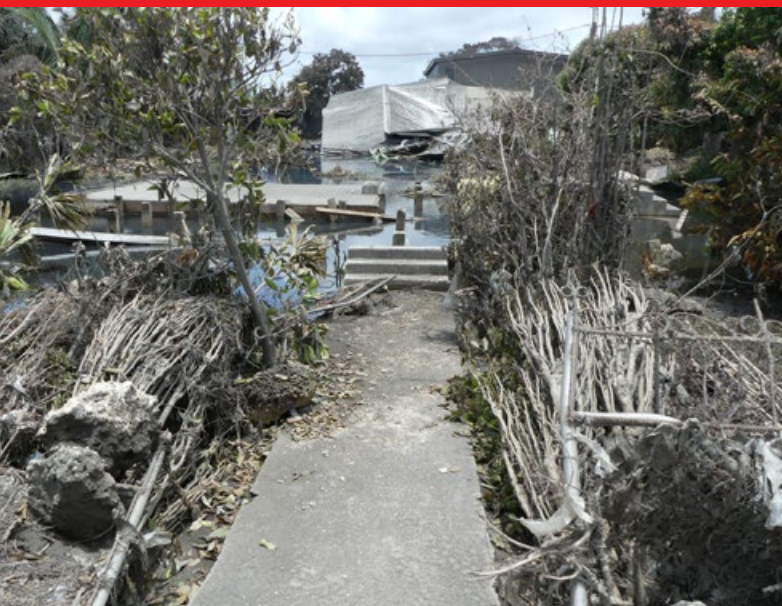


# Tonga National Infrastructure Investment Plan 2021–2030



## Hunga Tonga–Hunga Ha’apai Volcanic Eruption and Tsunami update





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T1	=	\$0.44
\$1	=	T\$2.29



# Contents

Abbreviations	3
Executive Summary	4
1. Introduction	6
2. The Hunga Tonga Hunga–Ha’apai Event and Other Challenges	8
3. Infrastructure Projects Emerging from Hunga Tonga–Hunga Ha’apai, Plus Other Developments	11
4. Government-Priority List	21
5. Opportunities for Infrastructure Financing	37
6. Conclusion	41

## Appendices

Annex 1: The Stakeholders	42
Annex 2: The National Infrastructure Investment Plan Committee	43
Annex 3: Multi-Criteria Analysis Methodology	45
Annex 4: Organizational Outcome Groupings of the Tonga Strategic Development Framework, by Pillar	47
Annex 5: Infrastructure Sectors Categories	49
Annex 6: Development Partner Consultations after the Hunga Tonga–Hunga Ha’apai Eruption	50
Annex 7: Development Partner Consultation	52

# Tables

Table 1:	Copy of Table 15 World Bank GRADE Report	11
Table 2:	Project Groupings from the National Infrastructure Investment Plan, 2021-2030 Hunga Tonga–Hunga Ha’apai Update Report	13
Table 3:	Project Groupings from the Revised National Infrastructure Investment Plan, 2021-2030	13
Table 4:	Number of Projects Evaluated for Each Criterion, by Score	14
Table 5:	Overall Scores and Groupings Based on Sensitivity Analyses	16
Table 6:	Cabinet Modifications to the Group 1 Project Order Proposed by the National Infrastructure Investment Plan Committee	22
Table 7:	Cabinet-Approved Project Groupings from the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021-2030	25
Table 8:	Cabinet approved Project Groupings from NIIP3 and NIIP3-HTHH	25
Table 9:	Combined Government Priority Project List for the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021-2030	26
Table 10:	Combined Project List, by Priority Group and Tonga Strategic Development Framework Pillar	30
Table 11:	Combined project list by Priority Group and Location	30
Table 12:	Combined Project List by Priority Group and by Government Body or Public Enterprise	31
Table 13:	Combined Project List by Priority Group and Infrastructure Sector Category	32
Table 14:	Likelihood of Project Economic Viability, by Priority Group	33
Table 15:	Summary of Potential Options for Funding of Group 1 Projects	38
Table 16:	Funding Options for Group 1 Projects	39

# List of figures

Figure 1:	Average Score for Each Criterion	14
Figure 2:	Average Score for Each Criterion, Using Different Weightings	20

# Abbreviations

<b>ADB</b>	Asian Development Bank
<b>CEO</b>	chief executive officer
<b>DFAT</b>	Department of Foreign Affairs and Trade (Australia)
<b>DRM</b>	disaster risk management
<b>EU</b>	European Union
<b>GPA</b>	Government Priority Agenda
<b>HMAF</b>	His Majesty's Armed Forces
<b>HTHH</b>	Hunga Tonga–Hunga Ha'apai
<b>IRR</b>	internal rate of return
<b>JICA</b>	Japan International Cooperation Agency
<b>MCA</b>	multi-criteria analysis
<b>MDA</b>	ministry, department, and/or agency
<b>MOF</b>	Ministry of Finance
<b>MOI</b>	Ministry of Infrastructure
<b>NEMC</b>	National Emergency Management Committee
<b>NGO</b>	nongovernment organization
<b>NIIP</b>	National Infrastructure Investment Plan
<b>NIIP-C</b>	NIIP Committee
<b>NIIP3</b>	National Infrastructure Investment Plan, 2021–2030
<b>NIIP3-HTHH</b>	Revision of the NIIP3 to include the government's response to the HTHH event
<b>NPD</b>	National Planning Division
<b>NSS</b>	NIIP support staff
<b>NZMFAT</b>	New Zealand Ministry for Foreign Affairs and Trade
<b>PCN</b>	Project Concept Note
<b>PPA</b>	Project Proposal Application
<b>TCL</b>	Tonga Cable Limited
<b>TEFS</b>	Tonga Emergency Fire Services
<b>TSDF</b>	Tonga Strategic Development Framework
<b>UN</b>	United Nations

# Executive Summary

The impact of the Hunga Tonga–Hunga Ha’apai (HTHH) eruption, which took place in January 2022, was felt around the world. In addition to the significant human trauma it caused, the eruption severely damaged infrastructure to the islands in the Tongatapu, ’Eua and Ha’apai groups. The Government of Tonga appreciates the significant support it has received from the diaspora, development partners and other friends of Tonga. The allocation of these resources focused mainly on immediate recovery work.

Before the eruption, Tonga had also been receiving much appreciated support from development partners to prepare for the arrival of COVID which happened within weeks of the eruption. While there was some minor infrastructure funding, most of this support was non-infrastructure related. The overall COVID situation made recovery from the HTHH even more challenging.

The initial World Bank analysis estimated the infrastructure damage to be about T\$48 million. The government responded by establishing a recovery committee based on a cluster mechanism for responding to extreme events. The committee initiated a response plan that revised the initial estimate in order to mobilize sufficient resources more effectively. Its report identified infrastructure needs totaling some T\$315 million.



Source: New Zealand Defence, <https://www.nzdf.mil.nz/nzdf/significant-projects-and-issues/tonga-response>



Source: Australian Defence, [https://images.defence.gov.au/assets/Home/Search?Query=20220310ran8625149\\_0156.jpg](https://images.defence.gov.au/assets/Home/Search?Query=20220310ran8625149_0156.jpg)

This revision of the government’s National Infrastructure Investment Plan, 2021–2030 (NIIP3) to include the government’s response to the HTHH event (NIIP3-HTHH) is part of the longer-term mobilization of resources to repair the resulting infrastructure damage within the context of the wider infrastructure needs. As a result, this report covers both the needs directly attributable to the HTHH event and the needs that have emerged since the start of the NIIP3. There are 47 new projects identified for the NIIP3-HTHH, 21 of which are fully attributable to the HTHH event (including the eruption, tsunami, and ashfall), and 7 partly attributable.

The same mainstream process used for the NIIP3 was applied here. This included the active participation of staff members from the National Planning Division (NPD); Ministry of Finance (MOF); and nearly all the other ministries, departments, and agencies (MDAs), as well as public enterprises.

In addition, the same multi-criteria analysis (MCA)—listed in section 7.3—was applied to the list of new projects, which was then combined with the list of NIIP3 projects still seeking funding. The resulting list was considered by the NIIP Committee (NIIP-C), with top level representation from all the MDAs and public enterprises. The NIIP-C accepted the list, with the recommendation that two policing projects be shifted from Priority Group 2 to Priority Group 1, in recognition of the important impact they would have on improvements in the areas of governance, law and order, and human rights.

The NIIP-C also noted the large number of projects, totaling some \$1.4 billion, or 10–15 years of possible funding. The committee was also concerned that some low-ranking projects were still critical for the operation of the government, and needed to be given more consideration in future prioritizations.

Based on further review, on March 1<sup>st</sup> 2023, the Honorable Prime Minister and the Cabinet approved the recommended list with some modifications to the ranking of the priority projects in Group 1, taking into account the current Government Priority Agenda (GPA).

# 1. Introduction

The Tonga National Infrastructure Investment Plan, 2021–2030 (NIIP3) was approved by the Cabinet in August 2021. The NIIP3 included government priorities covering all infrastructure areas. The plan mainstreamed international infrastructure investment best practices into the Government of Tonga’s integrated planning and project cycles, which include regular updates to ensure alignment with the second Tonga Strategic Development Framework (TSDF II), which covers 2015–2025, and with each administration’s Government Priority Agenda (GPA).

Within less than half a year of NIIP3 being approved, Tonga faced major changes that have significantly modified the conditions since NIIP3 was approved, including:

- i) the election of a new government, with a new Prime Minister and modified policy priorities, accompanied by growing legal challenges to the election results;
- ii) disruptions to supply lines, including shipping, and accelerating world inflation;
- iii) the HTHH volcanic eruption and the associated tsunami and ashfall;
- iv) the arrival of COVID in the Kingdom, along with a strong strain of flu, followed by lockdowns; and
- v) significant aid funding and related activities intended to address these geological and health challenges, which had to be delivered without direct contact.



Nuku'alofa: cleaning outside post office, NZ High Commission office behind.



While all these developments have had consequences for the well-being of the people of Tonga, the eruption, tsunami, and ashfall were the most disruptive to infrastructure. They damaged coastal infrastructure in the islands of Tongatapu, 'Eua and Ha'apai, including coastal protection structures, ports, roads, causeways, utilities, housing, schools, community facilities, churches, businesses, and many resorts. The domestic and international internet cables were destroyed, cutting off the country's connections.

Ashfall had limited direct impact on the infrastructure, but required extensive work: cleaning roofs, fixing gutters, and replacing downpipes. There are likely longer-term consequences for the maintenance of buildings and vehicles. The ash also damaged parts of the power distribution system.

Before the arrival of COVID, border closures were already delaying progress on infrastructure works. They also hindered the initial emergency response and recovery activities on the islands of Hunga Tonga and Hunga Ha'apai, which were extensive. The people of Tonga very much appreciated this support from both government and nongovernment sources. COVID's arrival in Tonga, which occurred shortly after the Hunga Tonga–Hunga Ha'apai (HTHH) volcanic eruption, and the associated lockdowns, further disrupted the clearing-up and recovery efforts.

This report presents a revision of the NIIP3 government priority list; and its preparation was the second time that the mainstreamed procedures have been applied. The report integrates the infrastructure needs identified in the Hunga-Tonga–Hunga-Ha'apai Recovery and Resilience Building Plan, 2022–2025 (HTHH Recovery Plan), as well as subsequent project identifications, into the NIIP3 project database.



Nuku'alofa: Law courts in front, Talamahu market behind.

## 2. The Hunga Tonga–Hunga Ha’apai Event and Other Challenges

### 2.1 The Event

The HTHH eruption, which occurred on 15 January 2022, and the resulting tsunami and ashfall had catastrophic consequences for Tonga.

The volcanic mushroom plume that was released reached the stratosphere and extended radially, covering all of Tonga’s islands. The series of tsunami waves, rising to about 10 meters, hit the coastal areas of the Tongatapu and Ha’apai islands groups, resulting in four deaths: three females and one male. The volcanic mushroom plume left a layer of volcanic ash of up to 2 centimeters over the whole of Tonga. Other than some ash, there was little impact on Niuatoputapu and Niuafu’ou islands and on the Vava’u island group.

The eruption was the largest recorded explosion since Krakatoa, in 1883, and it sent shock waves around the world<sup>1</sup>.



**A major link severed.** The damage to the 'Ohonua Bridge, on 'Eua, ruptured the main link from the wharf to the rest of the island (photo by Lunisi Tuivai Lauaki, Facebook, 2022).

<sup>1</sup> Boscaini, Joshua. 2022. Tonga Volcanic Eruption Confirmed as the Largest Explosion Recorded since 1883. ABC News (Australia). 16 May. <https://www.abc.net.au/news/2022-05-16/tonga-volcanic-eruption-largest-recorded/101069416>.

## 2.2 Economic and Social Impacts

Heartbreaking though it was to lose the four lives, it is incredible that the death toll was that low. If the eruption had occurred later that night, the loss of life would have been much greater. There were many stories of last-minute escapes told by Tongan families and long-term residents, and even by members of the diplomatic corps, all of them recounting how they had fled inland away from the tsunami waves.



Cleaning the roof of the Ministry of Fisheries.

responsiveness, both domestically and from overseas, provided a major boost to the emotional recovery of those affected. However, concerns remain about the long-term impact on many of them—both from the actual event and from the subsequent disruptions to livelihoods. The impact was made worse by the need to introduce COVID lockdowns only weeks after the event had occurred, disrupting schools and businesses.

Some 600 structures, including at least 300 residential buildings, were severely damaged or destroyed by the waves. Some smaller islands were nearly obliterated. About 1,500 people from over 300 households were displaced, comprising about 1.5 percent of the kingdom's population. Several community facilities, including churches, were also damaged or destroyed.

Farms and fisheries sustained significant damage, particularly to crops, trees, fishing boats and equipment, agricultural equipment, livestock, and buildings and other infrastructure. Several shops were also damaged, thus endangering local food supplies and food security.

The tourism sector was severely affected. Seven large and seven small resorts in Tongatapu were destroyed or badly damaged, accounting for some 90 percent of the country's tourism infrastructure, or nearly all the resorts in the main island.

The destruction of the international and national fiber-optic cable connection cut the outer islands off from Tongatapu, and the country off from the rest of the world. The lack of adequate alternative backup options, as well as other issues, worsened the impact. The power system was reconnected quickly, but the ashfall proved to be more disruptive than expected, and rolling blackouts had to be initiated to clear and bring all the transformers back into full operation. While water catchments and tanks were damaged, initial concerns about water quality proved to be unnecessary. Near the waterfronts, roads, causeways, bridges, and footpaths were damaged. Foreshore protection structures were damaged, as well, including those along the full coastline of the capital city, Nuku'alofa; and their ability to offer protection against large waves is now compromised.

Building on the impacts of the border closures and broad lockdowns, the HTHH event further hindered local employment, leaving many people jobless.

According to the World Bank’s analysis, the direct impact on residential buildings, non-residential buildings, infrastructure, agriculture, fisheries, and forestry would cost about T\$208 million to repair, or 18.5 per cent of GDP. Later, more detailed estimates suggested that at least \$240 million (T\$565 million) would be needed to fully recover from the eruption and for the economy to be in a sustainable and stable position moving forward.

The government’s budget statement for the fiscal year ending in June 2023 reduced its estimate of GDP growth from negative 1.8 percent to negative 2.5 percent. This includes the cumulative effect of the challenges listed at the start of this section. However, due the significant increase in aid funded activity and the opening up of borders, the Budget Strategy 2023/24 has revised the real GDP growth for 2022/23 up to 2.5 percent after an estimated fall of 3 percent in 2021/22.

## 2.3 Government Initiatives

The local communities, supported by an active network of nongovernment organizations (NGOs), and the government acted quickly to find accommodations and supplies for those displaced by the event, and to get the cleanup and recovery underway.

The Ministry of Infrastructure (MOI) was tasked by the National Emergency Management Committee (NEMC) with leading the clearance and removal of debris and ashes. This effort was undertaken jointly with His Majesty’s Armed Forces (HMAF) and the Tonga Emergency Fire Services (TEFS).

The NEMC and Cabinet authorized the MOI to lead the reconstruction phase, under a committee that was responsible for infrastructure recovery, including private housing. That committee is chaired by the deputy prime minister, and the members include the ministers of infrastructure, finance, internal affairs, trade and economic development, lands and national resources, health, justice and prisons; with chief secretary, and secretary for Cabinet, (CSSC) and the chief executive officer (CEO) at the MOI fulfilling the secretariat role.



Sopu temporary rebuilding damaged seawall along Vuna road.

The committee lead the preparation of the HTHH Recovery Plan, based on the cluster mechanism established in Tonga following earlier extreme events. This is part of the government’s disaster preparedness and emergency response. The cluster system provides an immediate response to extreme events, providing clean drinking water, food, tents and tarpaulins, and bedding to meet the immediate needs of the people impacted.

The response phase was completed in early February 2022. The government had collaborated with development partners to produce the HTHH Recovery Plan. The plan’s theme was: “Recovery with Greater Resilience,” and its goal was to focus “on providing long-term recovery and reconstruction assistance that is fully inclusive, sustainable, and contributes to disaster risk reduction.”

The plan was also designed to serve as a resource mobilization tool, for raising funds and seeking assistance for unfunded recovery projects, and to serve as a catalyst for more robust and more resilient development. This NIIP3-HTHH report and the updating of the NIIP database are part of this mobilization.

The HTHH event did not change the overall focus of the second TSDF. Instead, it highlighted the importance of building better, more resilient, and more sustainable infrastructure.

### 3. Infrastructure Projects Emerging from Hunga Tonga–Hunga Ha’apai, Plus Other Developments

In partnership with the government, the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR) submitted their Global Rapid Post Disaster Damage Estimation (GRADE) report on 7 February 2022. The four priority sectors identified in the GRADE report on the HTHH event are:

- i) Housing Recovery,
- ii) Food Security and Livelihood,
- iii) Tourism Industry, and
- iv) Public Infrastructure.<sup>2</sup>

Table 1: Copy of Table 15 World Bank GRADE Report

Infrastructure Damage Assessment by the World Bank in T\$ million		
Island Group	World Bank Damage assessment in TOP\$ million	Government Plan TOP\$ million
Tongatapu	33.8	173.88
Ha’apai	3.9	18.66
‘Eua	2.6	27.66
<b>Fibre Optic Cable Communication both Domestic and International</b>	<b>7.8</b>	<b>95</b>
<b>TOTAL</b>	<b>48.1</b>	<b>315</b>

Source: World Bank GRADE and IDA report by MOI, MEIDECC, PMO and Cluster Systems

The GRADE report also gives the World Bank’s initial estimate of the costs needed to repair the damage: nearly T\$50 million.<sup>3</sup> However, on 4th March 2022, the government released its “Hunga-Tonga-Hunga-Ha’apai Volcanic Eruption and Tonga Tsunami (HTHH Disaster) Recovery and Resilience Building Plan, 2022 – 2025” which was presented in a donor coordination meeting on 8th March 2022. This subsequent government update gave an estimate that was six times greater.

The GRADE report recommends various projects, some of which are a mix of recovery activities (e.g., foreshore cleanup) and NIIP infrastructure repairs (e.g., fixing and rebuilding seawalls). All the projects that might fit into the NIIP3 were adopted from the report (with initial cost estimates, if provided).

The NIIP team suggested some further steps, such as site preparation and the provision of utilities for new settlements. These were added to the NIIP database and assigned to the relevant lead ministries, departments, and agencies (MDAs); public enterprises; and/or sectors. They were cross-referenced with existing projects in the database, and all the projects were divided into groups based on the lead institution. The projects that had already been funded were marked as such in the database and not included in the subsequent NIIP3 prioritization process. When there was potential duplication, neither project record was deleted in the first round.

<sup>2</sup> World Bank. 2022. *Global Rapid Post Disaster Damage Estimation (GRADE)*. Washington, DC. p. 14.  
<sup>3</sup> Footnote 2, p. 31.

This integrated list, which included the records of about 60 projects, was used for the first round of consultations with most of the MDAs and public enterprises. A guidance checklist was drafted to assist the NPD in leading these consultations. The MDAs and public enterprises were asked to review and rationalize the lists, delete duplications, and add any missing information. This approach was similar to the one used to develop the original rationalized list for the NIIP3.

