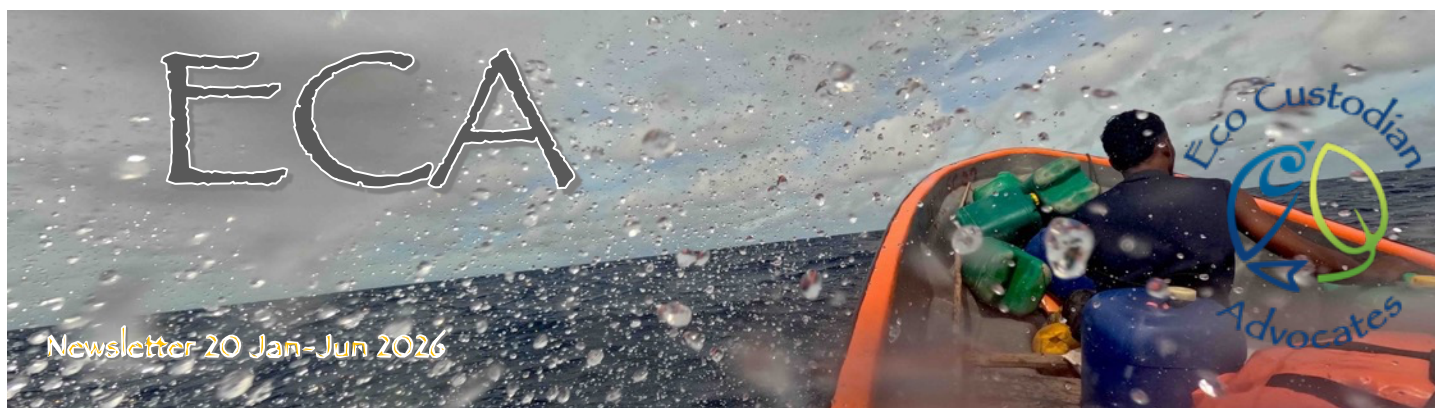




Prevailing weather fieldwork to Egum Atoll

em

A final field trip was made to the outer Kiriwina Islands under the BRCC [Building Resilience to Climate Change] project. At Konia Island a public viewing of a video that had been produced on the *gwala* closure there was screened. This was based on interviews and footage on the placement of a customary marine *gwala* closure that the community had put in. This *gwala* was to allow reef, fish and turtle/seabird rookery protection to allow for recovery of these species. It was also a way of defining their tenure rights fishing area in an attempt to stop poaching from outsiders. The short video called '*Rekindling Gwala in the Simsimla Islands*' was put together by Emmanuel Margam who is the Sustainability Officer with ECA by using free-to-use video editing software. As a best practice, before showing in public, it was shown to the community, projected onto a white sheet screen out in the open with a blue-toothed boombox for sound. The people were both excited and happy for it to be to be shown to other communities. It was therefore screened on the same field patrol to subsequent communities that we went to, these being Giva village, Kaileuna Island and on Kitava Island which share the same Kilivila language that was spoken throughout.



The isolated Konia Island with Kawa (where the school and aid post are located), Mwatagina & Nauria in the background em



It was encouraging that drought tolerant varieties of tapiok and open pollinated corn that had been previously distributed to Konia Island were already being harvested and growing well in the soil on the island. Tapiok originated from South America with evidence of it being grown by the Mayan 1400YBP. The varieties in Papua New Guinea are sweet with low levels of cyanide.

Tapiok has become an increasingly important staple across the islands of East Papuan Islands of Milne Bay Province especially in times of drought.

Left: tapiok of 2 different varieties L85, L5 harvested on Konia.

Open pollinated maize/corn varieties were also distributed to the small islands within the BRCC project in Milne Bay. This crop originated in what is now Mexico. Unusual as a staple crop here, however in PNG people also eat the inflorescence of a grass *pitpit* and New Guinea island is also the centre of diversity for sugarcane. Corn is very useful to plant after a cyclone as when planted in moist warm ground it soon matures putting seed cobs after 2-3 months. If harvested early they are soft and sweet from sugars, or if late they will be hard due to more starch, carbohydrate. Best for seed storage.



Corn of the 2 varieties harvested on Konia from distributed seed

Letter From the Director

Welcome to this our twentieth **ECA** newsletter for Eco Custodian Advocates. Wow!

