Tropical Cyclone Harold meets the Novel Coronavirus

Dispatch from the Pacific

Abstract: COVID-19 began to manifest in the Pacific Islands by early March, 2020 starting in the US and French territories spreading slowly to the independent countries of Fiji, PNG and Timor-Leste. The independent Pacific countries responded with aggressive measures, closing borders and establishing curfews. Against this background, Tropical Cyclone Harold, formed on April Fool's Day, began its devastating path through four Pacific countries: Solomon Islands with 27 dead in a ferry accident, ni-Vanuatu whose northern islands, including Santo and Malekula were devastated by Tropical Cyclone Harold with wind speeds greater than 200 km/h. The devastation continued in Fiji, with two tornadoes and devastation, particularly in Kadavu and the southern Lau group. Tropical cyclone Harold struck Tonga at the height of the king tide with resulting storm surge destruction. COVID-19 continues to complicate relief efforts, particularly in Vanuatu. Pacific resilience continues to shine. As of May 3, 2020, sixteen Pacific countries and territories have yet to report their first confirmed case of COVID-19: American Samoa, Cook Islands, Federated States of Micronesia, Kiribati, Nauru, Niue, Palau, Pitcairn, Republic of the Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna. The Pacific continues to lead by example motivated by collective stewardship with actions and policies based on science. Pacific leaders continue to work with WHO to implement COVID-19 management recommendations.

Keywords: COVID-19, cyclones, disasters, environment, Fiji, pandemic, risk communication, Solomon Islands, Tonga, Vanuatu

ELISABETH HOLLAND The University of the South Pacific, Suva, Fiji N Easter Sunday, 12 April 2020, Fiji had 16 cases of COVID-19 (Fiji Health, 2020). Prime Minister Voreqe Bainimarama announced Fiji's first confirmed case of COVID-19—a flight attendant on a Fiji Airways flight from San Francisco to Nadi who roamed around Lautoka and attended zumba class before feeling ill (Fiji Government, 2020a). The announcement was made within a week of the arrival of the WHO test kits. An isolation unit, just outside of the capital city Suva had been staffed since January, along with a test facility set up in February.

Coincident with the announcement of the first COVID-19 case, Prime Minister Bainimarama announced the suspension of all Fiji Airways flights through May 29 (now extended until the end of June), a 14-day lockdown of the port city of Lautoka, isolation of the ill patient, his family and close contacts with thorough contact tracing, a 10pm to 5am curfew, a ban on gatherings of more than 20 people, and a call for social distancing. With case number 9, inter-island transport of people was suspended to prevent the spread of COVID-19 among the islands.

On Thursday, April 2, with the announcement of cases #6 and #7—haircutters in two separate popular local hair salons—Suva was locked down, and contact sports, including touch rugby, a national pastime, and social gatherings, including customary kava gatherings, were forbidden.

The curfew was extended from 8pm to 5am. The contact tracing for case #9, father of case #7 identified 830 contacts (Kumar, 2020)

A woman and her son, with a history of possible COVID-19 exposure, arrived on our remote island at 10 pm on April 2, potentially compromising the health of 139 people on the island who had just completed a 14-day island quarantine (Nand, 2020a). The violation of the ban on interisland transport plus subsequent quarantine violations made the national news. Hundreds of people have been charged for quarantine and curfew violations. Two rugby players were arrested and placed in isolation after violating quarantine restrictions. On April 16, Fiji extended the quarantine period (Nand, 2020b) from 14 to 28 days for returning citizens with 28 days of isolation for positive COVID-19 cases. On May 16, it had been four weeks since Fiji's last confirmation of a new case, and Fiji had only three people completing the required isolation (Figure 1).

According to the WHO situation report #117 released on 16 May 2020, more than 4.4 million COVID-19 cases had been confirmed worldwide. Sixteen Pacific countries and territories remained free of confirmed COVID-19 cases—American Samoa, Cook Islands, Federated States of Micronesia, Kiribati, Nauru, Niue, Palau, Pitcairn, Republic of the Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna.

