
Tonga Insurance Payout Acquittal Report for Tropical Cyclone Harold



Kingdom of Tonga

Table of Content

Background Information	4
Event Description	4
Government Preparedness and Response	4
Impacts of the Event.....	5
Perceptions of PCRIC and Government Reconstruction Efforts.....	10
Conclusion and Recommendations.....	12
Annexures.....	13

Foreword

The recurring loss to human livelihood and infrastructure that cyclones cause on our shores and people is a critical concern to me as well as the entire government.

Tragically, in 2020 Tropical Cyclone Harold hit us while we were putting in place resource-consuming systems to assuage and mitigate the impact of the COVID-19 on our economy and fragile health systems. While we can largely commend all in government for the tremendous work to keep COVID-19 at bay, significant work remains in building climate resilience, systems and infrastructure—Given that climate change is the number one challenge for our beautiful nation, the government remains committed to seeking ways and enhancing partnerships which offer adequate intelligence and intelligence information system to forewarn and improve the level of preparedness when these untoward cyclones hit our shores.

Additionally, we are engaged in partnerships which help strengthen our climate finance systems and equip us with the necessary systems to attract and report on climate finance; and lastly, we have taken a rapid response insurance relief package with the Pacific Catastrophe Risk Insurance Company (PCRIC) which ensures that in the unlikely and unfortunate event of cyclones, that we have the immediate and necessary cash injections to relief our people who are traumatized by the sorts of devious loss that cyclones inflict on us.

To this end, the partnership with PCRIC is one that we value and will continue to seek ways in which our people can be better served not just through response, but prevention.

.....

Hon Tevita Lavemaau

Minister of Finance and National Planning

Background Information

Event: TC Harold	
Country	Kingdom of Tonga
Institution	The Ministry of finance and National Planning
PCRAFI Reference Number	
Report Author	Mrs Balwyn Faotusia
Report Author's Title	Tonga Insurance Payout Acquittal Report for Tropical Cyclone Harold
Type of disaster	Tropical Cyclone:
Event Date	9 April 2020
Insurance Payout Date	18 April 2020
Report Date: (Within six months after insurance payout)	23 October 2020
Amount of Insurance Payout	US\$ 4.5M
Amount Used to Date	US\$ 3.7M
Remaining Balance to Date	US\$ 0.8M ¹

Event Description

Tropical Cyclone (TC) Harold was the first Category 5 severe tropical cyclone anticipated to hit the South Pacific basin since Cyclone Gita in 2018. Globally, in 2020, Harold was the most intense tropical cyclone. It was first noted as a developing tropical low within a trough of low pressure during April 1, while it was located to the east of Papua New Guinea. Over the next day, the system moved south-eastwards over the Solomon Sea, before it was classified as a tropical cyclone and named Harold by the Australian Bureau of Meteorology. The system moved into the Fiji Meteorological Service's area of responsibility on April 2 and began to explosively intensify by April 3, reaching Category 4 status by April 4 on both scales. The next day, it further strengthened into a Category 5 severe tropical cyclone, the highest rating on the Australian scale. It made landfall on Espiritu Santo on April 6. Shortly afterward, the Joint Typhoon Warning Center (JTWC) upgraded it to a Category 5-equivalent cyclone on the Saffir–Simpson scale. It maintained this status for only six hours before being downgraded back to Category 4.

Government Preparedness and Response

- On 7 April 2020 – The Fua'amotu Tropical Cyclone Warning Center (FTCWC) was activated to provide 'Tropical Cyclone Advisory' to trigger the preparedness and response.
- On 8 April 2020- Government of Tonga declared 'State of Emergency' for the preparedness and response to TC Harold.

¹ Please note that the US\$0.8m has been committed and will be fully drawdown by end of this financial year, 2020/2021.