This represents our 10th anniversary which came around on the 1st of July 2026. The team on this day were split, some out in the field on Goodenough Island on the wagoia forest wallaby, whilst I was at the 5th Food & Nutrition Conference in Lae where I presented a paper.

Not to worry, we enjoy our work especially out-of-office and we can also celebrate when we are all back in Alotau together.

In this time we also returned to the outer Kiriwina Islands and the Duke of York Islands to finish off the Building Resilience to Climate Change initiative on Food Security that was spread over the last few years.

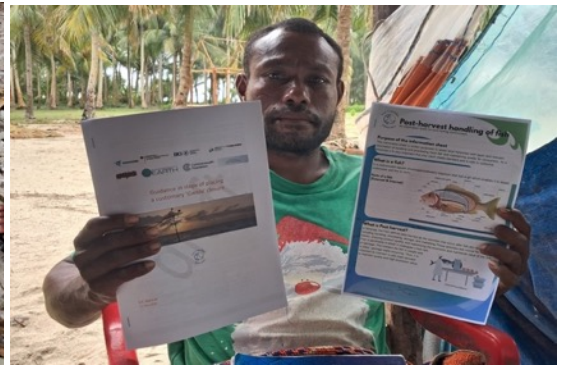
Timely as Milne Bay Islands were impacted by Tropical Cyclones Narelle Cat 3 and Maila Cat 5 that were quickly followed by the beginnings of an El Nino drought. These feature in this Newsletter.

I would like to thank everyone who has supported and believed in us through the last 10 years. Looking back so much has happened and much has been achieved. Whilst looking forward there are always new challenges that can be taken up.

We have really enjoyed the opportunities that have allowed us to continue in our work and we continue to dedicate our efforts in caring for place, and valuing the many customs that link people to their place.



David K Mitchell



Clockwise from above left: smartphone picture of landed fish catch laid out.; Above: ECA booklets on steps in setting up a marine customary closure and on fish handling Left: a fish filleting demo at Kitava Primary school

Within the BRCC project ECA demonstrated and gave hands on experience for local fishers in food processing where communities were not familiar with the correct way of filleting of fish and post-harvest care that is demanded by markets. This training was well received, though it was a pity that the 300l solar freezers (at a cost of PGK17,000) were dropped from the amended budget to allow for their purchase.



Tapiok garden Pwanbayos following TC Maila

New planting material after cyclone

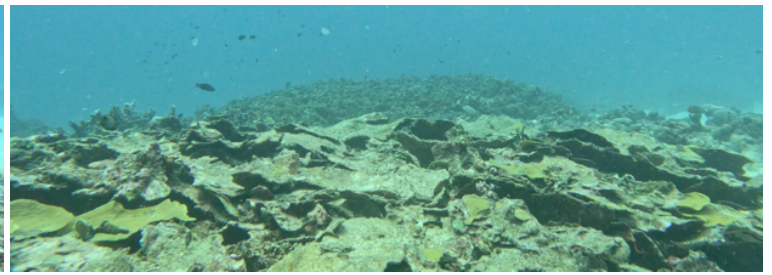
plus 2 weeks

em

Egum Atoll (Egum-Yanaba islands) received drought tolerant tapiok that ECA purchased from BRCC funds in 2024 and 2025. However much of this on Egum was affected from the seaspray from TC Maila. As part of the cyclone relief we re-sent cuttings of L5 and L6 tapiok sourced from the Koiagalu Research Centre at Bubuleta 24km east of Alotau. I was based in this station from 1991-1998 ending my time as the manager before assisting with the 1997-98 drought relief distribution and taking up a position as Area Manager for Murua LLG on Woodlark Island.