The independent Pacific island countries of Papua New Guinea and Timor-Leste had 8 and 57 confirmed cases respectively (WHO, 2020). The French associated territories of French Polynesia had 58 cases, and New Caledonia had

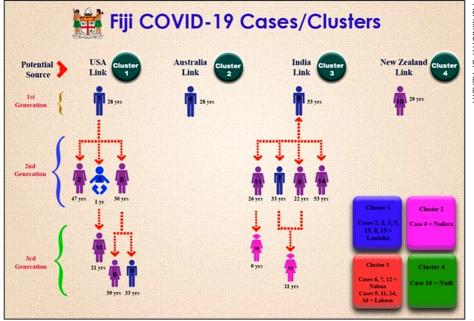


Figure 1: Case isolation and tracing done by Fiji's Ministry of Health for the first 16 confirmed COVID-19 cases.

18 cases. Fiji and New Caledonia are among the very few countries in the world with no new COVID-19 cases for more than 28 days.

The US territories of the Northern Mariana Islands had 19 COVID-19 cases (2 deaths), and Guam, home to a US military base, reported 149 COVID-19 cases (5 deaths) (WHO 2020). More than 20 percent (> 1,000) of the 4,800-person crew of the *USS Theodore Roosevelt*, tested positive for COVID-19 while docked in Guam, including the now famous Captain Crozier, fired for speaking up on behalf of his men. As of 16 May 2020, the ship continues to struggle with managing COVID-19. Thirteen sailors, who contracted COVID, and recovered with two successive negative tests, have now tested positive for the second time (Sandler, 2020).

COVID-19 and Tropical Cyclone Harold

With Fiji, the Pacific and the world anxious about COVID-19, Tropical Cyclone Harold spun into existence on April Fool's Day, and began its devastating Easter path across the Pacific. Imagine trying to practise shelter at home and social distancing while simultaneously preparing for a tropical cyclone that was gaining ferocity. Windows were boarded, evacuation centers were prepared. Adequate food and clean water were secured where possible. Generators were serviced and tested.

In early April, with no confirmed COVID-19 cases, the Solomon Islands government ordered city dwellers to return to their home villages to reduce the density of people in the capital of Honiara in Guadalcanal and to provide security of place (Aqorau, 2020). On April 4, some 600 Are Are residents of Honiara and Malaita boarded the *MV Taemarehu* ferry to make their way home. *MV Taemarehu* ran into the rough seas generated by Tropical Cyclone Harold, then rated as category one. Twenty-seven people were washed overboard and reported missing. Solomon Islands had difficulty transporting additional COVID-19 tests to Australia because Solomon Islands borders were closed. China has since donated the equipment needed to set a COVID-19 test facility in Honiara. The situation was beautifully described in an article by the ever insightful Transform Aqorau (2020), the Solomon Islands permanent representative to the UN, now stranded enroute to take up his new post in New York City.

By Monday, April 6, Tropical Cyclone Harold had intensified to category 5 (Australian scale) with wind speeds in excess of 198 km/h. Four northern islands of the independent nation of Vanuatu: Santo, Pentecost, Ambrym, Malekula and Malo were directly hit by the TC Harold.

Luckily, TC Harold arrived on Santo with the low tide. Luganville, on the island of Santo, the second most populous city of Vanuatu, suffered tremendous damage and struggled to provide food, power and water (Figure 2). In the days immediately after Tropical Cyclone Harold, *Vanuatu Daily Post* reported the following from Luganville:

For Lord Mayor Patty Peter, the experience was overwhelming. In an emotional phone call to media in Port Vila Tuesday. He said, 'We urgently



Figure 2. TC Harold battered schools and residences alike in Vanuatu.

need water, food and shelter at the moment. Many have lost their homes. Schools are destroyed. Electricity is down. I'm urgently calling for help. This is one of the worst experiences of my life.'