Continuing the NIIP3 process, the MDAs and public enterprises were then asked to indicate which of the projects on the rationalized list were important enough (and ready) for them to prepare a Project Proposal Application (PPA), or Project Concept Note (PCN), in the time available. Some asked if they could prepare PPAs or PCNs for projects on the NIIP3 list that were not directly related to the HTHH. Since this was also a general update of the database, they were allowed to do so. This decision increased the list of projects for prioritization by about 40%.

Ensuring active NPD leadership and engagement by concerned MDAs and public enterprises required more time than originally planned for in the Terms of Reference; however, this was worthwhile because it enabled the further strengthening of staff skills. At least one meeting took place with representatives from most of the MDAs and public enterprises. Multiple meetings were held with those who had a larger number of projects to deal with. A list of the main consultation meetings and the participants is provided in section 7.<sup>4</sup>

The NIIP3 list of projects was also reviewed. The ones that had been funded were marked as funded in the database, and so were no longer included in the NIIP list, while the rest were merged with the new MCA-prioritized NIIP3-HTHH list of 47 projects. Some further rationalization and merging of projects resulted in a total of 99 prioritized projects.

## 3.1 Prioritization of the List of Projects under the National Infrastructure Investment Plan, 2021–2030, Based on Multi-Criteria Analysis

Table 2 shows the 52 remaining NIIP3 projects (A), as well as the additional 47 NIIP3 projects (B), the latter due to the new prioritization using the MCA methodology which was approved by the Cabinet in 2021. The estimated funding came to the grand total of almost \$1.49 billion, which is to be allocated over 15 years.

The same cutoff points in the scoring that had been originally used for the original NIIP3 were also used for the NIIP3-HTHH in order to classify the projects into three groups, to maintain consistency. Group 1 has the highest priority and Group 3 the least, with the group assignments based on each project's score. Thus, Group 1 (G1) > 75.6, Group 2 (G2); between 75.6 and 61; and Group 3 (G3) = 60 and below. The Law Court Complex and Parliament and Office Complex projects both scored as G3 under the NIIP3 MCA, but the Cabinet noted their high priority for good governance, so they were included in G1. The design of the Parliament and Office Complex is well advanced, and will likely have funding.

As shown in Table 2, in both prioritization exercises about 40% of the projects qualified for G2; however, half of the approved NIIP3 projects were placed in G1, while under the NIIP3-HTHH MCA, the proportion was slightly over a quarter. This discrepancy was mainly due to the larger number of administrative buildings in the second prioritization.

The total list of G1 projects will cost \$757 million, well above the cut-off point of \$564 million designated in NIIP3. However, two projects still in G1—New Parliament (\$25 million) and Bridge over the Tongatapu inner Lagoon (\$150 million)—are close to being allocated funding. This would leave G1 with only \$577 million in its budget, close to the NIIP3 level; so, the listing was left for consideration by the NIIP Committee (NIIP-C).

<sup>4</sup> This does not include all the smaller subsequent meetings, both in person and virtually.

**Table 2: Project Groupings from the National Infrastructure Investment Plan, 2021–2030  
Hunga Tonga–Hunga Ha’apai Update Report**

Prioritization Report	Number of Projects				Project Costs (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
NIIP3-ranked projects (Nov 2021) <sup>a</sup>	26	23	3	52	503,771	143,415	195,100	842,286
NIIP3-HTHH-ranked projects (Nov 2022) <sup>b</sup>	13	19	15	47	253,324	210,004	186,055	649,383
<b>Total</b>	<b>39</b>	<b>42</b>	<b>18</b>	<b>99</b>	<b>757,095</b>	<b>353,419</b>	<b>381,155</b>	<b>1,491,669</b>

T\$ = pa’anga (Tongan national currency); G = Group; HTHH = Hunga Tonga–Hunga Ha’apai; NIIP3 = National Infrastructure Investment Plan, 2021–2030; NIIP3-HTHH = revision of the NIIP3 to include the government’s response to the HTHH eruption, tsunami, and ashfall.

<sup>a</sup> The values for the NIIP3 are from a ranking table based on a multi-criteria analysis; that ranking table was updated based on the final decisions of the Cabinet regarding the removal of projects that had received their funding or had been dropped.

<sup>b</sup> The values for NIIP3-HTHH are from the ranking table for the revised plan as it stood before the review by the NIIP Committee.

Sources: For the NIIP3 data: Government of the Kingdom of Tonga. 2021. *Tonga National Infrastructure Investment Plan 2021–2030*. Sydney, Australia: Pacific Region Infrastructure Facility (PRIF). For the NIIP3-HTHH data: Government of Tonga and Pacific Region Infrastructure Facility (PRIF).

As shown in Table 3, out of the new projects considered, 45% are completely focus on the HTHH recovery, and 15% are mixed, with some parts related to HTHH and other parts related to prior damage or needs.

**Table 3: Project Groupings from the Revised National Infrastructure Investment Plan, 2021–2030**

Extent Related to Hunga Tonga–Hunga Ha’apai Event	Number of Projects				Project Cost (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
Fully related to HTHH event	7	7	7	21	69,204	28,740	31,180	129,124
Partly related to HTHH event	2	4	1	7	17,020	75,353	10,000	102,373
Not related to HTHH event	4	8	7	19	167,100	105,911	144,875	417,886
<b>Total</b>	<b>13</b>	<b>19</b>	<b>15</b>	<b>47</b>	<b>253,324</b>	<b>210,004</b>	<b>186,055</b>	<b>649,383</b>

T\$ = pa’anga (Tongan national currency); G = Group, HTHH = Hunga Tonga–Hunga Ha’apai.

Note: The revised version of the National Infrastructure Investment Plan, 2021–2030 (NIIP-HTHH) includes projects that were added to respond to the damage caused by the HTHH volcanic eruption. The values in this table are drawn from a ranking table based on a multi-criteria analysis, but not yet reviewed by the NIIP Committee.

Sources: Government of Tonga and Pacific Region Infrastructure Facility (PRIF).

## 3.2 Sensitivity Analyses

The analysis in this section used the new list, which includes 100 projects. The new list is based on the corrections made by the NIIP Committee (NIIP-C) but does not take account of the recommended changes in the rankings of the new NIIP3-HTHH projects. This approach allows a clear depiction of the effect of the sensitivity analysis on the MCA rankings.

Table 4: Number of Projects Evaluated for Each Criterion, by Score

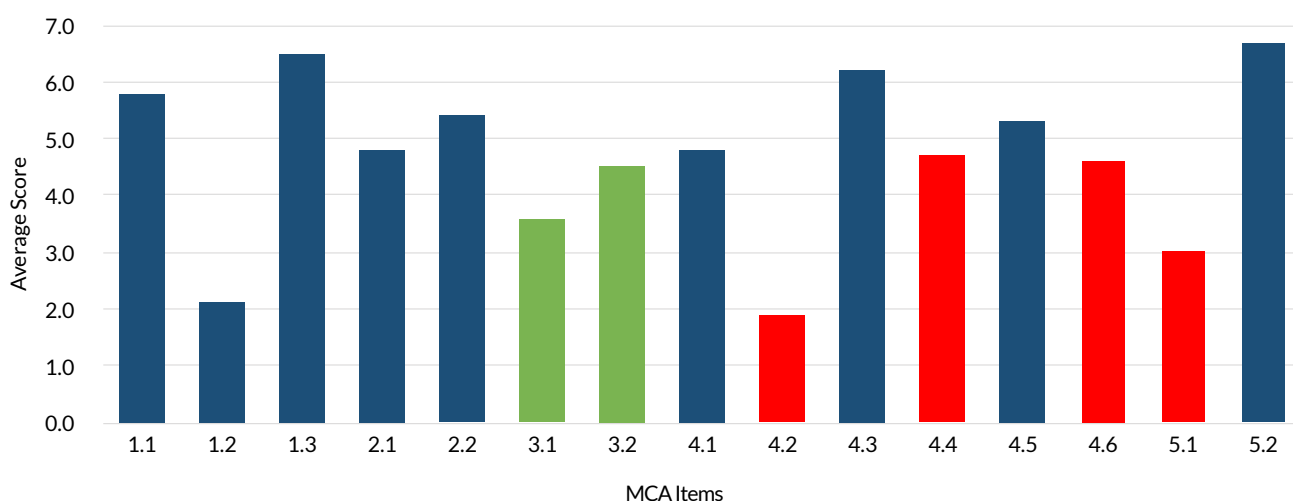
Score Value	1.1	1.2	1.3	2.1	2.2	3.1	3.2	4.1	4.2	4.3	4.4	4.5	4.6	5.1	5.2
0	1	47	0	0	1	14	10	12	39	0	9	2	11	49	0
2.22	7	22	0	12	13	34	25	18	44	2	19	17	13	5	0
4.44	20	20	8	60	27	29	17	10	10	18	25	23	32	9	0
6.67	72	11	92	28	59	23	48	60	7	80	47	58	44	37	100

... = score is zero.

Notes:

1. Each number over a column refers to a particular criterion, and the values within each column refer to the number of projects with the average score indicated in the far-left column.
  2. The various hues of the table cells are used to show the pattern for number of projects by criterion by broad grouping of the numbers.
  3. The scores of the projects for each criterion were based on a multi-criteria analysis of the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and of the version of the Plan that includes the response of the Government of Tonga to the Hunga Tonga–Hunga Ha’apai volcanic eruption (NIIP3-HTHH); the scoring for both was tested with different weightings. This approach takes account the factual corrections (e.g., regarding the projects funded or dropped) made by the NIIP Committee to the project lists for both plan versions.
- Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

Figure 1: Average Score for Each Criterion



DRM = disaster risk management, MCA = multi-criteria analysis.

Note:

1. This chart shows the results of the MCA ranking using the equal-weighted scores prior to the sensitivity analysis and highlights the two groups of indicators.
2. The final rankings were modified based on the final decisions of the Cabinet of the Government of Tonga.

Source: Government of Tonga.

The numbers of projects receiving each MCA score for each criterion is summarized in Table 4. These results suggest that, for future prioritizations, a few of the criteria might benefit from some further calibration. For example, under 5.2, which measures the ability to implement a project, all the projects received a full score. This indicates that the benchmark was set too low. The same may also be true for 1.3, which measures the improvement in a project’s reliability for the users and its relevance to various regulations.

The average scores for the criteria are shown in Figure 1. The scores were derived using the same type of sensitivity analysis as that used in the NIIP3. The relevant criteria are shown with the following coding:

- Other MCAs
- MCAs measuring the environment, DRM, climate change
- MCAs measuring economic factors



**First case scenario.** The MCA measurements of criteria 3.1 *Contribution of the project to climate change mitigation or adaptation functions, or environmental protection benefits* and 3.2 *Contribution of the project to disaster preparedness* are changed. Their weights are increased to 3, and the weights of all the other criteria are adjusted downward by an equal amount.

The overall scores drop, with only 25 projects increasing their scores. In this case, 13 projects fall from G1 to G2, and 17 from G2 to G3, with only 5 moving up a group. The following are specific examples of changes in the first scenario:

- i) Office buildings tend to increase their scores by 2–3 percentage points, but do not change their grouping. Fire and police stations also tend to see increases in their scores.
- ii) Coastal protection facilities, already with a strong focus on climate change, increase their scores by 5–16 percentage points, pushing two projects from G3 to G2 and one from G3 to G1.
- iii) Roads, airports, commercial activities, and education (which generates high social and economic benefits) decrease their scores by 4–15 percentage points, pushing 10 of them from G1 to G2 and 5 from G2 to G3.

**Second case scenario.** The MCA measurements of economic criteria double the weight of four criteria that might support economic recovery: 4.2 *Employment creation in operational phase (cost per full-time equivalent job)*,<sup>5</sup> 4.4 *Contribution to private sector activity*, 4.6 *Potential for economic viability*, and 5.1 *Ability to meet costs of operation and maintenance*. The other criteria weights are adjusted downwards, accordingly. Given that most of the HTHH-related projects rate relatively low on these criteria (e.g., most do not generate new jobs), the downward adjustments result in all but one project dropping in ranking.

Twelve projects drop from G1 to G2 (one even to G3), and 18 from G2 to G3. Only one rises from G2 to G1. For example:

- i) Government administrative offices and the health, police, fire, and corrections departments tend to decrease by 4–15 percentage points, pushing nine projects from G2 to G3 and four from G1 to G2.
- ii) Coastal protection facilities fall by 8–15 percentage points, pushing three projects from G2 to G3 and one from G1 to G2.
- iii) Roadworks decrease by 6–12 percentage points, pushing four projects from G2 to G3, and four from G1 to G2.
- iv) The trade and air transport sectors tend to rise by 6–8 percentage points.

In conclusion, under both scenarios 12 projects drop from G1 to G2, while only three remain in the same group. Under the first case scenario, two projects rise from G2 to G1.

The projects in Table 5 and in the other longer, detailed tables below are in the order of their MCA ranking scores. Given the nature of MCA scoring, several projects can have the same score.<sup>6</sup> Table 5 compares the total scores for each project under the two scenarios, and compares them with the standard case (i.e., the equal-weighted ranking).

<sup>5</sup> It should be noted that the rapid expansion of workers' overseas schemes since the opening of borders has greatly lessened the demand for jobs in Tonga. Businesses across all sectors are complaining about the loss of skilled workers who go overseas and the difficulty in finding people to fill urgent posts.

<sup>6</sup> The MCA provides 15 criteria each with values from 0 to 3 points. In the conversion of the points to percent in the ranking table, each point is equal to 2.22 percentage points.

Table 5: Overall Scores and Groupings Based on Sensitivity Analyses

Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Standard Score and Group <sup>c</sup>		Economic Score and Group <sup>d</sup>		DRM Score and Group <sup>e</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>f</sup>
A	001	TPL	Nuku'alofa Power Network Upgrade Project (NNUP) Area 4	91.1	G1	88.3	G1	93.8	G1	12,360	E
A	022	TWB	Centralized Tonga Water Board and Village Water Supply Tongatapu	91.1	G1	94.3	G1	93.8	G1	103,389	WS
A	055	TPL	Additional/Replacement Generators (TBU, Vv, Hp and 'Eua)	91.1	G1	88.3	G1	88.7	G1	6,000	E
A	024	MEIDECC	Multi-Hazard Early Warning/ Emergency Operations Centre (Niuas)	88.9	G1	89.9	G1	92.3	G1	15,000	OB
A	037	WAL	Convert dump sites to new structured landfill, Ha'apai & 'Eua	88.9	G1	86.9	G1	92.3	G1	8,000	UD
A	029	TWB	Improved Water Supply System in Vava'u (Greater Neiafu)	88.9	G1	92.9	G1	87.2	G1	14,748	WS
A	020	TWB	Improved 'Eua Water Supply System	84.4	G1	84.0	G1	89.2	G1	6,705	WS
A	042	TCC	Upgrade and Expansion 'Eua Mobile and Fixed Networks	84.4	G1	81.0	G1	79.0	G1	2,960	T
A	049	HMAF	Upgrade Touliki coastal protection structure	84.4	G1	71.9	G2	89.2	G1	3,000	WW
A	054	TMCL	Talamahu (TBU, Nuku'alofa) and 'Utukalungalu (Vv) Market upgrade	84.4	G1	81.0	G1	79.0	G1	5,000	UD
B	069	TPL	Power network relocation, extension, connection, HTHH villages	84.4	G1	81.0	G1	84.1	G1	1,405	E
B	091	TCC	Replace Telcoms tower, BTS, standby generator Kanokupolu, Ohonua	84.4	G1	81.0	G1	84.1	G1	1,340	T
B	113	TAMA	Upgrade of Small Industris Center - Ma'ufanga, TT	84.4	G1	90.1	G1	73.8	G2	5,000	UD
A	011	WAL	Close (Kalaka) and establishing new landfill(s) Vava'u	82.2	G1	82.6	G1	87.7	G1	12,000	UD
A	013	PAT	Second New Tug boats	82.2	G1	82.6	G1	77.4	G1	20,022	M
A	041	TCC	Upgrade and Expansion Niuas Mobile Networks	82.2	G1	82.6	G1	72.3	G2	2,627	T
A	050	MEIDECC	New Warehouses for NEMO (Vava'u)	82.2	G1	73.5	G2	87.7	G1	1,000	OB
A	058	MEFS	Upgrade Fire Station 1, Nuku'alofa	82.2	G1	73.5	G2	77.4	G1	2,360	OB
B	114	TCL	New international secondary internet cable linking VV and HH	82.2	G1	82.2	G1	82.2	G1	39,200	T
B	016	MOH	Reconstruction of Queen Salote School of Nursing Home	80.0	G1	69.1	G2	81.0	G1	5,000	H
A	017	MOH	Upgrading of a new Public health building (Tongatapu)	80.0	G1	72.1	G2	86.2	G1	5,000	H
A	052	MOI	Overlay of Asphalt Concrete on Primary Roads in Tongatapu	80.0	G1	69.1	G2	75.9	G1	40,000	R
B	112	TWB	Water Supply for HTHH damaged and relocated villages (TT, HH, 'Eua)	80.0	G1	81.2	G1	70.8	G2	2,061	WS
B	092	TWB	Water Supply upgrde (post HTHH) Hihifo, Holopeka, Pangai, HH	77.8	G1	76.8	G1	74.4	G2	6,898	WS
B	097	MEIDECC	Renovation Community Evacuation Centers TT, post HTHH	77.8	G1	58.6	G3	84.6	G1	1,500	OB
A	004	TAL	Upgrade/expand carpark, pedestrian access Fua'amotu Airports	77.8	G1	79.8	G1	64.1	G2	1,000	A
A	005	TAL	Second New Fire Tender Fua'amotu	77.8	G1	85.9	G1	64.1	G2	2,100	A
A	014	MOH	Upgrading of Vava'u Hospital (Prince Ngu Hospital)	77.8	G1	70.7	G2	79.5	G1	40,000	H
A	019	MOI	Fanga'uta Evacuation Bridge and Roads	77.8	G1	70.7	G2	84.6	G1	150,000	R

Table 5: Overall Scores and Groupings Based on Sensitivity Analyses (continued)

Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Standard Score and Group <sup>c</sup>		Economic Score and Group <sup>d</sup>		DRM Score and Group <sup>e</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>f</sup>
A	038	MET	TIST & TMPI extension/upgrade building (more inclusive for student)	77.8	G1	82.8	G1	69.2	G2	6,000	ET
A	027	MOI	New Wharfs for Small Outer Island	77.8	G1	76.8	G1	74.4	G2	16,000	M
B	064	MOH	Upgrade health centres (Kolovai, Kolonga), new clinic Sopu (TT)	75.6	G1	66.3	G2	83.1	G1	10,500	H
B	065	TMCL	Upgrade of TMCL's Tofoa market	75.6	G1	78.4	G1	67.7	G2	1,600	UD
B	068	TPL	Replacement of Residential Smart Meter Project	75.6	G1	75.4	G2	67.7	G2	1,400	E
B	085	MOI	Widening to Three Lanes, Taufua'ahau Rd (Pea to Tofoa)	75.6	G1	63.2	G2	72.8	G2	1,500	R
B	103	MOI	'Ohonua bridge ('Eua)	75.6	G1	66.3	G2	77.9	G1	16,000	R
A	008	MET	New Junior Campus for Tupou College	75.6	G1	78.4	G1	72.8	G2	10,000	ET
B	072	PAT	Replace of existing rock revetment for QS Wharf	75.6	G1	72.3	G2	67.7	G2	15,620	M
A	031	MJP-J	New Law Court Complex (Supreme and Magistrate)	46.7	G1	41.8	G1	32.3	G1	13,500	OB
A	018	OLA	New Fale Alea (Parliament House and Office Complex)	40.0	G1	34.5	G1	32.8	G1	25,000	OB
A	026	MOI	Relocation and Rebuild of Nafanua Harbour - 'Eua	75.6	G2	75.4	G2	72.8	G2	26,000	M
A	030	T Post	Tonga National Home & Street Addressing	75.6	G2	75.4	G2	62.6	G3	6,732	UD
A	043	MET	New ICT building & infrastructure Tupou Tertiary Institute (TTI)	75.6	G2	75.4	G2	62.6	G3	2,000	ET
A	023	MEIDECC	Renewable Energy Testing and Research Center	73.3	G2	73.9	G2	71.3	G2	4,000	E
A	051	MIA	Upgraded National Mini Sports Stadium/Rugby Field (VV, HP, 'Eua)	73.3	G2	70.9	G2	55.9	G3	1,200	UD
B	070	PAT	Dredging equipment QS Wharf channel and berthing area, Nuku'alofa	73.3	G2	67.9	G2	71.3	G2	20,450	M
B	071	MOI	Replace of Existing Aids to Navigation equipment for all island groups	73.3	G2	64.8	G2	71.3	G2	26,053	M
A	007	MoFi	New maintenance workshop and boat ramp upgrade (HP, VV)	71.1	G2	72.5	G2	64.6	G2	3,000	M
A	010	MoFi	Fisheries Export Refrigerator Storage - Fua'amotu Airport	71.1	G2	75.6	G2	54.4	G3	1,500	OB
A	039	MET	New 'Safer Schools' warehouse building	71.1	G2	63.4	G2	69.7	G2	2,000	ET
A	044	MET	New Tonga Side School Complex (phase 3)	71.1	G2	69.5	G2	54.4	G3	3,000	ET
A	048	HMAF	New Kauvai and Tufumahina military camps	71.1	G2	57.4	G2	69.7	G2	1,500	OB
A	056	MEFS	New staff quarters Fire Stations (FS1, FS2, FS3, FS6) (TT, VV, HP)	71.1	G2	57.4	G2	69.7	G2	1,183	OB
A	059	MOH	Upgrading 'Eua Hospital (Niu'eiki Hospital)	71.1	G2	57.4	G2	74.9	G2	5,500	H
A	053	MEIDECC	New water and sewage testing laboratory building	71.1	G2	71.1	G2	71.1	G2	3,000	WS
B	032	MLNR	MLNR New Office Complex (Mataki'eua)	71.1	G2	60.4	G3	74.9	G2	7,000	OB
B	110	TAMA	Upgrade APIMATAKA Properties and Infrastructure	68.9	G2	71.1	G2	63.1	G2	16,000	UD
A	003	TAL	Light for Runways at all domestic airports	68.9	G2	62.0	G2	63.1	G2	9,700	A
A	012	MJP-PD	Expanded and upgraded facilities Hu'atolitoli prison (Tongatapu)	68.9	G2	52.9	G2	68.2	G2	12,000	OB

