
INTERPRT

Climate ecocide

Preliminary report

Site: Pacific Ocean

Video evidence file: 10 min 20 sec.

Year: 2018

Script

1.0 PROLOGUE 2015

On March 15, 2018. Anote Tong, President of Kiribati made an address at the 4th Plenary Meeting Of the Third World Conference on Disaster Risk Reduction in Sendai, Japan.

1.1 “While cyclone pam was traveling towards Vanuatu, we also saw pictures of Kiribas, Marshall islands and Tuvalu, on the internet and social media, to give some indication of what is happening. These islands were swamped, under water, but on this occasion the water did recede, but there will be a time when the waters, will not recede.

I am pleased to note that the perception is now changing and we witness here in Sendei acceptance that climate change has exacerbated the severity of natural disasters and frequency, thus worsening the impacts on the different communities on different parts of the world.”

2.0 CYCLONE PAM 2015

2.1 On March 6, a tropical disturbance formed northwest of Fiji in the Pacific Ocean (black screen). On March 8, it reached tropical depression intensity as it passed the Solomon Islands.

Assigned the name Pam, it reached category 1 tropical cyclone strength on March 9, and category 3 severe tropical cyclone the following day.

Cyclone Pam reached category 5 intensity on March 12 as it approached Vanuatu, moving through its islands on March 13, with wind gusts of up to 280 kilometers per hour at its peak.

2.2 Cyclone Pam had a devastating impact on Vanuatu’s infrastructure and economy. 17,000 homes were damaged affecting 166,000 people, 71% of the population.

The total economic loss of 449.9 million dollars is equivalent to 64.1% of the country's GDP.

2.3 Arguably the damage from cyclone Pam was compounded by anthropogenic climate change. Warming oceans is one of the primary physical impacts of climate change.

While influenced by many factors, heat from the sea surface is a primary source of energy for cyclone formation. Warmer sea-surface temperatures will increase the probability of stronger cyclones forming.

2.4 Sea Surface Temperature (SST) in cyclone Pam's trajectory over the Western Pacific Region in March 2015 indicated that it was well above average.

3.0 PACIFIC STORM TRACKS 1992-2018

3.1 Storm tracks of major cyclones in the South Pacific from 1992-2018 show a pattern of increase in the intensity of cyclone strength at a rate of about 9 KM/H per decade.

3.2 Wilma (2011) - Cyclone Wilma was the first storm to still be classed as a tropical cyclone by the time it struck New Zealand with 10-minute sustained wind speeds of up to 185 km/h.

3.3 Winston (2016) - Cyclone Winston was the most intense tropical cyclone in the Southern hemisphere on record with 10-minute sustained wind speeds of 280 km/h. Record breaking sustained winds of 300 km/h were observed over Koro Island, Fiji.

3.4 Donna (2017) - Cyclone Donna was the most powerful off-season Southern Hemisphere cyclone ever recorded in the month of May with 10-minute sustained wind speeds of up to 205km/hour.

3.5 The impact of cyclones is further intensified by climate change driven sea level rise.

4.0 SEA-LEVEL RISE 1993-2017

4.1 Between 1993 and 2017, the global average rate of sea level rise was 3.12 mm per year.

4.2 During the same period in the Pacific, the local average rates of sea level rise were significantly higher. For example in Micronesia it was 3 times higher than the global average, about 10 mm/year.

4.2 Sea level rise disproportionately impacts low lying islands and atolls, some that are no more than 2 meters above sea level.

Climate change related displacement has already occurred in Fiji, Vanuatu, Kiribati, the Solomon Islands and Papua New Guinea. This is due to coastal erosion, sea level rise, king tides and storm surges.

4.3 In Vanuatu, on Tegua island, in 2004, the village of Lataw and its 70 inhabitants, moved several hundred meters inland. In December 2005, the United Nations declared these villagers the world's first climate refugees.

Across the Gilbert Islands in Kiribati, coastal erosion is a major issue. On Abaiang island, Tebunigiko village and on Marakei, Antai village have been completely eroded and on Marakei, Rawannawi village is also severely eroded. Drought and saltwater intrusion are major causes for concern.

In Papua New Guinea, Han Island in the Carteret Islands is relocating. 1700 people are being relocated to Bougainville Island. Schools are closing and food gardens are increasingly being damaged by sea level rise.

5.0 THERMAL CORAL BLEACHING 2014-2017

5.1 Coral reefs host over 25% of all marine species globally and are themselves the most biodiverse living ecosystems in the ocean. Bleaching is a process induced by high water temperatures and damages the coral ecosystem.

5.2 Following those in 1998 and 2010, the third major global mass bleaching event began in June 2014 and ended in May 2017.

More than 70% of global coral reef locations have been exposed to bleaching-level stress, many of these multiple times.

5.3 Here we isolate the mass bleaching events in the equatorial Pacific.

5.4 Due to global warming, mass coral bleaching in the Pacific has targeted the Great barrier reef and was caused by the highest occurring water temperatures on record.

The Great Barrier Reef in Australia, the largest coral reef system on the planet is more than 2,400 kilometers in length.

The bleaching of the Great Barrier Reef between March and November 2016 resulted in 30% coral death with the northern third of the reef most severely affected.

5.5 This third mass global coral bleaching event was marked by the four warmest years on record globally: 2014, 2015, 2016 and 2017.

The frequency, duration and intensity of the bleaching events has worsened as global warming has increased. The threat to nonhuman life in the ocean is multiplied by ocean acidification and marine pollution.

The increasing intensity of these events will only continue to magnify the impacts on the Pacific Ocean's Ecosystem and its inhabitants.

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