Lord Mayor Peter later confirmed that food and water were being distributed, but 'just for today and tomorrow. That's all that we can do'. (Roberts & Selman, 2020)

The town has shrugged off smaller cyclones countless times in the past. 'But this one, like, it's a nightmare. It's a nightmare for all the people in the northern islands,' said Peter.

One of my PhD students launched a social media campaign to rebuild his family home, and his neighbor's homes in Luganville after receiving the news that more than 50 percent of the buildings were destroyed by TC Harold.

Montin Romone, a ni-Vanuatu master's student in climate change at the University of the South Pacific in Fiji, said in an email:

My family on North Malekula are safe despite all the root crops have been totally destroyed. Yesterday, I also was informed by my family on Malakula that my dad's smaller brother died at Santo hospital when TC Harold blew off the roof of the emergency room he was sleeping in. He was so panic as there were no doctors around as well. No electricity due to power cut by the hurricane. Only my smaller brother was there but could not do anything to protect him so he finally died at 1:00 am on that night. As doctors did not allow him to be put into the cold room, so my brother with the help of four other boys had to dig a hole in the municipal cemetery and bury him that evening.

Otherwise, family on Malekula are safe. Unfortunately, I lost two of my cattle but it's better than losing another family member. (Romone, M., email to the author.

With no confirmed cases of COVID-19, Vanuatu has forbidden any relief workers from entering the country. Vanuatu will manage the TC Harold relief themselves, and permit delivery of specifically requested supplies. All incoming supplies are subject to a three day quarantine in the capital of Port Vila before being shipped to the Northern Islands.

Since Vanuatu was hit by record-setting TC Pam in March 2015, the government has committed to building internal capacity for disaster relief. During TC Pam, managing the relief workers and their individual agendas proved to be more difficult than the relief work itself. Recognising the challenge of managing COVID-19 in a small country with limited resources, and only two ventilators, Vanuatu declared a state of emergency and closed its borders in February.

With COVID-19 efforts to repatriate non-citizens, Fiji Airways airlifted at least two flights of expatriates out of the Pacific Islands just hours before Tropical

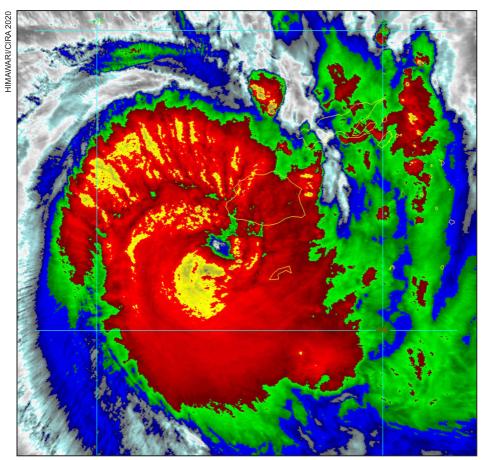


Figure 3: Himawari-8 visualisation of Tropical Cyclone Harold crossing just south of Fiji's main island of Viti Levu on April 8, Fiji time.

Cyclone Harold arrived. By 2am on Thursday, April 8, TC Harold's winds arrived on the main island of Fiji's Viti Levu on a more northerly, and more populated, track than originally forecast. The incoherent eyewall spun off two tornadoes one in Nausori and another in Tailevu. TC Harold generated substantial damage, through many of Fiji's more than 300 islands. TC Harold arrived in Kadavu at midday with the king tide and impacted the small island communities of Buliya, Dravuni, and Narikoso in Astrolabe Reef in the Ono district. A 30 day state of natural disaster was declared for the Viti Levu's Central and Western divisions including Tailevu North, Korovou, Nausori, Nakasi, Beqa and Yanuca and in the district of Nadarivatu, Vatulele, Mamanuca Group, the Yasawa Group, coastal communities in the Coral Coast and along the Sigatoka River in the Nadroga/Navosa province, and the Southern Lau Island group on Fiji's southeastern perimeter (Fiji, 2020b).