Table 5: Overall Scores and Groupings Based on Sensitivity Analyses (continued)

Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Standard Score and Group <sup>c</sup>		Economic Score and Group <sup>d</sup>		DRM Score and Group <sup>e</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>f</sup>
B	061	MoFi	New Fisheries Office for Vava'u and Niuatopotapu	68.9	G2	62.0	G3	57.9	G3	1,500	OB
B	060	MOP	Tonga Police Stations Custody Upgrade Project	68.9	G2	56.0	G3	52.8	G3	1,001	OB
B	062	MOP	Tonga Police Stations & support Facilities Rehabilitation (all island groups)	68.9	G2	56.0	G3	73.3	G2	2,850	OB
B	066	MEFS	New Fire Service Emergency HQ, Response, Training Center	68.9	G2	59.0	G3	73.3	G2	10,000	OB
B	077	PAT	Vuna wharf (State 2 Marina and Onshore Facilities)	68.9	G2	68.1	G2	73.3	G2	60,500	M
B	082	MOI	Haafeva Wharf Rehabilitation (Relocation), HH	68.9	G2	59.0	G3	78.5	G1	26,000	M
B	100	MEIDECC	Foreshore protection Nuku'alofa waterfront (Sopu to Patangata)	68.9	G2	56.0	G3	78.5	G1	10,000	WW
B	093	MTED	Packhouse & equipment VV, equipment Lapaha, TT & 'Eua	68.9	G2	65.1	G2	52.8	G3	5,040	UD
A	006	TAL	New Fire Tender Lupepau'u Airport (Vava'u)	66.7	G2	63.6	G2	56.4	G3	2,100	A
A	028	MOP	New Tonga National Police Head Quarters	66.7	G2	63.6	G2	66.7	G2	5,000	OB
A	036	MJP-PD	Expanded and upgraded facilities for Sainai Prison ('Eua)	66.7	G2	51.5	G3	66.7	G2	6,000	OB
B	104	MOI	Primary & secondary roads maintenance post HTHH in Ha'apai	66.7	G2	54.5	G3	56.4	G3	5,665	R
B	106	MOI	Primary & secondary roads maintenance post HTHH, Nuku'alofa	66.7	G2	54.5	G3	56.4	G3	2,000	R
A	046	MEIDECC	Hahake (TT) coastal area protection	64.4	G2	53.1	G3	75.4	G2	22,000	WW
A	047	MEIDECC	Ha'apai coastal area protection	64.4	G2	53.1	G3	75.4	G2	11,000	WW
B	075	PAT	Refurbishment of Customs cargo facility post HTHH damage	64.4	G2	62.2	G2	60.0	G3	5,275	OB
B	105	MOI	Primary & secondary roads maintenance post HTHH in Hihifo, TT	64.4	G2	53.1	G3	54.9	G3	6,870	R
B	111	TAMA	Upgrade Sea Star Property (international Metropole)	64.4	G2	59.2	G3	60.0	G3	5,000	UD
B	108	MOI	New Roads relocated villages (Kanokupolu, 'Atata, Mango)	64.4	G2	53.1	G3	60.0	G3	2,000	R
A	034	MJP-PD	Expanded and upgraded of facilities for Fale'one Prison (Ha'apai)	62.2	G2	45.7	G3	58.5	G3	6,000	OB
A	035	MJP-PD	Expanded and upgraded facilities for Ha'alefo Prison (Vava'u)	62.2	G2	42.6	G3	63.6	G2	6,000	OB
B	089	MJP-J	Renovation of Probation Office and Magistrate Court (Fasi)	62.2	G2	48.7	G3	53.3	G3	2,500	OB
B	102	MOI	Primary & secondary roads maintenance post HTHH in 'Eua	62.2	G2	51.7	G3	53.3	G3	1,300	R
A	025	PAT	New International Cruise Wharf, Vava'u	60.0	G3	62.4	G2	46.7	G3	54,000	M
B	094	MEIDECC	Coastal protection for 'Ohonua and Tufuvai in 'Eua	57.8	G3	42.8	G3	70.8	G2	7,000	WW
B	078	PAT	Yellow Pier upgrade and Super Yacht berth	57.8	G3	54.9	G3	55.4	G3	50,500	M
B	086	MOI	Floating Dock - Dry Dock	57.8	G3	58.0	G3	55.4	G3	15,000	M
B	098	MEIDECC	Foreshore protection for Hihifo (Hofoa to Ha'atafu)	55.6	G3	41.4	G3	69.2	G2	3,500	WW
B	074	PAT	New cargo inspection facility (phase 1 & phase 2)	55.6	G3	53.5	G3	53.8	G3	7,275	UD

Table 5: Overall Scores and Groupings Based on Sensitivity Analyses (continued)

Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Standard Score and Group <sup>c</sup>		Economic Score and Group <sup>d</sup>		DRM Score and Group <sup>e</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>f</sup>
A	002	TAL	Runway extension at Fua'amotu airport	53.3	G3	49.1	G3	36.9	G3	103,100	A
B	073	PAT	Salvage of sunken vessels from HTHH	53.3	G3	43.0	G3	47.2	G3	2,080	M
B	096	MEIDECC	Foreshore Coastal area Protection in Nomuka	51.1	G3	35.6	G3	66.2	G2	8,160	WW
B	107	MOI	Upgrade Nuku'alofa coastal area sidewalks and walkways post HTHH	51.1	G3	35.6	G3	35.4	G3	2,940	UD
B	088	MJP-J	New Registrar General Office and Archive (and equipment)	51.1	G3	44.6	G3	45.6	G3	3,500	OB
B	101	PMO	New integrated 'Eua Government Office Building	51.1	G3	41.6	G3	50.8	G3	5,000	OB
A	045	MEIDECC	Hihifo (TT) coastal area protection	48.9	G3	40.2	G3	54.4	G3	38,000	WW
B	076	PAT	Relocation of fishing wharf (Sopu)	48.9	G3	46.3	G3	49.2	G3	50,500	M
B	095	PMO	New integrated Ha'apai Government Office Building	48.9	G3	37.2	G3	49.2	G3	10,000	OB
B	109	MOI	Government staff quarters, Pangai	44.4	G3	28.3	G3	41.0	G3	2,100	OB
B	099	MOI	Government Buildings, Noumuka	44.4	G3	31.3	G3	46.2	G3	2,500	OB
B	090	MJP-J	Two new residencies for Lord Chief Justice and Judge (+ equipment)	35.6	G3	25.7	G3	34.9	G3	16,000	OB

**Key:**

- Group 1 (high priority, likely to be funded)
- Group 2 (medium priority, funding possible)
- Group 3 (funding delayed)

DRM = disaster risk management; E = energy; ET = education and training; G = Group; H = health; HMAF = His Majesty's Armed Forces; HTHH = Hunga Tonga–Hunga Ha'apai; ICT = information and communication technology; M = maritime; MDA = ministry, department, and/or agency; MEFS = Ministry of Emergency and Fire Services; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MJP-J = Ministry of Justice and Prisons-Justice; MOH = Ministry of Health; MOI = Ministry of Infrastructure; OB = other buildings; OLA = Office of the Legislative Assembly; PAT = Ports Authority Tonga; PMO = Prime Minister's Office; R = roads; T = telecommunications; TAMA = Tonga Asset Management Association; TCC = Tonga Communications Corporation; TMCL = Tonga Market Corporation Limited; TPL = Tonga Power Limited; TWB = Tonga Water Board; UD = urban development; WAL = Waste Authority Limited; WS = water and sanitation; WW = waterways.

**Notes:**

1. The rankings of the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3), and under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH), are both based on a multi-criteria analysis, but they were tested with different weightings of the criteria. This was done to take into account the factual corrections made by the NIIP Committee and the Cabinet, including the deletion of projects that had received their funding or were dropped.

<sup>a</sup> In the first column on the left, "A" refers to the NIIP3 and "B" refers to the NIIP3-HTHH.

<sup>b</sup> The names of some of the projects given in this column are sometimes in shortened form.

<sup>c</sup> The standard scores are based on equitable weightings of the criteria during the multi-criteria analysis.

<sup>d</sup> The scores in this column are based on a double weighting of the economic criteria 4.2, 4.4, 4.6, and 5.1, with the rest of the criteria adjusted down accordingly.

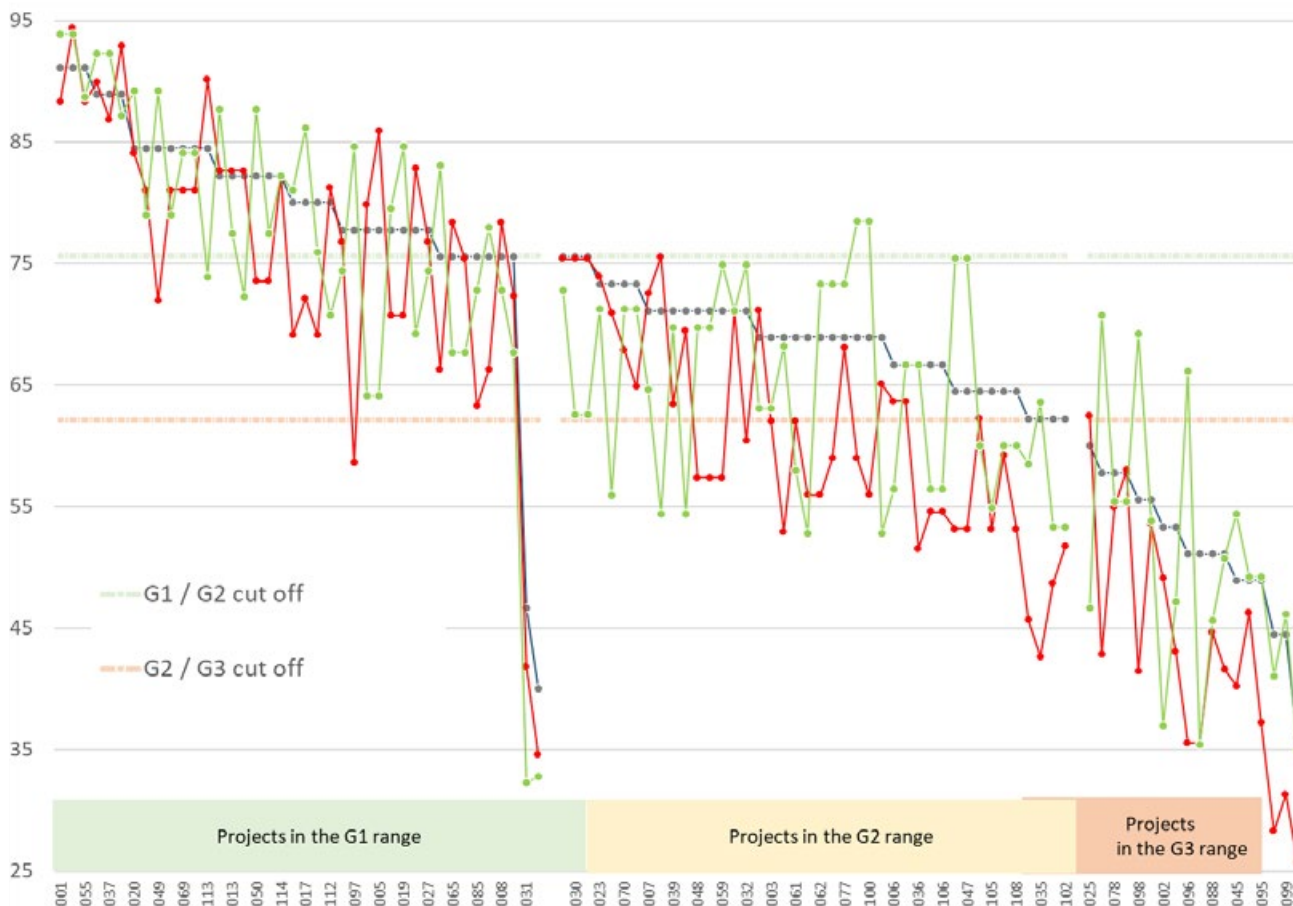
<sup>e</sup> The DRM scores are based on a triple weighting of the environment (3.1) and disaster management (3.2) criteria, with the rest of the criteria adjusted down accordingly.

<sup>f</sup> "Inf. Sect. Cat." stands for "Infrastructure Sector Category." Under this rubric, the category of "Buildings and Housing" has been split into three categories: "Education and Training," "Health," and "Other Buildings."

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

Figure 2 plots the values of the three scores (standard, economic, and DRM) for each project number in the order in which the projects appear in the tables with the full listings. This provides a broad picture of how much the scores diverge from the standard score across all the projects. The cutoff points between each group are shown by the horizontal lines and the groupings at the bottom, and by the two breaks in the graphs. The standard score generates quite a few clusters, which are shown as the dark dots in a row. However, when the two sensitivity options are applied, they tend to push these clusters apart into new clusters.<sup>7</sup> On average, the red (economic sensitivity) and green (DRM, climate change) sensitivity points lie below the dark line, which shows the equal scoring.

Figure 2: Average Score for Each Criterion, Using Different Weightings



G = Group.

Notes:

1. The rankings of the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha’apai volcanic eruption (NIIP3-HTHH) are both based on a multi-criteria analysis, but they were tested with different weightings of the criteria. This was done to take into account factual corrections made by the NIIP Committee, such as the deletion of projects that had received their funding or were dropped.
2. The red line shows the sensitivity scores for economics-related criteria, the green line show the same for criteria related to climate change and disaster risk management. The black line shows the standard scores.
3. The numbers along the horizontal axis indicate the individual projects.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

7 Due to the mathematical effect of the changed weightings, the number of projects in each clusters tends to be smaller than they were before.

## 4. Government-Priority List

### 4.1 NIIP-Committee review of MCA List

The NIIP Committee met to discuss the combined list of projects recommended for prioritization. Much of the discussion focused on further clarifications and some justifications of changes in the list. The main concern of the committee members was the low likelihood of the G2 and G3 projects ever being funded if the priority list were strictly applied during the funding negotiations. The fact that the total list would add up to nearly 15 years of potential funding is an important reason why the list should be regularly monitored.

For example, the project with the second-highest ranking in G1, Centralized Tonga Water Board and Village Water Supply Tongatapu, would cost \$103.4 million, which is equivalent to the cost of the top 14 projects in G2. If only projects under about \$10 million were considered, their total cost would be equivalent to that of the top 28 G2 projects. For future prioritizations, consideration might be given to replacing very high-cost projects with more cost-effective options, or to the possibility of phasing them.

The NIIP Committee also noted that the multi-criteria analysis (MCA) paid inadequate attention to important issues related to governance, law and order, security, and human rights. Given the challenges involved in maintaining a reasonable standard of law and order, while ensuring basic human rights, the committee recommended that the following two projects, which had a mid-G2 score of 68.9, be moved into G1:

- i) Tonga Police Stations Custody Upgrade (\$1 million)
- ii) Tonga Police Stations and Support Facilities Rehabilitation (on all island groups) (\$2.9 million)

In recent years, there were two suicides by prisoners held in custody, as well as several attempted suicides. Police station facilities are completely inadequate. Similarly, issues of law and order, including the increased use and trade of illicit drugs, are becoming of greater concern. So, an improved police presence is required in more villages, including those in areas where existing stations have been damaged by the volcanic eruption, tsunami, or ashfall.

### 4.3 Cabinet Review of the National Infrastructure Investment Plan Committee's Priority List

The Cabinet accepted the priority list proposed by the NIIP Committee (NIIP-C), though with some modifications in the rankings of the projects in G1. This was to better reflect the Government Priority Agenda (GPA), as well as the recent discussions with development partners. The modified order, with justifications, is shown in Table 6.