Above; Pwanbayos Island. em

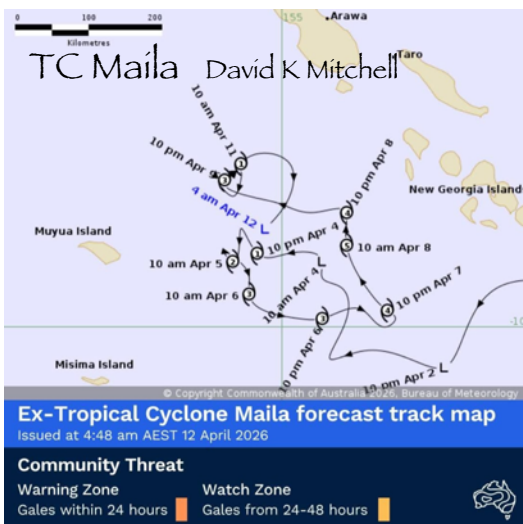


Reefs around Pwanbayos, Egum Atoll

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The dive at Pwanbayos Island on the inner atoll 'lagoon' side, shows sadly that the reef is mostly dead, with sand sediment in murky water. Quite disconcerting as it is in a remote part of the sea. This was a month after Tropical Cyclone Maila though there is no evident sign of reef breakage and rubbing. Such reef is still structural as a fish habitat, but it appears to be seriously degenerating likely from rising sea temperature and resultant coral bleaching over an extended period.

Following the fieldwork at Egum and Pwanbayos, the community held a meeting and placed a *gwal* customary marine closure on the atoll outer reef, to allow for reef and fish stock recovery.



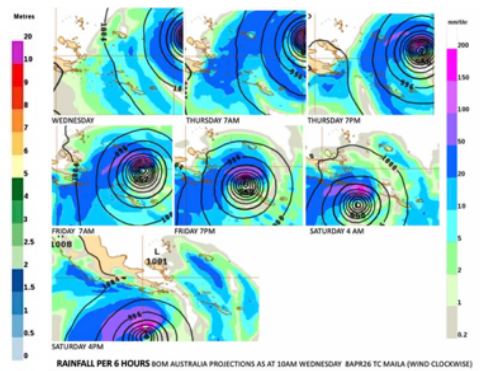
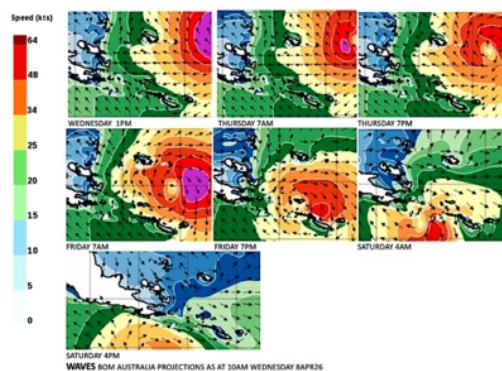
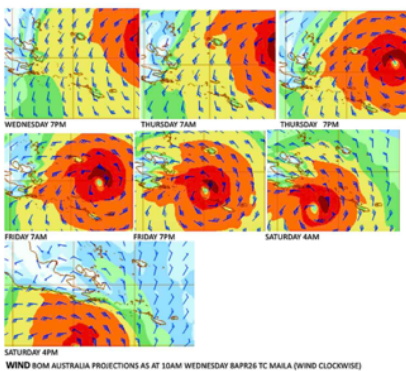
Tropical Cyclone Maila affected many parts of Milne Bay and the Solomon Island chain in April. On the left is the tracking map from its initial Low-pressure system that intensified to a Category 5 and then dropped back down to a Low-pressure system before tracking SW into the Coral Sea. I believe this is the first Category 5 Cyclone in PNG.

The Australian Bureau of Meteorology definition of a Cat 5 cyclone being;

- Extremely dangerous with widespread destruction of buildings and vegetation.
- Maximum mean wind speed greater than 200 km/hour
- Typical strongest gust greater than 279 km/hour

TC Cyclone path April from L, 2nd to Cat 5, 8th to L, 12th

This TC was projected to follow the path most followed, which is SW through the province and down to Cape York Peninsula, but surprisingly it meandered around in a confined area.



Forecasts Bureau of Meteorology April 8th through to 11th

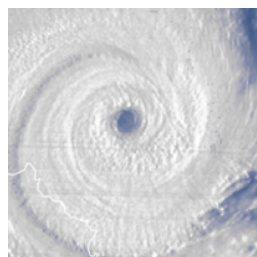
During TC Maila I was assisting the Disaster Office in Alotau on daily projections of Wind, Waves and Rain as these were continually changing. The waves of 6-8m and winds of 34-48knots on Woodlark and Budibudi Atoll over an extended period of time were a concern especially as there was no communication with the people on the atoll. Despite erosion of the main island and inundation of another and the loss of

many homes and food, when reached the people were found safe. Even a baby was born and given the name Maila. Such is the life of our remote islands of Milne Bay. Back in 2000 when I was the area manager that covered Budibudi and other small islands they all had Codan VHF radios with a base station at Guasopa and Alotau and a direct link to Alotau General Hospital, but these fell into disrepair and communication was lost with no mobile network coverage. Now there is talk of Starlink, but that will come at cost.