During the night of April 8, TC Harold left Fiji to continue onto Tonga passing south of the capital island of Tongatapu (Figure 3). The capital Nuku'alofa experienced the worst storm surge ever seen when TC Harold arrived in the early morning hours of April 9 accompanying the king tide of the full moon. The swathe of destruction focused on E'ua Island and several resorts on the north side of Tongatapu. The Tonga 'no plastics' campaign organised an extensive clean up campaigns along the seawall in Nuku'alofa. Tonga has no confirmed cases of COVID-19. Tonga declared a state of emergency on 19 March 2020, closing its borders completely when Fiji announced its first COVID-19 case.

Climate change, disaster risk management and COVID-19

Fiji and the Pacific leads with the concept of stewardship motivating actions. The 2016 anniversary of record setting Tropical Cyclone Winston was in February, just days after Fiji had been the first country in the world to ratify the 2015 Paris Agreement. With a population of less than a million people, Fiji went on to serve as both the President of the UN to host the UN Oceans Conference and President of the UNFCCC COP23 in 2017.

Similarly, the 2015 record setting Tropical Cyclone Pam crashed into Port Vila, Efate, Vanuatu, during the negotiation of the Sendai Framework for Disaster Risk Reduction. Development donor investments in the region are guided by the Framework for Resilient Development in the Pacific (Forum Secretariat, 2016) which recognised the need to simultaneously address disaster preparedness, climate change and development of low carbon economies.

Symbolic of the collective nature of Pacific culture, Prime Minister Bainimarama called upon Fiji to honor the power of the spirit of *vei lomani*—that profound sense of love and devotion to the protection of our people.

The Pacific leaders are determined to lead by example to prevent the devastation of COVID-19 in their countries. With the fresh memory of late 2019 measles epidemic in Fiji, Samoa, Tonga and American Samoa resulting in 83 deaths in Samoa, Samoan borders were closed in February.

None of the independent Pacific countries have a robust medical or epidemiological research programme, yet these leaders acted on the basis of science while leaders of other countries were still debating whether stay at home measures were required.

Pacific Islands countries suffered tremendously from the diseases brought by early explorers, including smallpox, measles, syphilis and gonorrhea, and the memory still resonates. In recognition of their limited resources and the advantages of their remote location, Pacific countries have acted early to protect themselves and close their borders, with considerable success to date.

The alarm and fear accompanying COVID-19 has galvanised action. Papua New Guinea with an abundance of natural resources and people, plagued by a

lack of adequate medical facilities and decades of struggles, will likely face the greatest challenges in dealing with COVID-19. PNG's 8 confirmed cases were distributed across four provinces.

In recognition of the importance of UN support agencies, like the UN's World Health Organisation, the Pacific leaders welcomed the WHO director Dr Tedras Adhanom Ghehreyesus to the 50th Pacific Islands Forum Leaders meeting in August 2019, establishing an effective network of relations just months before the arrival of COVID-19.

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Professor Elisabeth Holland is the Noarywa-Pacific Chair in Oceans and Climate Change at the University of the South Pacific. In 2007, she was a co-recipient of the 2007 Nobel Peace Prize for her contribution to the Intergovernmental Panel on Climate Change (IPCC). She writes from a remote island in Fiji's Koro Sea where she went to stay out of the way of COVID-19, the disease named by the World Health Organisation (WHO), caused by SARS-CoV-2, the virus named by the International Committee on Taxonomy of Viruses. The island is in the Lomaiviti archipelago. It is a short boat trip from Makogai, a leper colony tended by the Catholic sisters until the 1960s, a promising place to avoid COVID-19. An earlier version of the commentary was published by Asia Pacific Report on 22 April 2020. elisabeth.holland@usp.ac.fj



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