Table 6: Cabinet Modifications to the Group 1 Project Order Proposed by the National Infrastructure Investment Plan Committee

Proj. No.	MDA or Public Enterprise	Project Title <sup>a</sup>	MCA score <sup>b</sup>	GPA score <sup>c</sup>	Adjusted GPA Score <sup>d</sup>	Cost (T\$'000)	Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
114	TCL	New international secondary internet cable linking VV and HH	82.2	93.3	11.1	39,200	T	h
018	OLA	New Fale Alea (Parliament House and Office Complex)	40.0	93.3	53.3	25,000	OB	
014	MOH	Upgrading of Vava'u Hospital (Prince Ngu Hospital)	77.8	93.3	15.5	40,000	H	
031	MJP-J	New Law Court Complex (Supreme and Magistrate)	46.7	93.3	46.6	13,500	OB	
022	TWB	Centralized Tonga Water Board and Village Water Supply Tongatapu	91.1	91.1		103,389	WS	
064	MOH	Upgrade of the health centres (Kolovai, Kolonga), new clinic Sopu (TT)	75.6	88.9	13.3	10,500	H	n
024	MEIDECC	Multi-Hazard Early Warning/ Emergency Operations Centre ( Niuas)	88.9	88.9		15,000	OB	
029	TWB	Improved Water Supply System in Vava'u (Greater Neiafu)	88.9	88.9		14,748	WS	
020	TWB	Improved 'Eua Water Supply System	84.4	84.4		6,705	WS	
042	TCC	Upgrade and Expansion of 'Eua Mobile and Fixed Networks	84.4	84.4		2,960	T	
049	HMAF	Upgrade of Touliki coastal protection structure	84.4	84.4		3,000	WW	
054	TMCL	Talamahu (TBU, Nuku'alofa) and 'Utukalungalu (Vv) Market upgrade	84.4	84.4		5,000	UD	
069	TPL	Power network relocation, extension, connection, HTHH villages	84.4	84.4		1,405	E	h
091	TCC	Replacement of Telcoms tower, BTS, standby generator Kanokupolu, Ohonua	84.4	84.4		1,340	T	h
113	TAMA	Upgrade of Small Industris Center - Ma'ufanga, TT	84.4	84.4		5,000	UD	n
001	TPL	Nuku'alofa Power Network Upgrade Project (NNUP) Area 4	91.1	84.4	(6.7)	12,360	E	
055	TPL	Additional/Replacement Generators (TBU, Vv, Hp and 'Eua)	91.1	84.4	(6.7)	6,000	E	
017	MOH	Upgrading of a new Public health building (Tongatapu)	80.0	84.4	4.4	5,000	H	
103	MOI	'Ohonua bridge ('Eua)	75.6	84.4	8.8	16,000	R	h
019	MOI	Fanga'uta Evacuation Bridge and Roads	77.8	84.4	6.6	150,000	R	
013	PAT	Second requisition of new tug boats	82.2	82.2		20,022	M	
041	TCC	Upgrade and Expansion of Niuas Mobile Networks	82.2	82.2		2,627	T	
058	MEFS	Upgrade of Fire Station 1, Nuku'alofa	82.2	82.2		2,360	OB	
016	MOH	Reconstruction of Queen Salote School of Nursing Home	80.0	80.0		5,000	H	n
052	MOI	Overlay of Asphalt Concrete on Primary Roads in Tongatapu	80.0	80.0		40,000	R	
112	TWB	Water Supply for HTHH damaged and relocated villages (TT, HH, Eua)	80.0	80.0		2,061	WS	h
060	MOP	Tonga Police Stations Custody Upgrade Project	68.9	80.0	11.1	1,001	OB	n
062	MOP	Tonga Police Stations & support Facilities Rehabilitation (all island groups)	68.9	80.0	11.1	2,850	OB	m
050	MEIDECC	New Warehouses for NEMO (Vava'u)	82.2	77.8	(4.4)	1,000	OB	
092	TWB	Water Supply upgrde (post HTHH) Hihifo, Holopeka, Pangai, HH	77.8	77.8		6,898	WS	h



Table 6: Cabinet Modifications to the Group 1 Project Order Proposed by the National Infrastructure Investment Plan Committee (continued)

Proj. No.	MDA or Public Enterprise	Project Title <sup>a</sup>	MCA score <sup>b</sup>	GPA score <sup>c</sup>	Adjusted GPA Score <sup>d</sup>	Cost (T\$'000)	Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
097	MEIDECC	Renovation Community Evacuation Centers TT, post HTHH	77.8	77.8		1,500	OB	h
005	TAL	Second New Fire Tender Fua'amotu	77.8	77.8		2,100	A	
038	MET	TIST & TMPI extension/upgrade building (more inclusive for student)	77.8	77.8		6,000	ET	
027	MOI	New Wharfs for Small Outer Island	77.8	77.8		16,000	M	
011	WAL	Close (Kalaka) and establishing new landfill(s) Vava'u	82.2	75.6	(6.6)	12,000	UD	
065	TMCL	Upgrade of TMCL's Tofoa market	75.6	75.6		1,600	UD	n
068	TPL	Replacement of Residential Smart Meter Project	75.6	75.6		1,400	E	m
085	MOI	Widening to Three Lanes, Taufa'ahau Rd (Pea to Tofoa)	75.6	75.6		1,500	R	n
037	WAL	Convert dump sites to new structured landfill, Ha'apai & 'Eua	88.9	75.6	(13)	8,000	UD	
004	TAL	Upgrade/expand carpark, pedestrian access Fua'amotu Airports	77.8	75.6	(2.2)	1,000	A	
008	MET	New Junior Campus for Tupou College	75.6	75.6		10,000	ET	
072	PAT	Replace of existing rock revetment for QS Wharf	75.6	75.6		15,620	M	m

<b>Key:</b>		<b>TSDf Pillars</b>	
	Group 1 (high priority, likely to be funded)		Pillar 1: Economic institutions 1.0
	Group 2 (medium priority, funding possible)		Pillar 2: Social institutions 2.0
	Group 3 (funding delayed)		Pillar 3: Political (governance) institutions 3.0
	h Fully related to the HTHH event		Pillar 4: Infrastructure & technology Inputs (transport) 4.1
	m Partly related to the HTHH event		Pillar 4: Infrastructure & technology Inputs (utilities) 4.2
	n Not related to the HTHH event		Pillar 5: Natural resources and environmental inputs 5.0

( ) = negative; A = aviation; E = energy; ET = education and training; GPA = Government Priority Agenda; h = project related to the HTHH volcanic event; H = health; HMAF = His Majesty's Armed Forces; HTHH = Hunga Tonga–Hunga Ha'apai; m = mixed (partly related to HTHH event); M = maritime; MCA = multi-criteria analysis; MDA = ministry, department, and/or agency; MEFS = Ministry of Emergency and Fire Services; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MJP-J = Ministry of Justice and Prisons-Justice; MOH = Ministry of Health; MOI = Ministry of Infrastructure; MOP = Ministry of Police; OB = other buildings; n = project not related to HTHH event; OLA = Office of the Legislative Assembly; PAT = Ports Authority Tonga; R = roads; T = telecommunications; TAL = Tonga Airports Limited; TAMA = Tonga Asset Management Association; TCC = Tonga Communications Corporation; TCL = Tonga Cable Limited; TMCL = Tonga Market Corporation Limited; TPL = Tonga Power Limited; TWB = Tonga Water Board; UD = urban development; WAL = Waste Authority Limited; WS = water and sanitation; WW = waterways.

Notes:

1. The MCA ranking tables for the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and the revised version of the NIIP3, which includes the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH), both include adjustments in the GPA scores approved by the Cabinet of the Government of Tonga.

<sup>a</sup> The names of some of the projects given in this column are sometimes in shortened form.

<sup>b</sup> The standard MCA scores are based on equal weighting for all criteria.

<sup>c</sup> The GPA scores are based on the MCA scores adjusted for special considerations not accounted for in the MCA.

<sup>d</sup> This column shows the values of the adjustments in the GPA scores. This is the implied weighting of the special consideration.

<sup>e</sup> "Inf. Sect. Cat" stands for "Infrastructure Sector Category." Under this rubric, the category of "Buildings and Housing" has been split into three categories: "Education and Training," "Health," and "Other Buildings."

<sup>f</sup> h means fully related to the HTHH event, m means partly related to the HTHH event, n meant not related to the HTHH event. The blank cells in this column indicate projects that had been approved before the HTHH eruption.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

To move the projects into the Cabinet approved order, a GPA score was added to or subtracted from the MCA rankings.<sup>8</sup> In some cases, this required large changes to move the project between MCA scores, in other cases, only small changes were required. The GPA score is thus the percentage points added to or subtracted from to the MCA score to move the project to the required position and can be interpreted as the percentage point value of the GPA consideration. Each project that was moved in the rankings includes a note justifying the GPA score.

The new Parliament and Office Complex (018) and Law Court Complex (031) are the types of projects that tend to rank low on the MCA lists. During the NIIP3, the scores were even lower, as these projects were planned for the vulnerable area along the Nuku'alofa waterfront. However, they are both high-priority projects for governance and law-and-order reasons, and so were included at the bottom of G1 in the NIIP3. If the GPA score had been used, this would have required a score of about 30 percentage points to move them to those positions.

There is now serious thought being given to the idea of moving at least the Parliament and maybe the Law Court Complex farther inland. In that case, their MCA scores would have fallen well into the G2 scoring range. A GPA score of about 10 would, in that case, suffice to place them at the lower end of G1.

In the revised list for the NIIP3-HTHH, projects 018 and 031 would be moved somewhere among the top four projects in G1. This would have required GPA scores between 47 and 54, or some four times bigger than for any other project.

The adjustments made to the project list in G1 do not affect the shorter, summary tables in the following sections; they only affect the ordering of the G1 (green) projects in the longer, detailed tables.



Source: Australian Defence, [https://images.defence.gov.au/assets/Home/Search?Query=20220127ran8562953\\_0002.jpg](https://images.defence.gov.au/assets/Home/Search?Query=20220127ran8562953_0002.jpg)

<sup>8</sup> The idea of a GPA score was discussed in NIIP3, but since only a couple of projects had their positions changed, it was not applied.

## 4.3 Details of the Government Project Priority Lists

Based on the promotions of the two police-related projects to G1 status, and the net movements of several other projects and some fine tuning of costs, Table 7 provides an update of Table 2 concerning the list of projects recommended by the NIIP-C and approved by the Cabinet. The total cost drops a little to \$1.37 billion, and the total cost of the G1 projects drops to \$636.6 million, still over the NIIP3 threshold. However, once the bridge and Parliament projects are taken into account, the G1 total cost dips \$100 million under the threshold. By the time of the next NIIP prioritization, both these projects should be underway. Based on the current list, this would allow about a dozen other projects to move up from G2 to G1.

**Table 7: Cabinet-Approved Project Groupings from the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021–2030**

Prioritization Report	Number of Projects				Project Costs (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
NIIP3-ranked (Nov 2021) <sup>a</sup>	26	22	3	51	523,771	140,415	195,100	859,286
NIIP3-HTHH-ranked (Nov 2022) <sup>b</sup>	16	18	15	49	112,875	213,153	186,055	512,083
<b>Total</b>	<b>42</b>	<b>40</b>	<b>18</b>	<b>100</b>	<b>636,646</b>	<b>353,568</b>	<b>381,155</b>	<b>1,371,369</b>

T\$ = pa'anga (Tongan national currency); G = Group; HTHH = Hunga Tonga–Hunga Ha'apai; NIIP3 = National Infrastructure Investment Plan, 2021–2030; NIIP3-HTHH = revision of the NIIP3 to include the government's response to the HTHH eruption, tsunami, and ashfall.

<sup>a</sup> The values for the NIIP3 are from a ranking table based on a multi-criteria analysis. The table was modified based on the final decisions of the Cabinet, and then updated to remove those projects that had received their funding or were dropped.

<sup>b</sup> The values for the NIIP3-HTHH include modifications that were recommended by the NIIP Committee and approved by the Cabinet. Sources: For the NIIP3 data: Government of the Kingdom of Tonga. 2021. *Tonga National Infrastructure Investment Plan 2021–2030*. Sydney, Australia: Pacific Region Infrastructure Facility (PRIF). For the NIIP3-HTHH data: Government of Tonga and Pacific Region Infrastructure Facility (PRIF).

**Table 8: Cabinet approved Project Groupings from NIIP3 and NIIP3-HTHH**

Extent Related to Hunga Tonga–Hunga Ha'apai Event	Number of Projects				Project Cost (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
Fully related to HTHH event	7	7	7	21	68,404	28,740	31,180	128,324
Partly related to HTHH event	3	3	1	7	19,870	72,503	10,000	102,373
Not related to HTHH event	6	8	7	21	24,601	111,910	144,875	281,386
<b>Total</b>	<b>16</b>	<b>18</b>	<b>15</b>	<b>49</b>	<b>112,875</b>	<b>213,153</b>	<b>186,055</b>	<b>512,083</b>

T\$ = pa'anga (Tongan national currency); G = Group, HTHH = Hunga Tonga–Hunga Ha'apai.

Note: This table is drawn from the revised version of the National Infrastructure Investment Plan, 2021–2030, which includes projects to address the damage caused by the HTHH volcanic eruption. The values are based on a multi-criteria analysis, and include modifications recommended by the National Infrastructure Investment Plan Committee and approved by the Cabinet.

Sources: Government of Tonga and Pacific Region Infrastructure Facility (PRIF).

The full list of all the government's prioritized projects—including G1, G2, and G3—is shown in Table 9, which also includes the revised order of the G1 projects. This list resembles the format used for the NIIP3, but with a few minor modifications. For instance, (i) the sector categories used in NIIP3 were renamed in line with the organizational outcome groupings under the Tonga Strategic Development Framework (TSDF), as they were more accurate; and (ii) a new column was added to capture infrastructure sector categories similar to those used in NIIPs in the Pacific. These modifications are described in the footnotes to tables 9 and 13.

Table 9: Combined Government Priority Project List for the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021–2030

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Accumulated Cost (T\$'000)	TSDF Pillar Organizational Outcome <sup>d</sup>		Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
B	114	TCL	New international secondary internet cable linking VV and HH	93.3	G1	39,200	39,200	4.2	ICT	T	h
A	018	OLA	New Fale Alea (Parliament House and Office Complex)	93.3	G1	25,000	64,200	3.0	CON	OB	
A	014	MOH	Upgrading of Vava'u Hospital (Prince Ngu Hospital)	93.3	G1	40,000	104,200	2.0	HTH	H	
A	031	MJP-J	New Law Court Complex (Supreme and Magistrate)	93.3	G1	13,500	117,700	3.0	JLO	OB	
A	022	TWB	Centralized Tonga Water Board and Village Water Supply Tongatapu	91.1	G1	103,389	221,089	4.2	WAT	WS	
B	064	MOH	Upgrade health centers (Kolovai, Kolonga), new clinic of Sopu (TT)	88.9	G1	10,500	231,589	2.0	HTH	H	n
A	024	MEIDECC	Multi-Hazard Early Warning/Emergency Operations Centre (Niuas)	88.9	G1	15,000	246,589	5.0	DRM	OB	
A	029	TWB	Improved Water Supply System in Vava'u (Greater Neiafu)	88.9	G1	14,748	261,337	4.2	WAT	WS	
A	020	TWB	Improved 'Eua Water Supply System	84.4	G1	6,705	268,042	4.2	WAT	WS	
A	042	TCC	Upgrade and Expansion 'Eua Mobile and Fixed Networks	84.4	G1	2,960	271,002	4.2	ICT	T	
A	049	HMAF	Upgrade Touliki coastal protection structure	84.4	G1	3,000	274,002	5.0	COA	WW	
A	054	TMCL	Talamahu (TBU, Nuku'alofa) and 'Utukalungalu (Vv) Market upgrade	84.4	G1	5,000	279,002	1.0	TRA	UD	
B	069	TPL	Power network relocation, extension, connection, HTHH villages	84.4	G1	1,405	280,407	4.2	ENE	E	h
B	091	TCC	Replace Telcom tower, BTS, standby generator Kanokupolu, Ohonua	84.4	G1	1,340	281,747	4.2	ICT	T	h
B	113	TAMA	Upgrade of Small Industries Center - Ma'ufanga, TT	84.4	G1	5,000	286,747	1.0	TRA	UD	n
A	001	TPL	Nuku'alofa Power Network Upgrade Project (NNUP) Area 4	84.4	G1	12,360	299,107	4.2	ENE	E	
A	055	TPL	Additional/Replacement Generators (TBU, Vv, Hp and 'Eua)	84.4	G1	6,000	305,107	4.2	ENE	E	
A	017	MOH	Upgrading of a new Public health building (Tongatapu)	84.4	G1	5,000	310,107	2.0	HTH	H	
B	103	MOI	'Ohonua bridge ('Eua)	84.4	G1	16,000	326,107	4.1	LTD	R	h
A	019	MOI	Fanga'uta Evacuation Bridge and Roads	84.4	G1	150,000	476,107	4.1	LTD	R	
A	013	PAT	Second requisition of new tug boats	82.2	G1	20,022	496,129	4.1	SEA	M	
A	041	TCC	Upgrade and Expansion Niuas Mobile Networks	82.2	G1	2,627	498,756	4.2	ICT	T	
A	058	MEFS	Upgrade Fire Station 1, Nuku'alofa	82.2	G1	2,360	501,116	5.0	FIR	OB	
B	016	MOH	Reconstruction of Queen Salote School of Nursing Home	80.0	G1	5,000	506,116	2.0	HTH	H	n
A	052	MOI	Overlay of Asphalt Concrete on Primary Roads in Tongatapu	80.0	G1	40,000	546,116	4.1	LTD	R	
B	112	TWB	Water Supply for HTHH damaged and relocated villages (TT, HH, Eua)	80.0	G1	2,061	548,177	4.2	WAT	WS	h
B	060	MOP	Tonga Police Stations Custody Upgrade Project	80.0	G1	1,001	549,178	3.0	JLO	OB	n
B	062	MOP	Tonga Police Stations & support Facilities Rehabilitation (all island groups)	80.0	G1	2,850	552,028	3.0	JLO	OB	m
A	050	MEIDECC	New Warehouses for NEMO (Vava'u)	77.8	G1	1,000	553,028	5.0	DRM	OB	
B	092	TWB	Water Supply upgrde (post HTHH) Hihifo, Holopeka, Pangai, HH	77.8	G1	6,898	559,926	4.2	WAT	WS	h
B	097	MEIDECC	Renovation Community Evacuation Centers TT, post HTHH	77.8	G1	1,500	561,426	5.0	DRM	OB	h
A	005	TAL	Second New Fire Tender Fua'amotu	77.8	G1	2,100	563,526	4.1	AIR	A	

Table 9: Combined Government Priority Project List for the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021–2030 (continued)

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Accumulated Cost (T\$'000)	TSDf Pillar Organizational Outcome <sup>d</sup>		Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
A	038	MET	TIST & TMPI extension/upgrade building (more inclusive for student)	77.8	G1	6,000	569,526	2.0	EDU	ET	
A	027	MOI	New Wharfs for Small Outer Island	77.8	G1	16,000	585,526	4.1	SEA	M	
A	011	WAL	Close (Kalaka) and establishing new landfill(s) Vava'u	75.6	G1	12,000	597,526	4.2	SWA	UD	
B	065	TMCL	Upgrade of TMCL's Tofoa market	75.6	G1	1,600	599,126	1.0	TRA	UD	n
B	068	TPL	Replacement of Residential Smart Meter Project	75.6	G1	1,400	600,526	4.2	ENE	E	m
B	085	MOI	Widening to Three Lanes, Taufa'ahau Rd (Pea to Tofoa)	75.6	G1	1,500	602,026	4.1	LTD	R	n
A	037	WAL	Conversion of dump sites into new structured landfill, Ha'apai & 'Eua	75.6	G1	8,000	610,026	4.2	WSA	UD	
A	004	TAL	Upgrade/expand carpark, pedestrian access Fua'amotu Airports	75.6	G1	1,000	611,026	4.1	AIR	A	
A	008	MET	New Junior Campus for Tupou College	75.6	G1	10,000	621,026	2.0	EDU	ET	
B	072	PAT	Replacement of existing rock revetment for QS Wharf	75.6	G1	15,620	636,646	4.1	SEA	M	m
A	026	MOI	Relocation and Rebuild of Nafanua Harbour - 'Eua	75.6	G2	26,000	662,646	4.1	SEA	M	
A	030	T Post	Tonga National Home & Street Addressing	75.6	G2	6,732	669,378	4.2	POS	UD	
A	043	MET	New ICT building & infrastructure Tupou Tertiary Institute (TTI)	75.6	G2	2,000	671,378	2.0	EDU	ET	
A	023	MEIDECC	Renewable Energy Testing and Research Center	73.3	G2	4,000	675,378	4.2	ENE	E	
A	051	MIA	Upgraded National Mini Sports Stadium/Rugby Field (VV, HP, 'Eua)	73.3	G2	1,200	676,578	2.0	SPR	UD	
B	070	PAT	Dredging equipment for QS Wharf channel and berthing area, Nuku'alofa	73.3	G2	20,450	697,028	4.1	SEA	M	m
B	071	MOI	Replace of Existing Aids to Navigation equipment for all island groups	73.3	G2	26,053	723,081	4.1	SEA	M	m
A	007	MoFi	New maintenance workshop and boat ramp upgrade (HP, VV)	71.1	G2	3,000	726,081	4.1	SEA	M	
A	010	MoFi	Fisheries Export Refrigerator Storage - Fua'amotu Airport	71.1	G2	1,500	727,581	1.0	FIS	OB	
A	039	MET	New "Safer Schools" warehouse building	71.1	G2	2,000	729,581	2.0	EDU	ET	
A	044	MET	New Tonga Side School Complex (phase 3)	71.1	G2	3,000	732,581	2.0	EDU	ET	
A	048	HMAF	New Kauvai and Tufumahina military camps	71.1	G2	1,500	734,081	3.0	DEF	OB	
A	056	MEFS	New staff quarters for fire stations (FS1, FS2, FS3, FS6) (TT, VV, HP)	71.1	G2	1,183	735,264	5.0	FIR	OB	
A	059	MOH	Upgrading 'Eua Hospital (Niu'eiki Hospital)	71.1	G2	5,500	740,764	2.0	HTH	H	
A	053	MEIDECC	New water and sewage testing laboratory building	71.1	G2	3,000	743,764	4.2	WAT	WS	
B	032	MLNR	New MLNR office complex (Mataki'eua)	71.1	G2	7,000	750,764	3.0	HQG	OB	n
B	110	TAMA	Upgrade APIMATAKA Properties and Infrastructure	68.9	G2	16,000	766,764	1.0	TRA	UD	n
A	003	TAL	Light for Runways at all domestic airports	68.9	G2	9,700	776,464	4.1	AIR	A	
A	012	MJP-PD	Expanded and upgraded facilities Hu'atolitoli prison (Tongatapu)	68.9	G2	12,000	788,464	3.0	JLO	OB	
B	061	MoFi	New Fisheries Office for Vava'u and Niuatoputapu	68.9	G2	1,500	789,964	3.0	LGA	OB	n
B	066	MEFS	New Fire Service Emergency HQ, Response, Training Center	68.9	G2	10,000	799,964	5.0	FIR	OB	n
B	077	PAT	Vuna wharf (State 2 Marina and Onshore Facilities)	68.9	G2	60,500	860,464	4.1	SEA	M	n