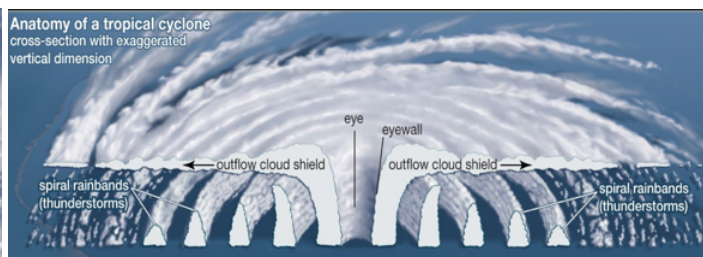


The following diagrams are how an anti-cyclone forms in the Southern Hemisphere. The direction of the wind is affected by Coriolis force, so named by the French Scientist Gaspard-Gustave de Coriolis in a 1835 paper.

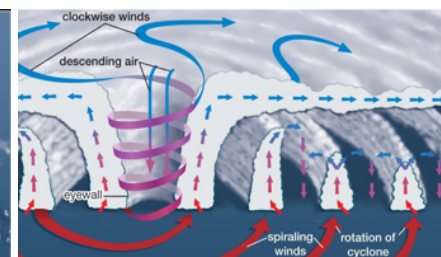
The coriolis force equation is too complicated for me $-2m(\omega \times v')$ Where ω is the angular velocity of the rotating reference frame relative to the inertial frame and v' is the velocity of the object relative to the rotating reference frame



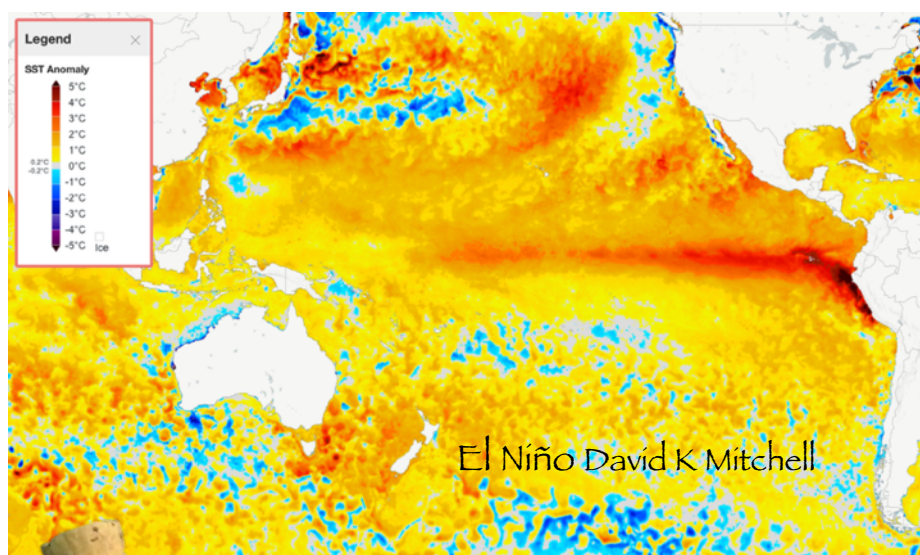
TC Maila Cat 5 Satellite Image



Cross Section



Wind directions



El Niño as at 25 June 2026 source NOAA

An El Niño will dominate the remainder of 2026. In June there is a strong indication of an early warming of sea surface temperature westward across the equatorial Pacific from South America, typical of an El Niño. Noticably in Milne Bay the nights have been clear and cold from late May to early June. Coconut oil turned solid at near 22°C.

Also in our fieldwork to the Duke of York islands the low tides were noticably low with reef flats emerged.

These are signs of an El Nino.



