what is important and prepare for change, with the necessary help and support, they can turn the tide.

We can do no better than quote from the Joint Message of Pope Francis and the Ecumenical Patriarch Bartholomew for the World Day of Prayer for Creation 2017, released as we were finalising this report:

We are convinced that there can be no sincere and enduring resolution to the challenge of the ecological crisis and climate change unless the response is concerted and collective, unless the responsibility is shared and accountable, unless we give priority to solidarity and service.

– Pope Francis and Ecumenical Patriarch Bartholomew, 1 September 2017



Looking out on Fanga'uta
lagoon, Nuku'alofa, Tonga

**Caritas Kiribati Youth Group
throws the challenge to all of
us to care for our planet**



The urgent call and challenge to care for creation are an invitation for all of humanity to work towards sustainable and integral development.

– Pope Francis and Ecumenical Patriarch Bartholomew, 1 September 2017



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