-
- On 9 April — TC Harold entered Tongan water around 1am in the morning; impacted Tonga, mainly Tongatapu, 'Eua and Ha'apai. NEMO mobilized Initial Damage Assessment (IDA) team to the field.
 - No loss of life reported. Damages to some households in Tongatapu and 'Eua. Storm/sea surge combined with high tide inundated coastal areas in Tongatapu, 'Eua and Ha'apai. There were some major damages to public infrastructure in coastal areas, especially to the Wharf and roads around the coastal sides in Tongatapu, 'Eua and Ha'apai.
 - His Majesty's Armed Forces (HMAF) and Tonga Police mobilized to clear the road blockade from fallen trees, fallen archway, debris and other materials deposited by cyclone on main roads.
 - On 9 April at about 7pm - National Emergency Management Committee (NEMC) meeting called to discuss the impact of TC Harold to Tonga and plan for the response.
 - On 11 April at about 9am- A Joint NEMC and National Task Force meeting was called to discuss COVID19 and TC Harold Response
 - On 11 April at about 2pm — A Development Partners meeting was called to update on impact and plan for response
 - On 14 April — An Inter cluster meeting was convened at 12pm to discuss the IDA report and response

Impacts of the Event

The whole of Tonga was under the TC Harold influence starting 1:00am 9 April, 2020. Strong winds and storms were felt across Tongatapu, 'Eua, Ha'apai and Vava'u. Sea surge and heavy damaging swell combined with King tide impacted most of the coastal areas. No injuries or deaths were reported in Tonga. However, there were some serious damages to The Wharf and public infrastructure along the coastal areas in Tongatapu, Ha'apai and 'Eua. Additionally, there was minimal damages in Vava'u. Although no damage was reported in Niuatoputapu and Niufo'ou, in Tongatapu and 'Eua (mentioned above) significant damage which signals food drought.

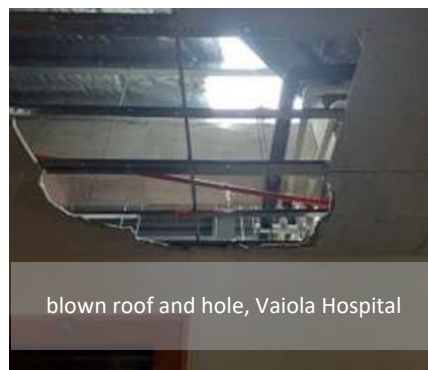
Tongatapu

A storm surge nearly a metre above the king tide running inland flooded the areas and brought sand, gravel and debris. Storm Surge and wind affected coastal areas with inundation to infrastructures.

The wind and sea sprays affected the plantation. No major damage to infrastructures but road blockades in many areas. The power was off in some places due to fallen poles but restored quickly in many parts. Some houses reported damage. Due to flooding on coastal areas, the roads were blocked by debris deposited by were cleared early by His Majesty's Armed Forces (HMAF), Tonga Police and Tonga Fire and Emergency Services with the support from NEMO. Some minor damage was observed at international berths at Queen Salote Wharf in Nuku'alofa but now operational.

Houses including beach resorts along the south coast line of Tongatapu were damaged by winds and floods from storm surge.

Liku'alofa Beach Resort, on Tongatapu's western coast and the Vakaloa Resort in Kanokupolu Beach were destroyed by TC Harold. Most of the resorts along the coast line have reported some damages. For the detail of damages to the households and needs, refer to the table in following sections from the Initial Damage Assessment Report.



Vava'u Islands

There were no major damages to people's properties. Plantations also remain unharmed. There is minor damage to the wharf in Falevai. Families residing in coastal areas of 'Utungake experienced some impacts of storm surge but no serious harm to the individual and property. There was no major impacts regarding the hospital. All public services in Vava'u remained intact despite strong winds and heavy rainfall.