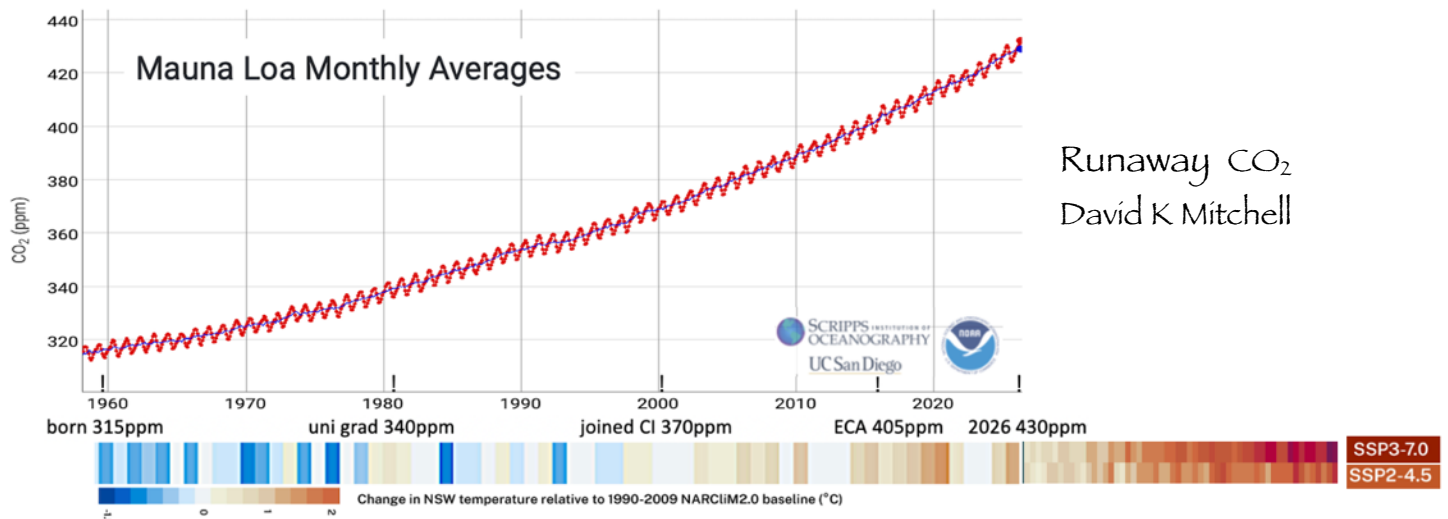
Low tide exposing sea grass flats & fringing reefs Duke of Yorks
Coconut oil turned solid from liquid in the cold.



El Nino education & awareness upper grades Utuan Primary

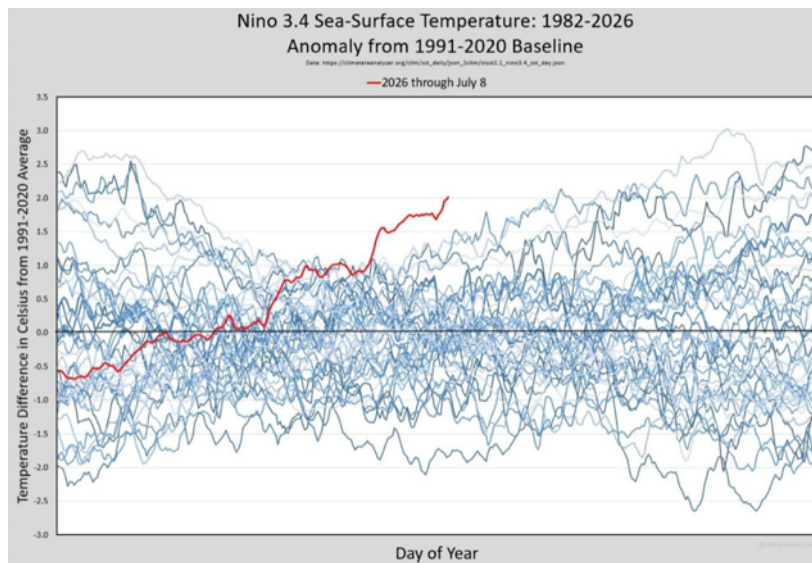
During Climate change work on the Duke of Yorks I therefore took time to explain the recent TC Maila that also affected them with heavy rain, and ENSO with the emerging El Nino. The main points were to;