Table 9: Combined Government Priority Project List for the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021–2030 (continued)

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Accumulated Cost (T\$'000)	TSDF Pillar Organizational Outcome <sup>d</sup>		Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
B	082	MOI	Haafeva Wharf Rehabilitation (Relocation), HH	68.9	G2	26,000	886,464	4.1	SEA	M	m
B	100	MEIDECC	Foreshore protection Nuku'alofa waterfront (Sopu to Patangata)	68.9	G2	10,000	896,464	5.0	COA	WW	h
B	093	MTED	Packhouse & equipment VV, equipment Lapaha, TT & 'Eua	68.9	G2	5,040	901,504	1.0	TRA	UD	n
A	006	TAL	New Fire Tender Lupepau'u Airport (Vava'u)	66.7	G2	2,100	903,604	4.1	AIR	A	
A	028	MOP	New Tonga National Police Head Quarters	66.7	G2	5,000	908,604	3.0	JLO	OB	
A	036	MJP-PD	Expanded and upgraded facilities for Sainai Prison ('Eua)	66.7	G2	6,000	914,604	3.0	JLO	OB	
B	104	MOI	Primary & secondary roads maintenance post HTHH in Ha'apai	66.7	G2	5,665	920,269	4.1	LTD	R	h
B	106	MOI	Primary & secondary roads maintenance post HTHH, Nuku'alofa	66.7	G2	2,000	922,269	4.1	LTD	R	h
A	046	MEIDECC	Hahake (TT) coastal area protection	64.4	G2	22,000	944,269	5.0	COA	WW	
A	047	MEIDECC	Ha'apai coastal area protection	64.4	G2	11,000	955,269	5.0	COA	WW	
B	075	PAT	Refurbishment of Customs cargo facility post HTHH damage	64.4	G2	5,275	960,544	1.0	TRA	OB	h
B	105	MOI	Primary & secondary roads maintenance post HTHH in Hihifo, TT	64.4	G2	6,870	967,414	4.1	LTD	R	n
B	111	TAMA	Upgrade of the Sea Star Property (international Metropole)	64.4	G2	5,000	972,414	1.0	TRA	UD	n
B	108	MOI	New roads relocated villages (Kanokupolu, 'Atata, Mango)	64.4	G2	2,000	974,414	4.1	LTD	R	h
A	034	MJP-PD	Expanded and upgraded of facilities for Fale'one Prison (Ha'apai)	62.2	G2	6,000	980,414	3.0	JLO	OB	
A	035	MJP-PD	Expanded and upgraded facilities for Ha'alefo Prison (Vava'u)	62.2	G2	6,000	986,414	3.0	JLO	OB	
B	089	MJP-J	Renovation of the probation office and magistrate court (Fasi)	62.2	G2	2,500	988,914	3.0	JLO	OB	h
B	102	MOI	Primary & secondary roads maintenance post HTHH in 'Eua	62.2	G2	1,300	990,214	4.1	LTD	R	h
A	025	PAT	New International Cruise Wharf, Vava'u	60.0	G3	54,000	1,044,214	4.1	SEA	M	
B	094	MEIDECC	Coastal protection for 'Ohonua and Tufu, 'Eua	57.8	G3	7,000	1,051,214	5.0	COA	WW	h
B	078	PAT	Yellow Pier upgrade and Super Yacht berth	57.8	G3	50,500	1,101,714	4.1	SEA	M	n
B	086	MOI	Floating Dock - Dry Dock	57.8	G3	15,000	1,116,714	4.1	SEA	M	n
B	098	MEIDECC	Foreshore protection for Hihifo (Hofoa to Ha'atafu)	55.6	G3	3,500	1,120,214	5.0	COA	WW	h
B	074	PAT	New cargo inspection facility (phase 1 & phase 2)	55.6	G3	7,275	1,127,489	1.0	TRA	UD	n
A	002	TAL	Runway extension at Fua'amotu airport	53.3	G3	103,100	1,230,589	4.1	AIR	A	
B	073	PAT	Salvage of sunken vesels from HTHH	53.3	G3	2,080	1,232,669	4.1	SEA	M	h
B	096	MEIDECC	Foreshore Coastal area Protection in Nomuka	51.1	G3	8,160	1,240,829	5.0	COA	WW	h
B	107	MOI	Upgrade Nuku'alofa coastal area sidewalks and walkways post HTHH	51.1	G3	2,940	1,243,769	4.1	LTD	UD	h
B	088	MJP-J	New Registrar General Office and Archive (and equipment)	51.1	G3	3,500	1,247,269	3.0	JLO	OB	n
B	101	PMO	New integrated 'Eua Government Office Building	51.1	G3	5,000	1,252,269	3.0	LGA	OB	h
A	045	MEIDECC	Hihifo (TT) coastal area protection	48.9	G3	38,000	1,290,269	5.0	COA	WW	
B	076	PAT	Relocation of fishing wharf (Sopu)	48.9	G3	50,500	1,340,769	1.0	FIS	M	n

**Table 9: Combined Government Priority Project List for the Updated and Revised Versions of the National Infrastructure Investment Plan, 2021–2030 (continued)**

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Accumulated Cost (T\$'000)	TSDF Pillar Organizational Outcome <sup>d</sup>		Inf. Sect. Cat. <sup>e</sup>	HTHH <sup>f</sup>
B	095	PMO	New integrated Ha'apai Government Office Building	48.9	G3	10,000	1,350,769	3.0	LGA	OB	m
B	109	MOI	Government staff quarters, Pangai	44.4	G3	2,100	1,352,869	3.0	LGA	OB	n
B	099	MOI	Government Buildings, Noumuka	44.4	G3	2,500	1,355,369	3.0	LGA	OB	h
B	090	MJP-J	Two new residencies for Lord Chief Justice and Judge (+ equipment)	35.6	G3	16,000	1,371,369	3.0	JLO	OB	n

**TSDF Pillars**

<b>Key:</b>	Pillar 1: Economic institutions	1.0
 Group 1 (high priority, likely to be funded)	Pillar 2: Social institutions	2.0
 Group 2 (medium priority, funding possible)	Pillar 3: Political (governance) institutions	3.0
 Group 3 (funding delayed)	Pillar 4: Infrastructure & technology Inputs (transport)	4.1
 Fully related to the HTHH event	Pillar 4: Infrastructure & technology Inputs (utilities)	4.2
 Partly related to the HTHH event	Pillar 5: Natural resources and environmental inputs	5.0
 Not related to the HTHH event		

A (under Inf. Sect. Cat.) = aviation; AIR = air transport; COA = coastal protection; CON = constitutional; DEF = defense; DRM = disaster risk management; E = energy; EDU = education; ENE = energy; ET = education and training; FIR = Fire and emergency services ; FIS = fisheries and marine resources; G = Group; H = health; HMAF = His Majesty's Armed Forces; HQG = other central government headquarters; HTH = health; HTHH = Hunga Tonga–Hunga Ha’apai; ICT = information and communication technology; JLO = justice, law and order; LTD = limited company ; M = maritime; MDA = ministry, department, and/or agency; MEFS = Ministry of Emergency and Fire Services; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MIA = Ministry of Internal Affairs; MJP-J = Ministry of Justice and Prisons-Justice; MJP-PD = Ministry of Justice and Prisons-Prisons; MLNR = Ministry of Lands and Natural Resources; MOFi = Ministry of Fisheries; MOH = Ministry of Health; MOI = Ministry of Infrastructure; MOP = Ministry of Police; MTED = Ministry of Trade and Economic Development; OB = other buildings; OLA = Office of the Legislative Assembly; PAT = Ports Authority Tonga; PMO = Prime Minister’s Office; POS = postal services; R = roads; SEA = sea transport; SPR = youth and sport; T = telecommunications; T Post = Tonga Post; TAL = Tonga Airports Limited; TAMA = Tonga Asset Management Association; TCC = Tonga Communications Corporation; TCL = Tonga Cable Limited; TMCL = Talamahu Market Corporation Limited; TPL = Tonga Power Limited; TRA = trade and business; TSDF = Tonga Strategic Development Framework; TWB = Tonga Water Board; UD = urban development; WAL = Waste Authority Limited; WAT = water supply; WS = water and sanitation; WW = waterways. Locations: TT = Tongatapu, HH = Ha’apai, VV = Vava’u, NN = Niuas

**Notes:**

1. The rankings of the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3), which had been updated with the removal of funded or dropped projects and under the revised version of the NIIP3, which includes the response of the Government of Tonga to the Hunga Tonga–Hunga Ha’apai volcanic eruption (NIIP3-HTHH) are both based on a multi-criteria analysis and were modified according to the final decisions of the Cabinet of the Government of Tonga.

<sup>a</sup> In the first column on the left, “A” refers to the NIIP3 and “B” refers to the NIIP3-HTHH.

<sup>b</sup> The names of some of the projects given in this column are sometimes in shortened form.

<sup>c</sup> The government scores are based on the MCA rankings adjusted according to the GPA scores.

<sup>d</sup> This column refers to the TSDF pillars and their organizational outcome groupings, which include: economic institutions , social institutions, political (governance) institutions, infrastructure and technology (transport) inputs, infrastructure and technology (utilities) inputs, and natural resources and environmental inputs.

<sup>e</sup> “Inf. Sect. Cat” stands for “Infrastructure Sector Category.” Under this rubric, the category of “Buildings and Housing” has been split into three categories: “Education and Training,” “Health,” and “Other Buildings.”

<sup>f</sup> The blank spaces in this column indicate projects that had been approved before the HTHH eruption.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

**Table 10: Combined Project List, by Priority Group and Tonga Strategic Development Framework Pillar**

TSDF Pillars	Number of Projects				Project Cost (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
1: Economic institutions	3	5	2	10	11,600	32,815	57,775	102,190
2: Social institutions	6	5	0	11	76,500	13,700	0	90,200
3: Political institutions (governance)	4	9	6	19	42,351	47,500	39,100	128,951
4.1: Infrastructure/tech (transport)	9	13	6	28	262,242	191,638	227,620	681,500
4.2: Infrastructure/tech (utilities)	15	3	0	18	221,093	13,732	0	234,825
5: Natural resources/environment	5	5	4	14	22,860	54,183	56,660	133,703
<b>Total</b>	<b>42</b>	<b>40</b>	<b>18</b>	<b>100</b>	<b>636,646</b>	<b>353,568</b>	<b>381,155</b>	<b>1,371,369</b>

T\$ = pa'anga (Tongan national currency); G = Group, tech = technology, TSDF = Tonga Strategic Development Framework.

Note: "Combined" means that the rankings include the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and those under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH). The rankings for both versions are based on a multi-criteria analysis and modified according to the final decisions of the Cabinet of the Government of Tonga.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

Table 10 provides a breakdown of the numbers and costs of projects by priority group and TSDF pillar. If the three priority groups are taken together, the largest number of projects fall within the transport infrastructure and technology (4.1) pillar, which includes roads and wharves damaged by the HTHH event. With regard to value, these projects represent 50% of the whole list, and 41% of G1. Nearly all the projects belonging to utilities (4.2) are in G1, comprising 35% of the projects in that group. The projects in the governance (3.0) pillar represent administration buildings; in addition to a big backlog of requests for such buildings, these projects include buildings that were damaged in 'Eua and in several parts of Ha'apai that will be moved on to safer ground.

**Table 11: Combined project list by Priority Group and Location**

Location	Number of Projects <sup>a</sup>				Project Cost (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
Tongatapu	27.2	23.6	11.0	61.8	475,290	213,666	292,395	981,351
'Eua	4.6	5.0	2.0	11.5	32,774	45,908	12,000	90,682
Ha'apai	2.8	5.8	4.0	12.6	22,446	61,865	22,760	107,072
Vava'u	5.3	4.7	1.0	11.0	87,868	23,557	54,000	165,425
Ongo Niua	2.3	0.9	0	3.2	18,267	8,572	0	26,839
<b>Total</b>	<b>42.0</b>	<b>40.0</b>	<b>18.0</b>	<b>100.0</b>	<b>636,646</b>	<b>353,568</b>	<b>381,155</b>	<b>1,371,369</b>

T\$ = pa'anga (Tongan national currency); G = Group.

Note: "Combined" means that the rankings include the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and those under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH). The rankings for both versions are based on a multi-criteria analysis and were modified according to the final decisions of the Cabinet of the Government of Tonga.

<sup>a</sup> In many cases, the quantities of projects are not expressed in whole numbers, as these values include projects that cover more than one island or island group, with only a part of their implementation occurring in each location.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).



Table 12: Combined Project List by Priority Group and by Government Body or Public Enterprise

MDA or Public Enterprise	Number of Projects				Project Cost (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
Prime Minister's Office	0	0	2	2	0	0	15,000	15,000
His Majesties Armed Forces	1	1	0	2	3,000	1,500	0	4,500
Min. Agriculture, Food and Forestry	0	0	0	0	0	0	0	0
MEIDECC	3	5	4	12	17,500	50,000	56,660	124,160
Ministry of Education and Training	2	3	0	5	16,000	7,000	0	23,000
Ministry of Internal Affairs	0	1	0	1	0	1,200	0	1,200
Ministry of Justice and Prisons - Justice	1	1	2	4	13,500	2,500	19,500	35,500
Ministry of Justice and Prisons - Prisons	0	4	0	4	0	30,000	0	30,000
Ministry of Fisheries	0	3	0	3	0	6,000	0	6,000
Ministry of Lands and Natural Resources	0	1	0	1	0	7,000	0	7,000
Ministry of Health	4	1	0	5	60,500	5,500	0	66,000
Ministry of Infrastructure	5	8	4	17	223,500	95,888	22,540	341,928
Ministry of Emergency and Fire Services	1	2	0	3	2,360	11,183	0	13,543
Ministry of Police	2	1	0	3	3,851	5,000	0	8,851
Ministry of Public Enterprises	0	0	0	0	0	0	0	0
Trade and Economic Development	0	1	0	1	0	5,040	0	5,040
Office of Legislative Assembly	1	0	0	1	25,000	0	0	25,000
Ports Authority Tonga	2	3	5	10	35,642	86,225	164,355	286,222
Tonga Post	0	1	0	1	0	6,732	0	6,732
Tonga Airports Limited	2	2	1	5	3,100	11,800	103,100	118,000
Tonga Asset Management Association	1	2	0	3	5,000	21,000	0	26,000
Tonga Communications Company	3	0	0	3	6,927	0	0	6,927
Tonga Cable Limited	1	0	0	1	39,200	0	0	39,200
Talamahu Market Company Limited	2	0	0	2	6,600	0	0	6,600
Tonga Power Limited	4	0	0	4	21,165	0	0	21,165
Tonga Water Board	5	0	0	5	133,801	0	0	133,801
Waste Authority Limited	2	0	0	2	20,000	0	0	20,000
<b>Total</b>	<b>42</b>	<b>40</b>	<b>18</b>	<b>100</b>	<b>636,646</b>	<b>353,568</b>	<b>381,155</b>	<b>1,371,369</b>

T\$ = pa'anga (Tongan national currency); G = Group; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications.

Note: "Combined" means that the rankings include the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and those under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH). The rankings for both versions are based on a multi-criteria analysis and were modified according to the final decisions of the Cabinet of the Government of Tonga.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

As shown in Table 11, the projects are concentrated on Tongatapu, which accounts for over 60% of the total by number and 70% by value. This is typical, given Tongatapu's population and possession of key administrative and international communications and transport links. Per capita, these percentages roughly reflect the share of Tonga's population that resides on Tongatapu. 'Eua and Ha'apai have some key projects related to the HTHH damage, such as the bridge connecting the wharf at 'Eua to the rest of that island and projects concerned with waterfront damage in both locations.

Table 12 provides a breakdown of the number of projects by priority group and by government ministry, department, and/or agency (MDA) or public enterprise. Given the high concentration of projects in transportation, the Ministry of Infrastructure (MOI) and Ports Authority Tonga account for about two-thirds of the additional projects by value. In the combined list, they account for over a quarter of total projects in terms of value, and for a little under half of the total cost.

Table 13 shows the breakdown by infrastructure category under the National Infrastructure Investment Plan (NIIP). The large number of projects in the “Other Buildings” category cover a wide range of applications, including government administrative offices as well as fire, police, and defense facilities. The importance of marine transport is demonstrated by the fact that it accounts for 14% of all projects.

**Table 13: Combined Project List by Priority Group and Infrastructure Sector Category**

Infrastructure Sector Category	Number of Projects				Project costs (T\$'000)			
	G1	G2	G3	Total	G1	G2	G3	Total
Roads	4	5	0	9	207,500	17,835	0	225,335
Aviation	2	2	1	5	3,100	11,800	103,100	118,000
Maritime	3	6	5	14	51,642	162,003	172,080	385,725
Waterways	1	3	4	8	3,000	43,000	56,660	102,660
Water and sanitation	5	1	0	6	133,801	3,000	0	136,801
Energy	4	1	0	5	21,165	4,000	0	25,165
Telecommunications	4	0	0	4	46,127	-	0	46,127
Education and training	2	3	0	5	16,000	7,000	0	23,000
Health	4	1	0	5	60,500	5,500	0	66,000
Other buildings	8	13	6	27	62,211	65,458	39,100	166,769
Urban development	5	5	2	12	31,600	33,972	10,215	75,787
<b>Total</b>	<b>42</b>	<b>40</b>	<b>18</b>	<b>100</b>	<b>636,646</b>	<b>353,568</b>	<b>381,155</b>	<b>1,371,369</b>

T\$ = pa'anga (Tongan national currency), G = Group.

Notes:

1. “Combined” means that the rankings include the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and those under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha’apai volcanic eruption (NIIP3-HTHH). The rankings for both versions are based on a multi-criteria analysis and modified according to the final decisions of the Cabinet of the Government of Tonga.

2. The infrastructure sector categories were not used in NIIP3, so they have been added to the existing NIIP3 projects still on the list for the sake of consistency.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

## 4.4 Likelihood of Project Economic Viability

In Table 14, economic viability is measured according to the same two criteria used in NIIP3: the annual net benefit required to get an internal rate of return (IRR) of 6%, and the per capita value of that net benefit for those serviced by the project. The average economic MCA score is a new addition to the analysis, and it is the average of the four economic criteria (4.2, 4.4, 4.6, and 5.1) covered in sensitivity analysis discussed in Section 3.2.