Ha'apai Islands

There was no serious damage to private buildings and property in Ha'apai Island groups. The storm/sea surge combined with high tide has rendered some damages to roads and infrastructures. The main Wharf in Pangai, Foa causeway and Holopeka road which were damaged during TC Tino have suffered major damages again during/by TC Harold too. Electricity went off for the period but restored by now. Total number of self-evacuees to Later Day Saints (LDS) chapels in Pangai, Fangale'ounga, Faleloa, Loto Foa and Ha'ano were 135 who have returned back to their home after cyclone passed away.

'Eua Island

'Eua was hardest hit by TC Harold. Storm surge caused severe damage to the wharf, roads and infrastructures. Coastal area of 'Ohonua and Tufuvai has suffered serious damage. Total 180 people were sheltered in 11 evacuation centres across 'Eua Island; all have returned to their home but 1 family of 6 members in Angaha village. The road connecting Tufuvai village to 'Ohonua village was completely damaged. The cemetery in the area was also inundated and were damaged. The power/electricity went off in some parts of Island. Restoration work is ongoing. As per the IDA report, 15 houses are completely destroyed and 31 houses suffering some level of damage.



Road damages by sea surge in 'Ohonua to Houma, 'Eua



Road damages by sea surge in 'Ohonua to Houma, 'Eua



Taufa'ahau Wharf at Pangai



Holopeka Road

As depicted in the above pictures, overall, the major impact of TC Harold was felt around the coastal areas, mainly due to storm/sea surge and strong winds. IDA team covered 1,700 households in Tongatapu and 889 in 'Eua. There were a total of 31 houses destroyed and around 400 houses have suffered some level of damages all together in Tongatapu and 'Eua.

See the table below for appreciation of the damage.

Infrastructure

Public Infrastructure around the coast line was severely affected in Tongatapu, 'Eua and Ha'apai. The Wharf in 'Eua was completely damaged and usable. The Wharf in Pangai, Ha'apai also suffered second damage after TC Tino. Wharf in Nuku'alofa was also inundated from surge water but fortunately there is no serious damages, only debris collected by water. Fortunately sea wall projects in 'Ahau, Kolovai and Navutoka suffered no damage by sea surge and cyclone.



Nafanua Wharf and area around the wharf in 'Eua



Coastal Road from Tufu to 'Ohonua in 'Eua

Damage to Households

In Tongatapu, 16 houses and in 'Eua 15 houses were reported to have been completely damaged. Around 10% of other houses in Tongatapu and 'Eua suffered some level of damages.

Preliminary findings found that most other houses suffered nothing but household flooding which is expected during cyclones. The storm left most houses inundated and once the storm cleared, they were overladen with debris needing clearing. The severest of instances was where kitchen supplies, bedding and other non-food items got damaged.



A house damaged by TC Harold in 'Atataa Island



Siesia Island inundated by TC Harold, Tongatapu

Damage to the Public Services

The electricity as it happens in all cyclone was off across the Islands in Tongatapu, 'Eua and Ha'apai. Partly it was switched off by Tonga Power Limited to avoid injuries from fallen

electric pole and the current flowing on water. It has been restored fully in Vava'u and Ha'apai. Some parts in Tongatapu and 'Eua are still out of electricity. Internet services has been also interrupted during the cyclone, now coming back to normal. Water services to individual households in Nuku'alofa and 'Eua has suffered minor damages, but most functioning well. The problem is with the inundation of water source and supply during the cyclone.

Damage to Food and Agriculture

As most of the houses around coastal areas were inundated, existing food reserve in some houses were damaged by the flood.

Agriculture is another main sector TC Harold impacted on. Banana plantations could not resist the storm in most instances; and this together with other damage bodes difficult times for food security in the months ahead.



Damage to Tourism Sector

Tourism sector, the business which is already to almost closure due to COVID-19 impact, have again been hit hard by TC Harold. The infrastructure supporting tourism, access road and resort itself has been severely damaged in many places, in Tongatapu and 'Eua.