- Take care of drinking water, fix tanks, clean wells and looks after coconuts
- Take care of food. Plant tapiok, maintain strong *karapua* bananas
- Don't light fires and let them escape into dry forest or gardens



Runaway CO₂
David K Mitchell

Climate Change has become a defining issue in my lifetime. This wasn't really noticeable through the years leading up to my formal learning at University. Even still when I joined Conservation International in 2000 they had a conference 'Defying Natures End' which was about 'No Species Loss'. Though it was apparent to me in the work of defining KBAs (Key Biodiversity Areas) in 2005 soon after that this was heavy based on IUCN species known habitat, the range of which would alter with changing climate domains and ecosystem change. That KBAs and Protected Areas could end up in the wrong place if we do not factor in the effects of climate change. In the 10 years of ECA CO₂ levels have risen by a further 25ppm as the



global green house GHG Emmissions limits set in Paris are being far exceeded. Climate Change is progressively and now noticeably causing unseasonal extremes, the future of which, the next generation will be facing.

Before the El Nino there are already warmer sea surface temperatures underlying it. This has led many to believe that this will amplify this El Nino event with a deep drought across much of PNG as was experienced in 1997-1998, which was the worst drought in memory or PNG's recorded history i.e. 1872 to the present.



On the 5th of June 2026, Alotau Primary School in Milne Bay Province commemorated the World Environment Day based on the theme; **"Inspired by Nature. For Climate. For our Future"**. The teachers and students had been preparing since the beginning of the week and the turnout was magnificent. Songs were composed, role plays were done, poems were read and posters were presented. It was great to see and hear how students understood the environment, the challenges that it faces and the solutions.

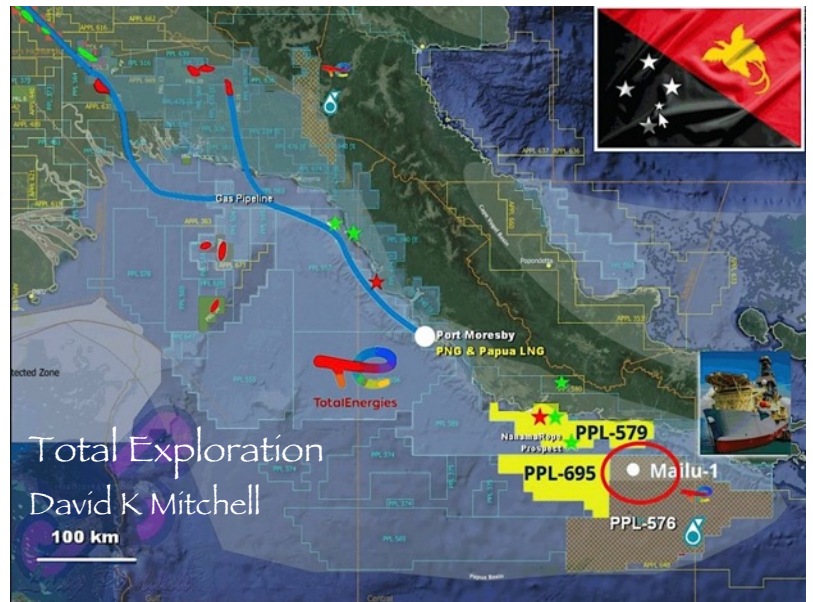
Four students from different grades and three teachers were interviewed, video and image fillings were captured of students and aerial view of the school plus the abbreviations of APS - Alotau Primary School, WED - World Environment Day and 2026. Spending time with the students and teacher whole through the day was rewarding.

In late June ECA attended a TotalEnergies awareness/information meeting in Alotau in which they indicated that they will be doing a deep well exploration for hydrocarbons 60km offshore. Called Mailu-1 it lies within the PPL (Petroleum Prospecting Licence) – 576.

Of note; Paris (AP) A court in Paris ruled on the 25th of June that TotalEnergies must account for its consumers' greenhouse gas emissions, and to report within 6 months on the environmental risks caused by the consumption of its gas and oil products.