Table 14: Likelihood of Project Economic Viability, by Priority Group

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>d</sup>	Required Net Annual Benefits (T\$'000) <sup>e</sup>	Population Served <sup>f</sup>	Required Net Annual Benefits Per Capita (T\$) <sup>g</sup>	Average Economic MCA Score <sup>h</sup>
B	114	TCL	New international secondary internet cable linking VV and HH	93.3	G1	39,200	T	3,528	80,000	44	5.56
A	018	OLA	New fale alea (Parliament House and Office Complex)	93.3	G1	25,000	OB	2,250	500	4,500	1.67
A	014	MOH	Upgrading of Vava'u Hospital (Prince Ngu Hospital)	93.3	G1	40,000	H	3,600	13,700	263	3.89
A	031	MJP-J	New law court complex (Supreme and Magistrate)	93.3	G1	13,500	OB	1,215	5,000	243	2.22
A	022	TWB	Centralized Tonga Water Board and Village Water Supply Tongatapu	91.1	G1	103,389	WS	9,305	70,000	133	6.67
B	064	MOH	Upgrade of health centres (Kolovai, Kolonga), new clinic Sopa (TT)	88.9	G1	10,500	H	945	15,000	63	3.33
A	024	MEIDECC	Multi-Hazard Early Warning/Emergency Operations Centre (Niuas)	88.9	G1	15,000	OB	1,350	1,500	900	6.11
A	029	TWB	Improved water supply system in Vava'u (Greater Neiafu)	88.9	G1	14,748	WS	1,327	8,000	166	6.67
A	020	TWB	Improved 'Eua Water Supply System	84.4	G1	6,705	WS	603	4,800	126	5.56
A	042	TCC	Upgrade and expansion of 'Eua Mobile and Fixed Networks	84.4	G1	2,960	T	266	4,800	56	5.00
A	049	HMAF	Upgrade Touliki coastal protection structure	84.4	G1	3,000	WW	270	5,000	54	3.33
A	054	TMCL	Talamahu (TBU, Nuku'alofa) and 'Utukalungalu (Vv) Market upgrade	84.4	G1	5,000	UD	450	20,000	23	5.00
B	069	TPL	Power network relocation, extension, connection, HTHH villages	84.4	G1	1,405	E	126	500	253	5.00
B	091	TCC	Replace Telcom tower, BTS, standby generator Kanokupolu, Ohonua	84.4	G1	1,340	T	121	4,300	28	5.00
B	113	TAMA	Upgrade of the small industries center - Ma'ufanga, TT	84.4	G1	5,000	UD	450	500	900	6.67
A	001	TPL	Nuku'alofa Power Network Upgrade Project (NNUP) Area 4	84.4	G1	12,360	E	1,112	10,000	111	5.56
A	055	TPL	Additional/Replacement of generators (TBU, Vv, Hp and 'Eua)	84.4	G1	6,000	E	540	60,000	9	5.56
A	017	MOH	Upgrading of a new public health building (Tongatapu)	84.4	G1	5,000	H	450	10,000	45	3.89
B	103	MOI	'Ohonua bridge ('Eua)	84.4	G1	16,000	R	1,440	4,800	300	3.33
A	019	MOI	Fanga'uta evacuation bridge and roads	84.4	G1	150,000	R	13,500	50,000	270	3.89
A	013	PAT	Second requisition of new tug boats	82.2	G1	20,022	M	1,802	50,000	36	5.56
A	041	TCC	Upgrade and expansion of Niuas mobile networks	82.2	G1	2,627	T	236	2,000	118	5.56
A	058	MEFS	Upgrading of the fire station 1, Nuku'alofa	82.2	G1	2,360	OB	212	10,000	21	3.89
B	016	MOH	Reconstruction of Queen Salote School of Nursing Home	80.0	G1	5,000	H	450	1,000	450	3.33
A	052	MOI	Overlay of Asphalt Concrete on Primary Roads in Tongatapu	80.0	G1	40,000	R	3,600	50,000	72	3.33
B	112	TWB	Water Supply for HTHH damaged and relocated villages (TT, HH, Eua)	80.0	G1	2,061	WS	185	5,000	37	5.56
B	060	MOP	Tonga police stations custody upgrade Project	80.0	G1	1,001	OB	90	2,000	45	2.22
B	062	MOP	Tonga police stations and support facilities rehabilitation (all island groups)	80.0	G1	2,850	OB	257	40,000	6	2.22
A	050	MEIDECC	New warehouses for NEMO (Vava'u)	77.8	G1	1,000	OB	90	8,000	11	3.89
B	092	TWB	Water Supply upgrde (post HTHH) Hihifo, Holopeka, Pangai, HH	77.8	G1	6,898	WS	621	2,000	310	5.00

Table 14: Likelihood of Project Economic Viability, by Priority Group (continued)

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>d</sup>	Required Net Annual Benefits (T\$'000) <sup>e</sup>	Population Served <sup>f</sup>	Required Net Annual Benefits Per Capita (T\$) <sup>g</sup>	Average Economic MCA Score <sup>h</sup>
B	097	MEIDECC	Renovation Community Evacuation Centers TT, post HTHH	77.8	G1	1,500	OB	135	20,000	7	1.67
A	005	TAL	Second new fire tender Fua'amotu	77.8	G1	2,100	A	189	50,000	4	6.67
A	038	MET	TIST & TMPI extension/upgrade building (more inclusive for student)	77.8	G1	6,000	ET	540	1,000	540	6.11
A	027	MOI	New wharfs for small outer island	77.8	G1	16,000	M	1,440	10,000	144	5.00
A	011	WAL	Close (Kalaka) and establishing new landfill(s) Vava'u	75.6	G1	12,000	UD	1,080	13,700	79	5.56
B	065	TMCL	Upgrade of TMCL's Tofoa market	75.6	G1	1,600	UD	144	10,000	14	5.56
B	068	TPL	Replacement of residential Smart Meter project	75.6	G1	1,400	E	126	100,000	1	5.00
B	085	MOI	Widening to Three Lanes, Taufua'ahau Rd (Pea to Tofoa)	75.6	G1	1,500	R	135	40,000	3	2.78
A	037	WAL	Convert dump sites to new structured landfill, Ha'apai & 'Eua	75.6	G1	8,000	UD	720	6,000	120	5.56
A	004	TAL	Upgrade/expand the carpark, pedestrian access Fua'amotu Airports	75.6	G1	1,000	A	90	50,000	2	5.56
A	008	MET	New junior campus for Tupou College	75.6	G1	10,000	ET	900	1,000	900	5.56
B	072	PAT	Replace of existing rock revetment for QS Wharf	75.6	G1	15,620	M	1,406	100,000	14	4.44
A	026	MOI	Relocation and rebuild of Nafanua Harbour - 'Eua	75.6	G2	26,000	M	2,340	4,800	488	5.00
A	030	T Post	Tonga national home & street addressing	75.6	G2	6,732	UD	606	100,000	6	5.00
A	043	MET	New ICT building & infrastructure Tupou Tertiary Institute (TTI)	75.6	G2	2,000	ET	180	1,000	180	5.00
A	023	MEIDECC	Renewable Energy Testing and Research Center	73.3	G2	4,000	E	360	500	720	5.00
A	051	MIA	Upgraded National Mini Sports Stadium/Rugby Field (VV, HP, 'Eua)	73.3	G2	1,200	UD	108	4,000	27	4.44
B	070	PAT	Dredging equipment QS Wharf channel and berthing area, Nuku'alofa	73.3	G2	20,450	M	1,841	100,000	18	3.89
B	071	MOI	Replace of Existing Aids to Navigation equipment for all island groups	73.3	G2	26,053	M	2,345	40,000	59	3.33
A	007	MoFi	New maintenance workshop and boat ramp upgrade (HP, VV)	71.1	G2	3,000	M	270	2,000	135	5.00
A	010	MoFi	Fisheries Export Refrigerator Storage - Fua'amotu Airport	71.1	G2	1,500	OB	135	500	270	5.56
A	039	MET	New 'Safer Schools' warehouse building	71.1	G2	2,000	ET	180	5,000	36	3.33
A	044	MET	New Tonga Side School Complex (phase 3)	71.1	G2	3,000	ET	270	5,000	54	4.44
A	048	HMAF	New Kauvai and Tufumahina military camps	71.1	G2	1,500	OB	135	1,000	135	2.22
A	056	MEFS	New staff quarters Fire Stations (FS1, FS2, FS3, FS6) (TT, VV, HP)	71.1	G2	1,183	OB	106	200	532	2.22
A	059	MOH	Upgrading 'Eua Hospital (Niu'eiki Hospital)	71.1	G2	5,500	H	495	4,800	103	2.22
A	053	MEIDECC	New water and sewage testing laboratory building	71.1	G2	3,000	WS	270	1,000	270	3.89
B	032	MLNR	MLNR New Office Complex (Mataki'eua)	71.1	G2	7,000	OB	630	5,000	126	2.78
B	110	TAMA	Upgrade APIMATAKA Properties and Infrastructure	68.9	G2	16,000	UD	1,440	1,000	1,440	5.00
A	003	TAL	Light for Runways at all domestic airports	68.9	G2	9,700	A	873	20,000	44	3.33
A	012	MJP-PD	Expanded and upgraded facilities Hu'atolitolu prison (Tongatapu)	68.9	G2	12,000	OB	1,080	1,000	1,080	1.67

Table 14: Likelihood of Project Economic Viability, by Priority Group (continued)

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>d</sup>	Required Net Annual Benefits (T\$'000) <sup>e</sup>	Population Served <sup>f</sup>	Required Net Annual Benefits Per Capita (T\$) <sup>g</sup>	Average Economic MCA Score <sup>h</sup>
B	061	MoFi	New Fisheries Office for Vava'u and Niuatoputapu	68.9	G2	1,500	OB	135	3,000	45	3.33
B	066	MEFS	New Fire Service Emergency HQ, Response, Training Center	68.9	G2	10,000	OB	900	70,000	13	2.78
B	077	PAT	Vuna wharf (State 2 Marina and Onshore Facilities)	68.9	G2	60,500	M	5,445	5,000	1,089	4.44
B	082	MOI	Haafeva Wharf Rehabilitation (Relocation), HH	68.9	G2	26,000	M	2,340	500	4,680	2.78
B	100	MEIDECC	Foreshore protection Nuku'alofa waterfront (Sopu to Patangata)	68.9	G2	10,000	WW	900	5,000	180	2.22
B	093	MTED	Packhouse & equipment VV, equipment Lapaha,TT & 'Eua	68.9	G2	5,040	UD	454	3,000	151	3.89
A	006	TAL	New Fire Tender Lupepau'u Airport (Vava'u)	66.7	G2	2,100	A	189	13,000	15	3.89
A	028	MOP	New Tonga National Police Head Quarters	66.7	G2	5,000	OB	450	10,000	45	3.89
A	036	MJP-PD	Expanded and upgraded facilities for Sainai Prison ('Eua)	66.7	G2	6,000	OB	540	200	2,700	1.67
B	104	MOI	Primary & secondary roads maintenance post HTHH in Ha'apai	66.7	G2	5,665	R	510	5,600	91	2.22
B	106	MOI	Primary & secondary roads maintenance post HTHH, Nuku'alofa	66.7	G2	2,000	R	180	10,000	18	2.22
A	046	MEIDECC	Hahake (TT) coastal area protection	64.4	G2	22,000	WW	1,980	1,500	1,320	2.22
A	047	MEIDECC	Ha'apai coastal area protection	64.4	G2	11,000	WW	990	3,000	330	2.22
B	075	PAT	Refurbishment of Customs cargo facility post HTHH damage	64.4	G2	5,275	OB	475	100,000	5	3.89
B	105	MOI	Primary & secondary roads maintenance post HTHH in Hihifo, TT	64.4	G2	6,870	R	618	4,300	144	2.22
B	111	TAMA	Upgrade Sea Star Property (international Metropole)	64.4	G2	5,000	UD	450	1,000	450	3.33
B	108	MOI	New Roads relocated villages (Kanokupolu, 'Atata, Mango)	64.4	G2	2,000	R	180	500	360	2.22
A	034	MJP-PD	Expanded and upgraded of facilities for Fale'one Prison (Ha'apai)	62.2	G2	6,000	OB	540	200	2,700	1.11
A	035	MJP-PD	Expanded and upgraded facilities for Ha'alefo Prison (Vava'u)	62.2	G2	6,000	OB	540	500	1,080	0.56
B	089	MJP-J	Renovation of Probation Office and Magistrate Court (Fasi)	62.2	G2	2,500	OB	225	2,000	113	1.67
B	102	MOI	Primary & secondary roads maintenance post HTHH in 'Eua	62.2	G2	1,300	R	117	4,800	24	2.22
A	025	PAT	New International Cruise Wharf, Vava'u	60.0	G3	54,000	M	4,860	5,000	972	4.44
B	094	MEIDECC	Coastal protection for 'Ohonua and Tufu, 'Eua	57.8	G3	7,000	WW	630	4,800	131	1.11
B	078	PAT	Yellow pier upgrade and super yacht berth	57.8	G3	50,500	M	4,545	5,000	909	3.33
B	086	MOI	Floating Dock - Dry Dock	57.8	G3	15,000	M	1,350	1,000	1,350	3.89
B	098	MEIDECC	Foreshore protection for Hihifo (Hofoa to Ha'atafu)	55.6	G3	3,500	WW	315	1,500	210	1.11
B	074	PAT	New cargo inspection facility (phase 1 & phase 2)	55.6	G3	7,275	UD	655	100,000	7	3.33
A	002	TAL	Runway extension at Fua'amotu airport	53.3	G3	103,100	A	9,279	50,000	186	2.78
B	073	PAT	Salvage of sunken vesells from HTHH	53.3	G3	2,080	M	187	500	374	1.67
B	096	MEIDECC	Foreshore Coastal area Protection in Nomuka	51.1	G3	8,160	WW	734	383	1,917	0.56
B	107	MOI	Upgrade Nuku'alofa coastal area sidewalks and walkways post HTHH	51.1	G3	2,940	UD	265	10,000	26	0.56
B	088	MJP-J	New Registrar General Office and Archive (and equipment)	51.1	G3	3,500	OB	315	100,000	3	2.22
B	101	PMO	New integrated 'Eua Government Office Building	51.1	G3	5,000	OB	450	4,800	94	1.67
A	045	MEIDECC	Hihifo (TT) coastal area protection	48.9	G3	38,000	WW	3,420	1,550	2,206	1.67

Table 14: Likelihood of Project Economic Viability, by Priority Group (continued)

NIIP3 Version <sup>a</sup>	Proj. No.	MDA or Public Enterprise	Project Title <sup>b</sup>	Government Score and Group <sup>c</sup>		Cost (T\$'000)	Inf. Sect. Cat. <sup>d</sup>	Required Net Annual Benefits (T\$'000) <sup>e</sup>	Population Served <sup>f</sup>	Required Net Annual Benefits Per Capita (T\$) <sup>g</sup>	Average Economic MCA Score <sup>h</sup>
B	076	PAT	Relocation of fishing wharf (Sopu)	48.9	G3	50,500	M	4,545	500	9,090	2.78
B	095	PMO	New integrated Ha'apai Government Office Building	48.9	G3	10,000	OB	900	5,600	161	1.11
B	109	MOI	Government staff quarters, Pangai	44.4	G3	2,100	OB	189	1,000	189	0.00
B	099	MOI	Government Buildings, Noumuka	44.4	G3	2,500	OB	225	380	592	0.56
B	090	MJP-J	Two new residencies for Lord Chief Justice and Judge (+ equipment)	35.6	G3	16,000	OB	1,440	20	72,000	0.56

## Key:

	Group 1 (high priority, likely to be funded)
	Group 2 (medium priority, funding possible)
	Group 3 (funding delayed)
h	Fully related to the HTHH event
m	Partly related to the HTHH event
n	Not related to the HTHH event

T\$ = pa'anga (Tongan national currency; A (under Inf. Sect. Cat.) = aviation; ET = education and training; G = Group; H = health; HMAF = His Majesty's Armed Forces; HTHH= Hunga Tonga–Hunga Ha'apai; ICT = information and communication technology; M = maritime; MCA = multi-criteria analysis; MDA = ministry, department, and/or agency; MEFS = Ministry of Emergency and Fire Services; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MIA = Ministry of Internal Affairs; MJP-J = Ministry of Justice and Prisons-Justice; MJP-PD = Ministry of Justice and Prisons-Prisons; MLNR = Ministry of Lands and Natural Resources; MOFi = Ministry of Fisheries; MOH = Ministry of Health; MOI = Ministry of Infrastructure; MOP = Ministry of Police; MTED = Ministry of Trade and Economic Development; NIIP3 = National Infrastructure Investment Plan, 2021–2030; OB = other buildings; OLA = Office of the Legislative Assembly; PAT = Ports Authority Tonga; PMO = Prime Minister's Office; R = roads; T = telecommunications; T Post = Tonga Post; TAL = Tonga Airports Limited; TAMA = Tonga Asset Management Association; TCC = Tonga Communications Corporation; TCL = Tonga Cable Limited; TMCL = Tonga Market Corporation Limited; TPL = Tonga Power Limited; TWB = Tonga Water Board; UD = urban development; WAL = Waste Authority Limited; WS = water and sanitation; WW = waterways.

## Notes:

1. The rankings of the projects under the National Infrastructure Investment Plan, 2021–2030 (NIIP3) and under the revision of the NIIP3 to include the response of the Government of Tonga to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH) are both based on a multi-criteria analysis and were both modified according to the final decisions of the Cabinet of the Government of Tonga.

<sup>a</sup> In this column, "A" refers to the government-approved updated version of the NIIP3 (November 2021), which deleted projects that had already received funding or had been dropped. "B" refers to the government-approved revised version, NIIP3-HTHH (November 2022), which added projects that address the damage caused by the HTHH volcanic eruption.

<sup>b</sup> The names of some of the projects given in this column are sometimes in shortened form.

<sup>c</sup> The government score is based on equitable MCA weightings.

<sup>d</sup> "Inf. Sect. Cat." stands for "Infrastructure Sector Category." Under this rubric, the category of "Buildings and Housing" has been split into three categories: "Education and Training," "Health," and "Other Buildings."

<sup>e</sup> The net annual benefits should generate an internal rate of return (IRR) of 6% for 20 years.

<sup>f</sup> This column gives the approximate size of the population served, at least to some extent, by each project.

<sup>g</sup> This column gives the net annual benefits of each project on a per capita basis (i.e., the net annual benefits divided by the population served).

<sup>h</sup> The values in this column show the average MCA-based scores for the economic criteria 4.2, 4.4, 4.6, 5.2.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

# 5. Opportunities for Infrastructure Financing

## 5.1 Aid Funding after the Hunga Tonga–Hunga Ha’apai Eruption

A video meeting was held with all the major development partners on 8 March 2022 to discuss support for the government’s response to the HTHH event (section 7.6), specifically, the revision of the NIIP3 to include projects redressing the damage from the volcanic eruption (NIIP3-HTHH). By this stage, there had already been a large inflow of funding, most of which had been allocated to recovery efforts such as emergency supplies, cleanups, and transport. The minutes of the meeting did not identify any significant NIIP3-HTHH projects that were not already in the pipeline.

The next phase of support focused on addressing private housing needs for those villages that had been destroyed. While this entails infrastructure, given that the housing would be privately owned, this support could not part of the NIIP3-HTHH. Several projects for roads and utilities to support resettlement were included in the list of projects in this report.

The major HTHH projects that have already received funding include and are, therefore, not included in the NIIP3-HTHH prioritization list are:

- i) the replacement of the damaged sections of international submarine telcom cables (arranged by the government and Tonga Cable Limited), supported by Space Link equipment, and servicing outer islands; and
- ii) all the tsunami-damaged schools, which were incorporated into the already-approved World Bank’s Tonga Safer and Resilient Schools Project.

## 5.2 Funding Options for Government Approved Group 1 List of Projects

While most of the projects, especially those with higher scores, have important contributions to make to the well-being of Tongans, the majority have limited commercial viability, so they will likely require development-partner funding.

Table 15 suggestions possible funding options. Apart from development-partner funding, a few of the projects might be able to receive at least part of their funding from user fees (even after paying operation and maintenance costs). In a few cases, the government may wish to consider contributing funds from its general revenue, though this option is extremely limited.

After the NIIP-C meeting and before finalization by Cabinet, the list of all projects (without prioritization) was shared with development partners to ensure that no pipeline projects were missing, and no formally funded projects were included. All major development partners, who are potential sources of NIIP funding, responded. The notes from these responses are included in the Annex Section 7.7. This provides additional information to

populated Table 16. While the table focusses on G1 priority projects, three Ministry of Education and Training (MET) projects in the upper part of G2 have been included as they may possibly be included within the discussions for the international development association (IDA20) plus Australian funding.

All suggested sources of funding are only indicative and must still pass various stages of formal approval within GOT and relevant development partners.

Focusing only on G1 projects (see Table 15), a little over \$400 million, or over 63%, have potential development partner funding. By value, nearly 60% of exclusively HTHH related projects, in G1, have potential funding, while over 78% of those partly HTHH related projects have potential funding.