Vakaloa beach resort,
Kanokupolu



Ovava Tree Guest House in
'Eua

Perceptions of PCRIC and Government Reconstruction Efforts

The PCRIC payout has assisted Tonga with the rebuilding of houses that were completely and severely damaged by TC Harold. Six out of these houses have been completely reconstructed to date. The house reconstruction project was constructed to climate-resilient standards. We were able to visit these six houses and interview two households about their reaction/feeling towards their new house and how it has changed their lives.

Household 1



Photo caption: House of Setefano Mahe at the village of Lapaha where his daughter and her children occupy.

Mele Uaisele, daughter of Setefano Mahe of Lapaha village whose house was completely destroyed by the devastating event of TC Harold was overwhelmed with the help of the government in rebuilding a new house for her family. According to Ms. Uaisele she said,

“Our house was completely flattened by the wind when the Cyclone hits. I lost hope in losing what we used to call home. I know we had to take shelter in anyone’s home for years because we cannot afford to build a house to fit 13 of us who live here.

Now, me and my family are fortunate enough to be a part of the Government immediate- response on their disaster-relief support. The 13 of us can easily fit into this house that includes me and my 6 children. We now lived in a new and improved home that it will take years for us to be able to build within a year. I cannot describe how happy I am seeing a new house where my family can fit, and my children are proud to call their home. I would like to convey our sincere appreciation to the government for giving us cyclone-resilient home to live.”

Household 2



Photo caption: House of Sione Finau at the village of Popua where his granddaughters standing on their doorway.

Mrs. Mele Veikoso daughter of late Sione Finau of Popua was also take part in this interview. According to Ms. Veikoso she said that their home was identified as being severely damaged by TC Harold. Due to the location of their house at Popua, living close to the coastal area makes their house prone to storm surge and high tide. Ms. Veikoso said that she and her brothers and their respective families lived together during the Cyclone when it blown off all their roof sheets and took off their kitchen. According to Mrs. Veikoso she said,

“We are beyond blessed to be part of the government reconstruction support. We never thought that there will be a chance like this for us. It was a difficult time because of the restrictions imposed by the pandemic and has put us into lot of grief. We did pray for speed recoveries and that is when miracle stand right before our eyes -a new home.

Due to us being unable to contain our happiness, we do all necessary help for the construction workers by feeding them even held a little grand opening after the house was completed. I applaud everyone especially the government for aiding these rapid recoveries and delivering us this beacon of good governance.”

Conclusion and Recommendations

Following from the above, there is no doubt that the damage caused by TC Harold was egregious. Today, some parts of the country still experience interruptions on internet/communication. And as a consequence, it is not easy for the government to measure the full extent of the damage of TC Harold save to say this report is comprehensive but not conclusive. The cyclone has a big impact on agricultural sector, individual households, public infrastructure (mainly wharf and roads in ‘Eua and Ha’apai) and on tourism sector, especially the buildings and access roads to the resorts on coastal side. Further worsened by the Covid-19 pandemic, there is therefore a need to:

- Determine the level of support for the houses which are completely destroyed, a detail assessment of individual houses is required.
- Wharf and roads in Ha’apai and Vava’u across the coastal areas which were damaged by TC Tino in February this year were hit hard again by TC Harold. Across the Kingdom of Tonga, there is a need for comprehensive risk assessment of coastal infrastructure and response to reduce the risk so that all wharf, jetties and coastal roads including causeways are able to sustain the potential impact in future cyclones if any.
- Detail assessment of damage to the resorts and beach houses build for tourism is required to define the support. ‘Build Back Better’ approach is required to ensure these infrastructures sustain the impact in future.
- Psychosocial support to the communities and individuals who have suffered severe impact by TC Harold.