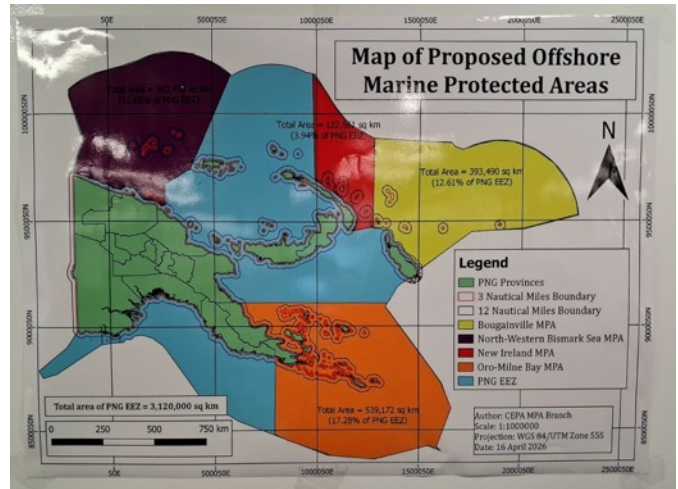
The decision, fell short of requests from the climate organizations who brought the lawsuit, to force the company to reduce its oil and gas production.

The court scheduled a new hearing for January to consider TotalEnergies' new assessment under a 2017 law that requires companies to prevent human rights abuses and environmental risks. It's the first time that the so-called corporate duty of vigilance law is being applied to climate change.



<https://www.learningfornature.org/en/courses/introduction-to-other-effective-area-based-conservation-measures-oecms/>

I did a free online course on OECMs and found it to be really great from which I learnt a lot. The link is above if you are working in environmental management or conservation and would like to also do it.



At the MOS, Melanesian Ocean Summit in Port Moresby under SOMACORE (Solutions for Marine & Coastal Resilience) I was able to present ECA's work on *gwala* as a customary practice as it relates to common law in PNG. Others from the program also presented, so it was a good sharing opportunity. It did surprise me though that CEPA had pasted up a map of 'Proposed Offshore MPAs' that included all the PNG EEZ of Milne Bay Province and beyond, combined with the Northern Provincial boundary. A big orange blob without

any set management. The late Brian Brunton was always pushing discussion on a Milne Bay Marine Park and to me it would be about a detailed multi-use zoned area, of an area similar to that of the orange polygon which in the spirit of the 'Marae Moana' of the Cook Island I'd call the 'ora 'ita'i'isi (caring for the sea).



Field visit to Sikka Island

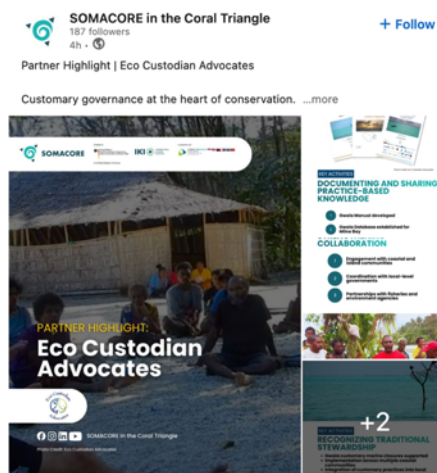


Mawar the dugong

ECAs Sustainability Officer attended the 1st/2026 SOMACORE Coordination Committee Meeting in the week of 20-24 April, on Alor, Indonesia. Partners had an opportunity to present their work progress and for ECA this was on our initiatives in customary marine closure, including the discussion paper on 'The recognition of customary laws and practices in PNG as they relate to customary marine closures'.

There was also a field trip to Sikka Island to see mangrove conservation efforts there. On the way Mawar the dugong was met. Sikka according to the locals is a sacred island of the dead with an ancestral connection with the dugong. Also another initiative was dried fish processing by a women's group that was assisted by the Nautika Foundation.

SOMACORE also assisted to raise the profile of ECA by putting our work on LinkedIn outlining the Discussion Paper and other products that we had produced out of our office.



Steven Taugopi taking video of ENB Seakeepers coral nursery at Pangpang Retreat

In ECA we also learn from other NGOs. In the Duke of Yorks coral nurseries set up by Ailan Awareness and East New Britain Sea Keepers were of interest to us.