**Table 15: Summary of Potential Options for Funding of Group 1 Projects**

Category	Total (\$m)	Possible Funding	
		Cost (\$m)	Percentage Category
h	68,404	40,700	59.5%
m	19,870	15,620	78.6%
other	548,372	347,203	63.3%
<b>Total</b>	<b>636,646</b>	<b>403,523</b>	<b>63.4%</b>

Key

- h Fully related to the HTHH event
- m Partly related to the HTHH event



Sopu Captain Cooks Apartment - car on verandah



Table 16: Funding Options for Group 1 Projects

(1)	Proj. No.	MDA or Public Enterprise (2)	Project Title (some slightly shortened)	Government Score	Cost (T\$'000)	HTHH	GoT	PEs	DPs	Private JV
B	114	TCL	New international secondary internet cable linking VV and HH	93.3	39,200	h		user fees	Aust/NZ	
A	018	OLA	New Fale Alea (Parliament House and Office Complex)	93.3	25,000				Aust/NZ	
A	014	MOH	Upgrading of Vava'u Hospital (Prince Ngu Hospital)	93.3	40,000				WB/Aust	
A	031	MJP-J	New Law Court Complex (Supreme and Magistrate)	93.3	13,500				Aust	
A	022	TWB	Centralized Tonga Water Board and Village Water Supply Tongatapu	91.1	103,389			user fees		
B	064	MOH	Upgrade health centres (Kolovai, Kolonga), new clinic Sopu (TT)	88.9	10,500	n			WB/Aust	
A	024	MEIDECC	Multi-Hazard Early Warning/Emergency Operations Centre ( Niuas)	88.9	15,000				DRM	
A	029	TWB	Improved Water Supply System in Vava'u (Greater Neiafu)	88.9	14,748			user fees		
A	020	TWB	Improved 'Eua Water Supply System	84.4	6,705			user fees		
A	042	TCC	Upgrade and Expansion 'Eua Mobile and Fixed Networks	84.4	2,960			user fees		
A	049	HMAF	Upgrade Touliki coastal protection structure	84.4	3,000				DRM	
A	054	TMCL	Talamahu (TBU, Nuku'alofa) and 'Utukalungalu (Vv) Market upgrade	84.4	5,000			user fees		
B	069	TPL	Power network relocation, extension, connection, HTHH villages	84.4	1,405	h				
B	091	TCC	Replace Telcoms tower, BTS, standby generator Kanokupolu, Ohonua	84.4	1,340	h		user fees		
B	113	TAMA	Upgrade of Small Industris Center - Ma'ufanga, TT	84.4	5,000	n		user fees		
A	001	TPL	Nuku'alofa Power Network Upgrade Project (NNUP) Area 4	84.4	12,360			user fees		
A	055	TPL	Additional/Replacement Generators (TBU, Vv, Hp and 'Eua)	84.4	6,000			user fees		
A	017	MOH	Upgrading of a new Public health building (Tongatapu)	84.4	5,000				WB/Aust	
B	103	MOI	'Ohonua bridge ('Eua)	84.4	16,000	h				
A	019	MOI	Fanga'uta Evacuation Bridge and Roads	84.4	150,000		toll		ADB/Aust	
A	013	PAT	Second New Tug boats	82.2	20,022			user fees		
A	041	TCC	Upgrade and Expansion Niuas Mobile Networks	82.2	2,627					
A	058	MEFS	Upgrade Fire Station 1, Nuku'alofa	82.2	2,360					
B	016	MOH	Reconstruction of Queen Salote School of Nursing Home	80.0	5,000	n			WB/Aust	
A	052	MOI	Overlay of Asphalt Concrete on Primary Roads in Tongatapu	80.0	40,000					
B	112	TWB	Water Supply for HTHH damaged and relocated villages (TT, HH, Eau)	80.0	2,061	h	revenue	user fees		
B	060	MOP	Tonga Police Stations Custody Upgrade Project	80.0	1,001	n				
B	062	MOP	Tonga Police Stations & support Facilities Rehabilitation (all island groups)	80.0	2,850	m				
A	050	MEIDECC	New Warehouses for NEMO (Vava'u)	77.8	1,000				Aust/NZ	
B	092	TWB	Water Supply upgrde (post HTHH) Hihifo, Holopeka, Pangai, HH	77.8	6,898	h				
B	097	MEIDECC	Renovation Community Evacuation Centers TT, post HTHH	77.8	1,500	h	revenue	user fees	DRM	
A	005	TAL	Second New Fire Tender Fua'amotu	77.8	2,100			user fees		
A	038	MET	TIST & TMPI extension/upgrade building (more inclusive for student)	77.8	6,000				WB	

Table 16: Funding Options for Group 1 Projects (continued)

(1)	Proj. No.	MDA or Public Enterprise (2)	Project Title (some slightly shortened)	Government Score	Cost (T\$'000)	HTHH	GoT	PEs	DPs	Private JV
A	027	MOI	New Wharfs for Small Outer Island	77.8	16,000					
A	011	WAL	Close (Kalaka) and establishing new landfill(s) Vava'u	75.6	12,000					
B	065	TMCL	Upgrade of TMCL's Tofoa market	75.6	1,600	n		user fees		
B	068	TPL	Replacement of Residential Smart Meter Project	75.6	1,400	m		user fees		
B	085	MOI	Widening to Three Lanes, Tafua'ahau Rd (Pea to Tofoa)	75.6	1,500	n				
A	037	WAL	Convert dump sites to new structured landfill, Ha'apai & 'Eua	75.6	8,000					
A	004	TAL	Upgrade/expand carpark, pedestrian access Fua'amotu Airports	75.6	1,000			user fees		
A	008	MET	New Junior Campus for Tupou College	75.6	10,000				WB/Aust	
B	072	PAT	Replace of existing rock revetment for QS Wharf	75.6	15,620	m		user fees	ADB/WB	
<b>Projects from G2 with potential funding</b>										
A	043	MET	New ICT building & infrastructure Tupou Tertiary Institute (TTI)	75.6	2,000				WB/Aust	
A	039	MET	New 'Safer Schools' warehouse building	71.1	2,000				WB/Aust	
A	044	MET	New Tonga Side School Complex (phase 3)	71.1	3,000				WB/Aust	

Key:

	Group 1 (within likely funding)
	Group 2 (needs extra funding)
h	Hunga Tonga Hunga Haa'pai (HTHH) fully related
m	Mixed, part HTHH
n	Not related to HTHH
	pre HTHH

A (under Inf. Sect. Cat.) = aviation; ADB = Asian Development Bank; Aust. = Australia; DRM = disaster risk management; E = energy; MET = Ministry of Education and Training; G = Group; GOT = Government of Tonga; H = health; HMAF = His Majesty's Armed Forces; HTHH= Hunga Tonga–Hunga Ha'apai; ICT = information and communication technology; M = maritime; MDA = ministry, department, and/or agency; MEFS = Ministry of Emergency and Fire Services; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MJP-J = Ministry of Justice and Prisons-Justice; MOH = Ministry of Health; MOI = Ministry of Infrastructure; MOP = Ministry of Police; NZ = New Zealand; NIIP3 = National Infrastructure Investment Plan, 2021–2030; OB = other buildings; OLA = Office of the Legislative Assembly; PAT = Ports Authority Tonga; R = roads; T = telecommunications; TAL = Tonga Airports Limited; TAMA = Tonga Asset Management Association; TCC = Tonga Communications Corporation; TCL = Tonga Cable Limited; TMCL = Talamahu Market Corporation Limited; TPL = Tonga Power Limited; TWB = Tonga Water Board; UD = urban development; WB = World Bank; WS = water and sanitation; WW = waterways.

Notes:

1. The rankings of the projects under the NIIP3 and under the revised version of the NIIP3, which includes the response of the GOT to the Hunga Tonga–Hunga Ha'apai volcanic eruption (NIIP3-HTHH)—are both based on a multi-criteria analysis and were modified according to the final decisions of the Cabinet of the GOT.
2. The funding options were identified based on discussions between the consultant and the National Planning Division, and with other government agencies and development partners.

Source: Government of Tonga

## 6. Conclusion

The HTHH eruption added to Tonga's infrastructure needs; in addition, various needs unrelated to HTHH have been better articulated since the start of the NIIP3. The revised version of the plan (NIIP3-HTHH) has allowed both sets of needs to be integrated into the NIIP3 database, building on the experience of the mainstreamed NIIP3 process. The prioritization is based on the multi-criteria analysis (MCA) approved by the Cabinet for the NIIP3, but it also takes other issues into account, such as good governance, law and order, and human rights obligations.

While the top priority group is expected to receive about 5 years of funding, the total required funding is equivalent to nearly 15 years of potential project operations



Vuna Road house washed from base, crushed at back.

# Annex 1: National Infrastructure Investment Plan Support Staff

The arrangements for the review of the revised version of the National Infrastructure Investment Plan, 2021–2030 (NIIP3-HTHH) were similar to those used for the review of the previous version, when the plan had been updated before the HTHH event (NIIP3). They involved the participation of NIIP support staff (NSS) from of the National Planning Division (NPD), under the Prime Minister’s Office, and of the two key ministries in charge of infrastructure investment and financing: the Ministry of Finance (MOF) and the Ministry of Infrastructure (MOI). The main role of the NSS is to lead the application of the NIIP3 procedures, as established in the NIIP3 Report, and the handling of any other management issues for the successful completion of the revision. During the NIIP3-HTHH review, NPD staff were the most active participants of the NSS. Table A1 of NSS Members lists the members from NIIP3, with some updates as provided by NPD (there may be further adjustments based on the reps identified by MOF and MOI).

**Table A1: Staff Involved in the Review of the Revised National Infrastructure Investment Plan, 2021–2030**

Name	Position	Division	Ministry
Ma'u Alipate Leha	Director	National Planning	PMO
Lupe Fe'iloaki	Principal economist	National Planning	PMO
Ma'ata Mafi	Senior economist	National Planning	PMO
Kiu Futuna Tatafu	Economist	National Planning	PMO
Saane Lolo	Deputy CEO	Project Aid and Resilience	MOF
Salesi Pongi	Principal economist	Project, Aid Management	MOF
Lopeti Heimuli	CEO	Building	MOI
Mandie Finau	Principal engineering	Resilient unit	MOI
Tevita Lavemai	Deputy	Road infrastructure	MOI

CEO = Chief Executive Officer, MOF = Ministry of Finance, MOI = Ministry of Infrastructure, PMO = Prime Minister’s Office.

Note: A blank cell indicates that the column head does not apply.

Sources: Government of Tonga

# Annex 2: The National Infrastructure Investment Plan Committee

During the review of the National Infrastructure Investment Plan, 2021–2030 (NIIP3), two committees were combined into one NIIP Committee (NIIP-C). The two committees were as follows:

- i) The NIIP Technical Working Committee (NIIP-TWC) was composed of at least one staff member from each government ministry, department, and agency and from each public enterprise that was managing and/or operating public infrastructure; they lead on the technical work, such as the preparation of the Project Concept Note.
- ii) The NIIP Taskforce Committee (NIIP-TC) included the chief executive officers (CEOs) of the Prime Minister’s Office, Ministry of Finance, and Ministry of Infrastructure as the full members. They were assisted by the CEOs of all the other government ministries, departments, and agencies, and of the public enterprises, that were managing and/or operating public infrastructure; they lead on decision-making and liaising with ministers.

The current members of the combined NIIP-C are listed in Table A2.

**Table A2: The Members of the National Infrastructure Investment Plan Committee**

Ministry Department Agencies	Taskforce Committee members	Technical Working Committee members
Prime Minister’s Office	Chair: Chief Secretary and Secretary to Cabinet (CSSC): Paula Ma’u, Secretary: Director – National Planning Department: Ma’u Leha	Chief Secretary and Secretary to Cabinet (CSSC): Paula Ma’u Director – National Planning Department: Ma’u Leha
Ministry of Finance	CEO, Tina Tuaimoe’api	Deputy CEO, Saane Lolo Principal Economist, Salesi Pongi Senior Economist, Nick Lavemaau
Ministry of Infrastructure	CEO, Lopeti Heimuli	Deputy CEO Land Transport, Tevita Lavemai Deputy CEO Corporate Services, Mandie Finau Deputy CEO Marine, Kelela Tonga
Ministry of Public Enterprises	CEO, Sione ‘Akauola	Deputy CEO Monitoring and Compliance, Hola Naidu
Ports Authority Tonga	CEO, ‘Alo Maileseni	Mele Lavemaau
Tonga Airports Limited	A/CEO, Siena Taumoepeau	
Tonga Water Board	CEO, Sione Finau	Deputy CEO Engineering, Quddus Fielea
Tonga Power Limited	CEO, Finau Moa	Andrew Kautoke
Tonga Cable Limited	CEO, Semisi Panuve	Sione ‘Uta’atu
Tonga Communication Corporation	CEO, Sione Veikos	Sitani Akolo
Tonga Waste Authority	CEO, Malakai Sika	Manager Administration & Projects, Lola Liava’a
Ministry of Education and Training	CEO, ‘Isikeli Oko	Ponepate Tausisila
Ministry of Lands and Natural Resource	A/CEO, Taaniela Kula	National Spatial Planning Authority, Tukua Tonga
Ministry of Health	CEO, Siale ‘Akau’ola	Deputy CEO Corporate Service, Sioape Kupu
Ministry of Internal Affairs	A/CEO, Dr. Fotu Fisi’iahi	‘Onetoto ‘Anisi

Table A2: The Members of the National Infrastructure Investment Plan Committee (continued)

Ministry Department Agencies	Taskforce Committee members	Technical Working Committee members
Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	A/CEO, Paula Ma'u	Director of Meteorology, 'Ofa Fa'anunu Director of Energy, Dr. Kakau Foliaki Director of Emergency Management, Mafua Maka Director of Climate Change, Lu'isa Malolo Director of Communications, Feleti Tu'ihalamaka
<b>Additional MDAs</b>		
Ministry of Agriculture, Food and Forest	CEO, Viliami Manu	Principal Accountant, Fe'ao Lasalo
Ministry of Fisheries	CEO, Tu'ikolongahau Halafih	Deputy CEO Corporate Services, Elaine Havealeta
Ministry of Tourism	CEO, Viliami Takau	Deputy CEO Industry, Magdalena Fifita
Ministry of Justice	CEO, Manakovi Pahulu	Deputy CEO Corporate Services, Eileen Fonua
Prison Department	Commissioner, Semisi Tapueluelu	Deputy Commissioner, Alani Manuofetoa
Ministry of Police	Commissioner, Shane McLennan	Programme Manager, Fuka Tonga
Ministry of Fire and Services	CEO, Viliami Tu'ihalamaka	Assistant Fire Commander, Vika Unga
His Majesty's Armed Forces	Brigadier General, Lord Fielakepa	Capt. Sione Ulakai
Palace office	Private Secretary, Sione Fifita	Senior Assistant Secretary, Mosese Vakasiuola
Legislative Assembly	Clerk of the House, Gloria Pole'o	Deputy Clerk, Dr. Sione Vikilani
Ministry Trade and Economic Development	CEO, Distaquaine Tu'ihalamaka	Deputy CEO Corporate Service, Charles Lavemaau
Tonga Post Office	CEO, Lotomo'ua Tu'ungafasi	Temple Tatafu
Tonga Market	CEO, Metuliki Fakatava	Vika Olie
Tonga Asset Management	CEO, Tevita Hu'akau	Mele Boadu

CEO = chief executive officer; CFO = chief financial officer; CSSC = Chief Secretary and Secretary to Cabinet; DCEO = deputy CEO; MDA = ministry, department, and/or agency; MEIDECC = Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; MET = Ministry of Education and Training; MIA = Ministry of Internal Affairs; MLNR = Ministry of Lands and Natural Resources; MOF = Ministry of Finance; MOI = Ministry of Infrastructure; MPE = Ministry of Public Enterprises; NIIP = National Infrastructure Investment Plan; NIIP-C = NIIP Committee; NIIP-TWC = NIIP Technical Working Committee; NUP = ; PAMD = Project and Aid Management Division; PAT = Ports Authority Tonga; PMO = Prime Minister's Office; PUMA = Planning and Management Agency; TAL = Tonga Airports Limited; TCC = Tonga Communications Corporation; TCL = Tonga Cable Limited; TERM = Tonga Energy Road Map; TPL = Tonga Power Limited; TWB = Tonga Water Board; WAL = Waste Authority Limited.

Note: A blank cell indicates that the column head does not apply.

Sources: Government of Tonga and the Pacific Region Infrastructure Facility (PRIF).

# Annex 3: Multi-Criteria Analysis Methodology

Table 3A lists the criteria, grouped by category, that were included in the multi-criteria analysis for the National Infrastructure Investment Plan, 2021–2030. It also shows the links between the criteria and the pillars of the Tonga Strategic Development Framework (TSDFI).

**Table A3: Links between the Multi-Criteria Analysis and the Tonga Strategic Development Framework**

MCA Criteria Category and Specific Criteria	Linked TSDFI Pillars <sup>a</sup>
<b>Category 1: Infrastructure Performance</b>	
1.1 Linkages with other infrastructure <sup>b</sup>	[Pillar 4] Seeks reliable, safe, and affordable infrastructure.
1.2 Optimal use of existing infrastructure <sup>b</sup>	[Pillar 4] Seeks reliable, safe, and affordable infrastructure.
1.3 Improvements in service coverage, reliability, safety, and/or compliance with relevant government regulations or international obligations	[Pillar 2] Seeks improvements in education and training, lifetime education, and improved health care and delivery systems (universal health coverage).
	[Pillar 3] Seeks improved law and order and domestic security, appropriately applied.
	[Pillar 4] Seeks reliable and safe infrastructure.
<b>Category 2: Project Risk</b>	
2.1 Number of critical risk ratings for the project (based on the Risk Screening Toolkit)	[Pillar 4] Seeks reliable and safe infrastructure.
	[Pillar 5] seeks more resilient infrastructure.
2.2 Number of critical risk ratings for the project (based on the Risk Screening Toolkit)	[Pillar 4] Seeks reliable and safe infrastructure.
	[Pillar 5] Seeks a cleaner environment, climate-change adaptation, and DRM.
<b>Category 3: Project Climate Change/Disaster Risk Management/Environmental Protection Benefits</b>	
3.1 Contribution of the project to climate change mitigation, adaptation functions, and/or environmental protection	[Pillar 5] Seeks improved resilience against the impact of climate change, as well as a cleaner environment, supported by the JNAP II.
3.2 Contribution of the project to disaster preparedness	[Pillar 3] Seeks improved governance, including policies such as stronger enforcement of building codes.
	[Pillar 5] Seeks improved resilience against extreme natural events.
<b>Category 4: Economic and Social Impact</b>	
4.1 Investment cost per beneficiary <sup>c</sup>	[Pillar 4] Seeks affordable infrastructure services.
4.2 Employment creation during the operational phase (cost per full-time equivalent job) <sup>b</sup>	[Pillar 1] Seeks a closer public-private partnership for economic growth, and a strengthened business-enabling environment.
4.3 Efficiency gains and/or reduced costs for infrastructure users <sup>b</sup>	[Pillar 1] Seeks a strengthened business-enabling environment.
	[Pillar 3] Seeks improved law and order and domestic security, appropriately applied.
	[Pillar 4] Seeks affordable infrastructure services.
4.4 Contribution to private sector activity	[Pillar 1] seeks a closer public/private partnership for economic growth and a strengthened business enabling environment
4.5 Contribution to improved social services and/or community activity	[Pillar 2] Seeks to improve education and training, lifetime education, health care and delivery systems (universal health coverage), care and support for vulnerable groups (such as the disabled), the building of stronger communities, and the links with the diaspora.
4.6 Potential for economic viability	[Pillar 1] Seeks a closer public-private partnership in the pursuit of economic growth and improved public enterprise performance.
	[Pillar 4] Seeks reliable, safe, and affordable infrastructure.

Table A3: Links between the Multi-Criteria Analysis and the Tonga Strategic Development Framework (continued)

MCA Criteria Category and Specific Criteria	Linked TSDP Pillars <sup>a</sup>
<b>Category 5: Operational Sustainability<sup>b</sup></b>	
5.1 Ability to meet the O&M costs (in terms of the percentage of total O&M costs)	[Pillar 1] Seeks improved public enterprise performance. [Pillar 4] Seeks reliable, safe, and affordable infrastructure.
5.2 Institutional capacity of project implementing agency and operator	[Pillar 1] Seeks improved public enterprise performance. [Pillar 4] Seeks reliable and safe infrastructure.

DRM = disaster risk management; JNAP II = Joint National Action Plan II on Climate Change and Disaster Risk Management, 2018–2028; O&M = operation and maintenance; TSDP = Tonga Strategic Development Framework.