Annexures

Data from IDA Tongatapu

District and Community	Number of House Damaged			Type of Damage			
	Yes	No	Total	No Answer	Minor Damage	Major Damage	Totally Damaged
Kolofo'ou	71	286	357		58	11	2
Kolofo'ou		3	3				
Ma'ufanga	5	26	31		5		
Nukunukumotu		5	5				
Popua	41	193	234		35	5	1
Tukutonga	25	59	84		18	6	1
Kolomotu'a	40	235	275		34	4	2
Kolomotu'a	38	226	264		33	3	2
Tofoa	2	9	11		1	1	
Kolovai	30	259	289		26	2	2
Ahau	5	51	56		5		
Fo'ui	1	6	7		1		
Ha'atafu	6	34	40		6		
Ha'avakatolo	5	39	44		5		
Kanokupolu	4	53	57		3	1	
Kolovai	9	76	85		6	1	2
Lapaha	56	103	159		44	11	1
Hoi	12	40	52		10	2	
Kolonga	3	2	5		2	1	
Lapaha	30	41	71		22	8	
Makaunga	3	4	7		3		
Manuka		1	1				
Navutoka	1		1				1
Niutoua	1		1		1		
Nukuleka	2	6	8		2		
Talasiu	4	9	13		4		
Nukunuku	53	135	188		43	9	1
Houma	36	83	119		30	6	
Nukunuku	17	52	69		13	3	1
Tatakamotonga	69	222	291		57	10	2
Fatumu	17	43	60		17		
Ha'asini/Hamula	16	57	73		13	3	
Haveluliku	6	16	22		6		
Lavengatonga	9	29	38		8	1	
Nakolo	9	43	52		6	3	
Tatakamotonga	12	34	46		7	3	2
Vaini	64	77	141	1	36	21	6
Longoteme	1		1		1		
Pea	24	26	50		12	9	3
Tokomololo	8	22	30		5	1	2
Vaini	13	10	23	1	7	5	
Veitongo	18	19	37		11	6	1
Total	383	1317	1700	1	298	68	16

District and Community	Non-Food Item (NFI) Needs of Household								
	No NFI	Kitchen Kit	Beddings	Clothes	Drinking Water Storage	Agricultura	Shelter Kit	Hygiene Kit	Other NFI Needs
Kolofo'ou	148	68	78	46	108	30	73	118	56
Kolofo'ou	1	0	1	0	0	0	0	1	1
Ma'ufanga	16	1	1	0	3	2	4	5	7
Nukunukumotu	5	0	0	0	0	0	0	0	0
Popua	118	38	31	16	62	24	38	66	34
Tukutonga	8	29	45	30	43	4	31	46	14
Kolomotu'a	124	50	42	14	62	36	58	82	44
Kolomotu'a	121	49	41	14	56	34	55	80	44
Tofoa	3	1	1	0	6	2	3	2	0
Kolovai	248	9	7	3	11	22	11	11	6
Ahau	52	0	1	0	0	3	0	1	1
Fo'ui	6	1	1	0	0	0	1	1	0
Ha'atafu	25	3	1	0	6	5	5	6	0
Ha'avakatolo	38	0	0	0	0	3	3	0	2
Kanokupolu	57	0	0	0	0	1	0	0	0
Kolovai	70	5	4	3	5	10	2	3	3
Lapaha	39	57	42	23	75	43	59	82	24
Hoi	12	26	12	3	32	7	20	30	9
Kolonga	0	5	4	3	4	3	4	5	2
Lapaha	23	16	19	14	26	19	22	31	10
Makaunga	1	1	0	1	3	4	3	3	0
Manuka	0	0	0	0	0	0	0	0	1
Navutoka	0	1	1	1	1	1	1	1	0
Niutoua	1	0	0	0	0	0	0	0	0
Nukuleka	1	2	2	0	3	4	3	3	0
Talasiu	1	6	4	1	6	5	6	9	2
Nukunuku	93	32	21	10	22	21	30	14	26
Houma	51	24	16	7	20	18	25	12	11
Nukunuku	42	8	5	3	2	3	5	2	15
Tatakamotonga	66	108	76	27	141	134	113	163	84
Fatumu	23	17	17	5	17	31	23	28	10
Ha'asini/Hamula	25	12	6	2	15	7	12	13	38
Haveluliku	2	9	7	2	11	13	9	15	5
Lavengatonga	1	23	19	6	22	23	7	33	0
Nakolo	9	30	13	4	43	38	35	43	7
Tatakamotonga	6	17	14	8	33	22	27	31	24
Vaini	36	68	52	37	74	75	65	76	19
Longoteme	0	1	1	1	1	1	1	1	0
Pea	15	24	17	13	22	27	22	27	5
Tokomololo	7	12	10	8	17	20	13	17	4
Vaini	3	11	8	6	13	8	14	10	3
Veitongo	11	20	16	9	21	19	15	21	7
Total	754	392	318	160	493	361	409	546	259