In Alotau a one-day inception meeting with National Fisheries Authority team [NFA] brought together officers from the Provincial Fisheries & Marine Resources Division; Commerce Division; the Presidents from Bwanabwana, Louisiade, Yeleyamba and Murua local level governments; ward members of Ware and Brooker, artisanal fishers and the Live Reef Fish for Food Trade operator. The purpose of the meeting was to collect vital practical information from stakeholders to inform the amendment of 2003 Live Reef Fish for Food Trade Management Plan.

The ward member for Ware, Hon. Lynette John in particular was concerned on the lack of awareness in her community on the Live Fish for Food initiative in their customary rights marine tenure waters. From ECA's NGO viewpoint issues were raised in relation to gaps identified in the management plan of, no set TAC or size limits, no survey on the effective population of the targeted species nor their life history such as fish size at first maturity and spawning season. All of grave concern in relation to sustainability of the fishery, even under short term fishing pressure. The fish species targeted play a vital role in the marine ecosystem and the food chain with groupers helping keep a balanced the fish population in the reef.

At the Melanesian Ocean Summit I was also given a chance to talk in a side event on the variance of marine customary closures, their purpose and governace. This was work supported under the Food Security Component of the ADB BRCC program for selected small islands in Manus, East New Britain and Milne Bay Provinces.



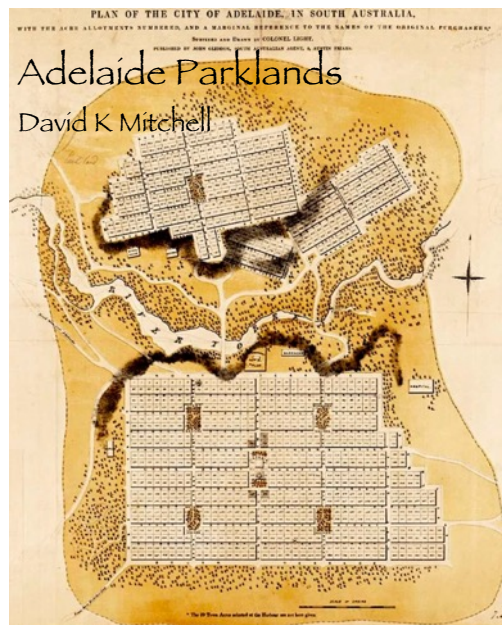
Presenters (white bags) from NFA, CCDA, ECA with participants



Presentation collage of activities within the BRCC



Smoking fish at Giva on Kaileuna Island Milne Bay



The city of Adelaide was designed in 1836 by Col Light, totally surrounded by parklands. Recently the State Government passed a law that allowed some 600+ old growth trees to be cut for a golf course redevelopment which led to public demonstrations 'STOP THE CHOP' which despite petitioning the decision, holding rallies at the parliament and action on the site these didn't stop the tree felling from going ahead.

Colonel Light's original 1836 city plan showing parklands and squares. A recent satellite image showing the parklands. 1. Where I was born, Rose Park, 2 where I grew up Joslin, 3 went to school East Adelaide and 4 Adelaide University where I studied. The North Adelaide golf course where the trees were cut also known as 'Possum Park' is marked * where I incidently worked during 1st year uni semester, mowing tees and watering the greens avoiding flocks of galahs.



Kaurna peoples camps 'Adelaide' painted by Alexander Schramm. First surveys and colonisation painted by William Light A poster created from the LORAX to Care, Speak up, Protect Our Park Lands.

Green spaces, parks, public parklands/gardens, tree lined streets are important in our towns and cities.

Eco Custodian Advocates is thankful for the funding donors who have supported us through different projects, programs, and activities over our journey through our 10 years.

We greatly appreciate the Mychorrhizal Fund who have supported us from Day 1, in a close relationship that included an unforgettable experience with the Manta Rays of Sawasawaga.

Conservation International assisted in the first 3 years as we gained visibility and their Marine Team from Hawaii helped us with NOAA and the US National Fish and Wildlife Foundation Funds in our initial years. Within PNG the UNDP has been a big contributor to our work along the way in a diverse range of opportunities. In recent years other donors especially the foundations of; Synchronicity Earth, Hans Wilsdorf and Full Circle have been a mainstay of our security moving forward. Many other donors have been invaluable in us achieving discrete distinct outcomes. These have all been highlighted in our ECA Newsletters 1-20. Thanks also to the people in government agencies and communities who just 'get it'.



Small lad with his pet turtles Konia Island

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