<sup>a</sup> The TSDP pillars are as follows: Pillar 1: Economic Institutions; Pillar 2: Social Institutions; Pillar 3: Political Institutions; Pillar 4: Infrastructure and Technology Inputs; and Pillar 5: Natural Resources and Environment Inputs.

<sup>b</sup> Category and criteria retained from Phase 2 of the National Infrastructure Investment Plan, 2015 (NIIP2).

<sup>c</sup> Criteria retained from Phase 2 of the NIIP2, with added projects taken into account.

Source: Government of Tonga



# Annex 4: Organizational Outcome Groupings of the Tonga Strategic Development Framework, by Pillar

Table A4: Organizational Outcome Groupings of the Tonga Strategic Development Framework, by Pillar

Outcome Grouping/Abbreviation	Lead MDA or Public Enterprise <sup>a</sup>	Abbreviation
<b>TSDF Pillar 1: Economic Institutions</b>		
Agriculture and forestry	AGR Ministry of Agriculture, Food and Forestry	MAFF
Fisheries and marine resources	FIS Ministry of Fisheries	MOFi
Tourism	TOU Ministry of Tourism	MOT
Trade and Business	TRA Ministry of Trade and Economic Development	MTED
	Tonga Market Corporation Limited	TMCL
<b>TSDF Pillar 2: Social Institutions</b>		
Education	EDU Ministry of Education and Training	MET
Health	HTH Ministry of Health	MOH
Housing	HOU Ministry of Infrastructure, Building Control Division	MOI-BCD
Youth and sport	SPR Ministry of Internal Affairs	MIA-YD, SD
Elderly and disabled	ELD Ministry of Internal Affairs	MIA-DIS
Community infrastructure	COM Prime Minister's Office	PMO-LG
<b>TSDF Pillar 3: Political Institutions (Governance)</b>		
Constitutional	CON Office of the Legislative Assembly	OLA
Justice, law and order	JLO Ministry of Justice and Prisons-Justice	MJP-J
	Ministry of Justice and Prisons-Prison Service	MJP-PS
	Ministry of Police and Fire Services-Tonga Police	MPFS-TP
Other central government headquarters	HQG [Any ministry headquarters not included elsewhere in Pillar 3]	
Local government administration	LGA Ministry of Internal Affairs, as well as the PMO (the LGA having moved there in 2021), as well as various central government offices on outer islands	MIA, PMO, etc.
CERT/e-governance	ICT Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	MEIDECC-CERT
Defense	DEF His Majesty's Armed Forces	HMAF
<b>TSDF Pillar 4a: Infrastructure and Technology (Transport) Inputs</b>		
Land transport	LDT Ministry of Infrastructure	MOI
Sea transport	SEA Ports Authority Tonga	PAT
	Ministry of Infrastructure, Marine and Ports Division	MOI-MPD
Air transport	AIR Tonga Airports Limited	TAL
<b>TSDF Pillar 4b: Infrastructure and Technology Inputs (Utilities) Inputs</b>		
Energy	ENE Tonga Power Limited	TPL
Communications	ICT Tonga Communications Corporation	TCC
	Tonga Cable Limited	TCL
Postal services	POS Tonga Post Ltd.	T Post
Water supply	WAT Tonga Water Board	TWB
Solid waste and sanitation	SWA Waste Authority Limited	WAL

Table A4: Organizational Outcome Groupings of the Tonga Strategic Development Framework, by Pillar (continued)

Outcome Grouping/Abbreviation	Lead MDA or Public Enterprise <sup>a</sup>	Abbreviation
<b>TSDF Pillar 5: Natural Resources and Environment Inputs</b>		
Land and natural resources	NAT Ministry of Lands and Natural Resources	MLNR
Environment	Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	MEIDECC-Env.D
	ENV Ministry of Agriculture, Food and Forestry	MAFF
	Ministry of Fisheries	MOFi
	Ministry of Lands and Natural Resources	MLNR
Disaster risk management	DRM Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	MEIDECC-DRMD
Fire and emergency	FIE Ministry of Police and Fire Services, Tonga Fire and Emergency Services	MPFS-TFES
Coastal protection	COA Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications	MEIDECC-CCD
Meteorology	MET Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications; Ministry of Education and Training	MEIDECC-MET

MDA = ministry, department, and/or agency; TSDF = Tonga Strategic Development Framework.










<sup>a</sup> The listing here of MDAs and public enterprises by grouping is not a comprehensive one. If an MDA or public enterprise undertakes a project that belongs to a particular grouping, the project is recorded under that grouping, but if a project covers more than one grouping, it is placed within the grouping on which it is most focused. This list includes those MDAs and public enterprises involved in sectors relevant to the National Infrastructure Investment Plan, 2021–2030 (NIIP3). A fuller list will be provided later for the NIIP database.

Source: Government of Tonga, Ministry of Finance and National Planning, 2015. Tonga Strategic Development Framework, 2015–2025. Nuku'alofa.

# Annex 5: Infrastructure Sectors Categories

Table A5 lists the infrastructure-sector categories along with the types of facilities, buildings, and other structures that would typically fall under each category.

Table A5: Primary Infrastructure Sectors and Their Components

Icon	Infrastructure Sector Category (and Abbreviation)	Typical Infrastructure Assets in Sector
	Roads (R)	Earthworks, road pavement, footpaths, traffic signals, guardrails, curbing, roadside drains, bridges, fords, culverts, retaining walls, jetties
	Aviation (A)	Runways, taxiways, aprons, navigation aids, runway lighting, weather stations, control systems, fueling systems, aircraft
	Maritime (M)	Wharves, jetties, navigation aids, tugs; container yards, cranes, dredges
	Water and sanitation (WS)	Pipelines, boreholes, reservoirs, storage tanks, treatment plants, pumping stations, oxidation ponds, ocean outfalls
	Energy (E)	Diesel engines, hydro turbines, generators, transformers, solar panels, switching equipment, transmission and distribution lines
	Buildings and housing	Schools, hospitals, government administration, justice and corrections, public buildings, public housing
	[category split into three parts:]	
	Education and training (ET)	Schools, colleges, universities, technical institutes
	Health (H)	Hospitals, clinics, health centers, laboratories, pharmacies
	Other buildings (OB)	All other buildings not included elsewhere, such as government offices, police and fire stations and services, prisons, and military bases
	Telecommunications (T)	Internet cable and landing stations, AM/FM towers
	Waterways (WW)	Seawalls, embankments, levies, river channels, dredges, irrigation, flood gates
	Urban development (UD)	Public parks, commercial districts, retail, markets and commercial enterprises; city landscaping, pedestrian facilities, tourism infrastructure, waste management

Source: PRIF guideline to preparing national infrastructure plans, 2022.

# Annex 6: Development Partner Consultations after the Hunga Tonga–Hunga Ha’apai Eruption

## TONGA DEVELOPMENT PARTNERS’ FORUM

### VIDEO CONFERENCE

**VENUE:** Conference Room, Ministry of Finance

**Time:** 2:00pm – 4:30pm Tonga Time (2.30 hours)

**Date:** Tuesday 8<sup>th</sup> of March, 2022

#### OBJECTIVES:

The objectives of the Forum are:

1. To provide an update on:
  - a. Tonga’s Economy Updates;
  - b. Volcano Eruption Recovery Plan
  - c. Capacity Building Priorities
2. Chair, Host: Deputy Prime Minister Hon. Poasi Tei  
Supported by the Minister for Foreign Affairs, *Hon. Fekitamoeloa Katoa ‘Utoikamanu* & Minister of Finance, *Hon. Tatafu Moeaki*

Table A6: The Key Results of Consultations with Donor Partners after the Hunga Tonga–Hunga Ha’apai Eruption

Development Partner	Pledges
New Zealand	(i) Agreement signed by the Ministry of Finance granting NZ\$6 million (T\$9 million) for a project to improve household and community access to resilient, safe, and secure water supply and sanitation
	(ii) Provision of 1,500 new water tanks and 400 new sanitation or latrine systems for the most vulnerable households, which are especially urgent following the recent disasters
	(iii) Development of an integrated water policy and regulations to help implement Tonga's Water Resources Act 2020
	(iv) A joint project with the Pacific Community, which also donated 1,500 kilograms of vegetable seeds to support food security and agricultural recovery
	(v) Partnership with Polynesian Health Corridors to address the COVID-19 outbreak
	(vi) Provision of NZ\$170,000 for a fit-for-purpose container lab, to be shipped to Vava'u
	(vii) A 16-module GeneXpert system from New Zealand that will increase the polymerase-chain-reaction (PCR) testing capability of Vaiola Hospital by 400%

Development Partner	Pledges
People's Republic of China	(i) Willingness to make use of the economic and technical cooperation agreements signed by the governments of the People's Republic of China and Tonga, with cooperation projects concentrated on priority recovery needs such as housing and infrastructure
	(ii) Provision of more farm tractors, motorized fishing boats, water tanks, etc., to help achieve food security and improve the livelihoods of the affected people
	(iii) Long-term plan for setting up small industries in Tonga, such as food processing, especially for agricultural produce
	(iv) Enhanced cooperation in poverty reduction, and an improvement in people's livelihoods through this mechanism
Japan	(i) Multilateral assistance through the World Food Programme amounting to \$2.5 million
	(ii) Ongoing consultations with line ministries on the completion of Tonga's National Early Warning System by August–September 2023
United Kingdom	(i) Mapping of the north of Tonga by the Royal Navy ship HMS Spey
	(ii) Priority consideration to be given to Tonga's submission to the Blue Planet Fund, Sustainable Oceans Financing Facility, and to the Resilient Asia Challenge on Gender and Climate Change
Australia	(i) Commendation of the leadership of a major locally driven humanitarian support drive
	(ii) A signed agreement
	(iii) Interest in the recovery plan's focus on vulnerable communities and infrastructure
United States	(i) Two pallets of scientific equipment for monitoring volcanic activity around the Hunga Tonga–Hunga Ha'apai volcano
	(ii) Provision of technical assistance for the deployment of the equipment on-site
United Nations (UN) Resident Coordinator's Office	(i) Request for the recovery plans for each sector, and for data on disability and women-lead households
	(ii) UN mobilization of approximately \$2.1 million for early recovery alone
	(iii) Activation of the Early Recovery Cluster Working Group (including the Asian Development Bank, World Bank, and the Council of Regional Organizations of the Pacific), which is ready to support the efforts of the Government of Tonga's line ministries and departments to achieve social and economic recovery in areas such as education, health, and employment; and is ready to provide overall reconstruction support in line with Tonga's National Recovery Plan
	(iv) Cooperation Framework 2023–2027, which in Tonga focuses on inclusive economic growth; quality affordable services for all; climate change responses such as adaptation, disaster risk reduction, and resilience; and on building the government's capacity to achieve the Sustainable Development Goals (with a strong emphasis on those most at risk, such as women, youth, children, the elderly, rural poor, migrant workers, and persons with disabilities)
	(v) Contribution of technical assistance through the deployment of UN staff on-site
	(vi) Coordination of UN agencies in the implementation of the National Recovery Plan
European Union (EU)	(i) Approval of €10 million (roughly T\$25 million) for a new Tonga– EU budget support program
	(ii) Grant of €3.3 million for cofinancing, together with the Asian Development Bank, the upgrade of the Nuku'alofa electricity network
	(iii) Key focus of EU support on the implementation of the Energy Act and the Energy Road Map
	(iv) Possible additional support for Tonga from existing EU programs at the regional level, especially from the Program for Research in Science and Engineering (PRISE); Tonga to request <u>reallocation</u> from the Program on International Financial Systems (PIFS)
World Bank	> Approval of \$270 million to Tonga for ongoing projects, of which \$196 million will be grant financing
	> Priority focus on addressing the compounding shocks through 2025, with an upcoming submission to the World Bank's Board of Directors for consideration at their next meeting, in June 2023
Asian Development Bank	(i) No commitments to any interventions as yet

The development partners will consider the needs and priorities of the Government of Tonga as outlined during the virtual conference. They are also willing to work with the government line ministries, through the Prime Minister's Office, to determine the best way to support Tonga's recovery and achievement of its resilience targets in 2023.

# Annex 7: Development Partner Consultation

The list of NIIP projects were shared with development partners. Table A7 summarizes the comments received.

**Table A7: Summary of Development Partner Consultations**

Asian Development Bank (ADB)			
i. Nuku'alofa Port Upgrading Project (Additional Financing) – USD30 million.			
ii. Fanga'uta Lagoon Bridge Project – about USD65 million (currently going through advanced bidding to determine the market price, might be potentially higher).			
Australian High Commission (AHC)			
Current Projects	Cost	Period	Counterpart Ministry
Obstetrics ward at Vaiola Hospital emergency building works (including new septic, toilets, basins, stainless steel benches, air conditioning, electrical works)	T\$380,000	2023	Ministry of Health
Mu'a super clinic (equipment and supplies)	TOP1,050,000	2022-2025	Ministry of Health
Water Sanitation and Hygiene assessment of Vaiola Hospital & community health centres (co-funding with UNICEF)	TOP 150,000	2023-24	Ministry of Health
Engineering Assessment of the sewerage/septic system at Vaiola Hospital to provide a costed remedial plan	AUD60,000	2023-24	Ministry of Health
Tonga Safe and Resilient Schools Project, co-funded with World Bank	AUD7,000,000	2022-2027	Ministry of Education & Training
Tonga Parliamentary Buildings project co-funded with New Zealand Awaiting confirmation of new relocation site from Government of Tonga	AUD18,000,000	TBC	Legislative Assembly
GENSET for Tonga Power	AUD500,000	2023	Ministry of Public Enterprises
Nuku'alofa Network Upgrade Project – co-funded with Asian Development Bank	AUD5,300,000	2021-2022	Ministry of Public Enterprises
Tonga Renewable Energy Project – co-funded with Asian Development Bank	AUD3,500,000	2019-2024	MEIDECC*
Outer Islands Renewable Energy Project – co-funded with Asian Development Bank	AUD9,500,000	2013-2023	MEIDECC*
Northern Command Base Vava'u	TOP 5,000,000	2021-25	HMAF
Taliai Military Camp	TOP 600,000 pa	Annual	HMAF
Masefield Navy Base	TOP 600,000 pa	Annual	HMAF
HQ HMAF	TOP 600,000 pa	Annual	HMAF
Tonga Police Radio Communications Enhancement Project	AUD685,000	2022-23	Tonga Police
Construction of Tonga Police College Carpark facilities	AUD425,000	2022-23	Tonga Police
Renovation of Tonga Police Kitchen	AUD20,000	2022-23	Tonga Police
Renovation of Tonga Police K9 facilities	AUD3,000	2022-23	Tonga Police
Renovation of the Tonga Police ICT office	AUD30,000	2022-23	Tonga Police
Under consideration			
Queen Salote Wharf Port Upgrade, co-financing with Asian Development Bank Awaiting endorsement from Australia Infrastructure Financing Facility for the Pacific Board (28 February) and approval from Australian Foreign Minister	USD20,000,000	TBC	Ministry of Infrastructure/ Port Authority

Table A7: Summary of Development Partner Consultations (continued)

International Telecommunications redundancy cable (cofinanced with NZ) Pending consideration from Australia Infrastructure Financing Facility for the Pacific Board (28 February) and approval from Australian Foreign Minister	TBC	TBC	MEIDECC*
New Warehouse for NEMO (Vava'u)	TBC	TBC	MEIDECC*
Upgrading of Vava'u Hospital through budget support provided in 2022 – decision with GoT (Prince Ngu Hospital)	TBC	TBC	Ministry of Health
New Law Court Complex (Supreme and Magistrate)	TBC	TBC	Ministry of Justice
Fanga'uta Lagoon Evacuation Bridge Project	TBC	TBC	Ministry of Infrastructure

**British High Commission**

- i. The NIIP looks very comprehensive and it is clear that there are many important, key projects in the pipeline.
- ii. We are currently working on our forward plan for development support, so cannot yet confirm the work streams coming online, but climate change is a key focus and hoping to work closely with government stakeholders here to contribute to projects on adaptation and resilience.

**China Embassy**

Confirmed no comments from their office.

**Japan Embassy**

Confirmed no comments from their office. Japan signed off \$USD90k for the Kanokupolu (Paletu'a project) new water connection for relocated village.

**Japan International Cooperation Agency (JICA)**

Confirmed no comments from their office.

**New Zealand High Commission (NZHC)**

- i. Tonga Parliamentary Complex reconstruction. The Government of Tonga requested support from New Zealand and Australian support to build a new Fale Alea (Parliament House) and Office of the Legislative Assembly (OLA) in the wake of Tropical Cyclone Gita in February 2018 which destroyed the previous buildings.
- ii. Increasing telecommunications resiliency, alongside Australia, through support towards fibre optic cable redundancy.
- iii. Construction of a disaster resilient Central Pharmacy Warehouse for the Ministry of Health in Tongatapu.
- iv. Construction of a new warehouse for NEMO in Ha'apai for storage of pre-positioned supplies to support effective disaster response.
- v. Initiatives that will increase water security and quality, including funding through the Tonga Climate Change Fund for the National Water Tank project installing household water tanks in over 6,000 households throughout Tonga, and a sanitation initiative for household latrines.

**World Bank (WB)**

- i. I understand the NIIP is limited to UNFUNDED projects. I would be keen to understand from a sectorial perspective how we can see what the whole infrastructure needs per sector is, what is funded & unfunded (both recurrent & development). Is that available?
- ii. For the Bank we have several projects underway which is why it's not reflected in the NIIP. However when seeking comments from my colleagues the following was raised:
  - Transport – please find attached list of works approved but have yet to be procured – FYI (at the bottom of the comments)
  - Fisheries – based on the Draft Interim Report for the Tonga Fisheries Investment Master Plan supported by the Bank, this aligns with those findings in the NIIP
  - I did have a question on the “New Safer Schools Warehouse Building” under MET. As you might be aware, we have the Tonga Safe & Resilient Schools Project US\$29m providing a lot of support to the Education sector facilities. I would be keen to understand what this is and possible location
- iii. Lastly we are working with government, via the Ministry of Finance to finalise government priorities for our current funding cycle and it's great to see some of those projects listed here. Once that has been finalized we will be able to share that too.

Table A7: Summary of Development Partner Consultations (continued)

Major civil works	REVISED Commitment & Estimates (USD)	Cost '000 TOP
<b>TCRTP</b>		
Rehabilitation of Roads - Vava'u - North West	2,153,181	5,043
Rehabilitation of Roads - Vava'u - South West	2,443,094	5,722
Rehabilitation of Roads - 'Eua	2,185,877	5,119
Liku Road (Tolitolu Rd int to Fua'amotu) - Tongatapu - lot 3	1,831,280	4,289
Loto Road (Fo'ui-Matahau) - Tongatapu	1,330,975	3,117
Loto Road (Matahau-Liahona) - Tongatapu	1,206,980	2,827
Port improvement works at Nafanua Port - 'EUA	1,048,837	2,456
Port works improvement works at Pasivulangi Port- Niuatoputapu	1,485,937	3,480
Port improvement works at Futu Port - Niuafou'ou	900,000	2,108
Resurfacing works on runway of Salote Pilolevu Airport - Ha'apai	4,090,841	9,580
<b>TCRTP II</b>		
Rehabilitation of Liku Road ('Utulau to Tolitolu Rd int) - Tongatapu - lots 1&2	3,455,000	8,091
Rehabilitation of Liku Road (Haveluliku-Hoi) - Tongatapu	1,000,000	2,342
Rehabilitation of Taufua'ahau Road (Hoi-Kolonga) - Tongatapu	2,000,000	4,684
Rehabilitation of priority roads - 14km - Vava'u	5,340,000	12,506
Rehabilitation of roads - 7.5km - Ha'apai	2,500,000	5,855
Rehabilitation of roads - 8km - 'Eua	1,500,000	3,513
Road Safety Works - Tongatapu	900,000	2,108
Port rehabilitation and improvement works at Nafunua Port, 'Eua	2,540,000	5,948
Port repair and improvement works, Taufua'ahau Port, Ha'apai	2,700,000	6,323
Resurfacing on runway of Kafauna Airport, 'Eua	2,140,000	5,012

Additional information on potential World Bank under IDA20 covers from the preliminary consultations between GoT and WB.

\* Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change and Communications





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