'Eua

	Division/District / Village	Households	Population			Level of Damage			
			Male	Female	Total	1	2	3	4
	'Eua	889	2,489	2,461	4,950	1	2	3	4
	'Eua Motu'a	511	1420	1380	2800				
1	Kolomaile	97	265	257	522	93	2	2	
2	Houma	55	130	148	278	50	1	4	
3	Ohonua	221	630	616	1,246	211		2	8
4	Ta'anga	37	108	84	192	31			6
5	Tufuvai	41	110	121	231	41			
6	Pangai	60	177	154	331	60			
	'Eua fo'ou	378	1069	1081	2150				
7	Angaha	64	187	200	387	56	3	4	1
8	'Esia	38	106	125	231	37	1		
9	Fata'ulua	37	124	107	231	37			
10	Futu	50	119	139	258	48	1	1	
11	Mata'aho	50	138	128	266	45	4	1	
12	Mu'a	29	80	81	161	28	1		
13	Petani	58	149	128	277	56	2		
14	Sapa'ata	23	85	75	160	22	1		
15	Tongamama'o	29	81	98	179	28	1		
		889				843	17	14	15

Other Support Received by the Government

- On 9 April, NEMO sent the team with tarpaulin to temporarily cover the roof blown away from TC Harold of medical ward in Vaiola hospital.
- Tonga Power Limited has restored power in most of the places and continues working to bring services back to normal in all places
- Joint NEMC/NTF meeting was called at 9am 11 April to discuss response on both COVID-19 and TC Harold. Development partners meeting was called at 1pm to update the situation and discuss the response.
- NEMO has mobilized team on 13 April to 'Atataa and Pangaimotu and distributed
 - 4 tents
 - 4 Hygiene kits
 - 8 Water container (jerry-cans)
 - 16 solar light
- NEMO has sent an immediate response team to 'Eua with relief items, as below, for the distribution to the families who are on urgent need. Team comprised of NEMO and Tonga Geology.

Items	Quantity
Diesel	2drums (2@200Literes)
Drinking water	20 pack
Hygiene Kit	40
Solar Light	40
Water Container	30
Small tents	10
Chainsaw	2
Oil Pack	30x4@1 litres
Stroke Oil	2x2@4 litres
Petrol drum	1@200 litres

- NEMO, in coordination with Caritas, Tonga National Youth Congress and Tonga Red Cross is covering immediate relief distribution to the houses in districts of Kolofo'ou, Kolomotu'a, Kolovai, Nukunuku and Vaini and sending
 - 12 tents for the houses completely destroyed
 - 36 tarpaulin for the houses with the major damages and
 - 48 Hygiene kits for total 48 houses needing hygiene kit supply.
- Tonga Red Cross is providing immediate relief to the damaged households and families in
 - Lapaha- 1 completely damaged, 11 major and 44 minor,
 - Tatakamotonga- 2 completely damaged, 10 major and 57 minor
 - Vaini- 6 completely damaged, 21 major and 36 minor