



# SOCIAL PROTECTION IN TIMES OF NEED

Top-up Transfers to the Elderly in  
the Aftermath of Tropical Cyclone  
Gita in Tonga

TECHNICAL REPORT

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# Abbreviations

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ADB	Asian Development Bank
ASP	Adaptive Social Protection
DFAT	Australian Government - Department of Foreign Affairs and Trade
DRFS	Disaster Risk Financing Strategy
DWS	Disability Welfare Scheme
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
HIES	Household Income and Expenditure Survey
FY	Fiscal Year
ILO	International Labour Organization
MFAT	New Zealand Ministry of Foreign Affairs and Trade
MIA	Ministry of Internal Affairs
MOI	Ministry of Infrastructure
NATA	Naunau o'e Alamaite Tonga Association
NEMO	National Emergency Management Office
NGO	Non-governmental Organization
NRBF & SWS	National Retirement Benefit Fund & Social Welfare Scheme
ODI	Overseas Development Institute
SOP	Standard operating procedure
SPDD	Social Protection and Disability Division
SWS	Social Welfare Scheme
TC	Tropical Cyclone
TNVIA	Tonga National Visual Impairments Association
TOP	Tongan Pa'anga

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# Executive Summary

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Tropical Cyclone (TC) Gita was the strongest cyclone to hit the Kingdom of Tonga since 1982. On Monday, February 12, 2018, TC Gita passed over the islands of Tongatapu and 'Eua causing significant damage. It is estimated that TC Gita affected approximately 80,000 people (75 percent of Tonga's population), causing T\$356 million (US\$153 million)<sup>1</sup> in damage, the equivalent of approximately 38 percent of the nominal gross domestic product (Government of Tonga, 2018a).

To support the most affected and vulnerable in the aftermath of TC Gita, the Government of Tonga decided to provide top-up transfers through two existing social assistance programs: the Social Welfare Scheme (SWS) and the Disability Welfare Scheme (DWS). This decision was based on a rapid needs assessment carried out by the Government of Tonga as part of their disaster response plan. The assessment identified that the elderly (those aged 70 and above) and those living with disabilities had unmet needs, and were therefore at higher risk of poverty and vulnerability. Consequently, in March 2018, one month after TC Gita hit Tonga, the government provided support to these two groups via a one-time top-up payment of T\$225 (US\$97) to SWS and DWS recipients residing in Tongatapu and 'Eua.<sup>2</sup>

This report presents findings of a World Bank assessment of the SWS top-up and is structured around several key areas: (i) characteristics of the elderly and their households, including main income sources and informal assistance; (ii) assistance received after TC Gita; (iii) usage of the SWS top-up transfer; (iv) impacts of the top-up on the surveyed beneficiaries' independence, decision-making, and wellbeing; and (v) insights on the SWS top-up program operations.

## **The main findings from the SWS top-up assessment are as follows:**

- Formal and informal social safety nets supported families during the immediate three months after TC Gita
- In both non-emergency and emergency situations, the SWS benefit was an important source of income for the elderly surveyed
- The government's decision to top-up the SWS payment was an important strategy to support the livelihoods of the elderly after TC Gita (around 90 percent of surveyed beneficiaries reported the SWS top-up was one of the main forms of assistance received immediately after TC Gita)

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<sup>1</sup> As of 20<sup>th</sup> April 2023, TS1 = US\$0.43.



- The SWS top-up was used primarily to ensure food security of the surveyed recipients and their households
- Recipients reported that the top-up had positive impacts on their independence, health, and general wellbeing
- The SWS top-up was delivered efficiently and in a timely manner, as the majority of surveyed beneficiaries received the top-up within the first month after TC Gita (76 percent). In comparison, the distribution of housing assistance post-TC Gita took between two to three months.



These results demonstrate the importance of existing social protection systems with adaptable delivery systems in the immediate time after a disaster – and they highlight the advantages of Adaptive Social Protection (ASP)<sup>3</sup> mechanisms during the immediate response period. Social protection systems that are flexible and adaptable during disasters can support the most vulnerable in meeting their basic needs and those of their immediate network (informal social protection).

**Based on these findings,<sup>4</sup> the report puts forward the following recommendations for the government’s consideration:**

- The Government of Tonga could consider continuing with the use of top-ups to existing social protection programs, such as the SWS, as one of the immediate response mechanisms to shocks and emergencies
- The Government of Tonga could also consider investing in an ASP policy framework,<sup>5</sup> which could be leveraged during a disaster to: (i) expand the coverage of those experiencing hardship and vulnerability beyond those covered by existing social protection programs, such as women and children (during TC Gita such a framework was not in place and therefore social protection programs were only provided to those that were already social assistance beneficiaries); (ii) further integrate targeting mechanisms into disaster response, such as assessment on household risks and vulnerability; (iii) prepare institutional responses before a disaster occurs (ex-ante) that allow the government to immediately respond using social protection instruments, disaster risk financing and data, as well as information systems. In addition, ongoing social protection programs and ASP frameworks would build the resilience of the poor and enhance their capacity to prepare for, cope with, and adapt to shocks.

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<sup>3</sup> Adaptive Social Protection "...helps to build the resilience of poor and vulnerable households to the impacts of large, covariate shocks, such as natural disasters, economic crises, pandemics, conflict, and forced displacement. Through the provision of transfers and services directly to these households, ASP supports their capacity to prepare for, cope with, and adapt to the shocks they face – before, during, and after these shocks occur. Over the long term, by supporting these three capacities, ASP can provide a pathway to a more resilient state for households that may otherwise lack the resources to move out of chronically vulnerable situations" (Bowen et al., 2020).

<sup>4</sup> These findings are even more significant and important after the COVID-19 pandemic. Globally, adaptive social protection was one of the main policy levers used to respond to the crisis.

<sup>5</sup> Currently, the Government of Tonga has put in place several analytical pieces that will form the basis for an ASP Policy or Strategy. In 2021, the government approved the Disaster Risk Financing Strategy (DRFS), which provides a framework for risk layering financing for disaster response. ASP is a key priority area for the DRFS. The government has recently approved the National Social Protection Policy with key reforms in the area of social protection, including the development of an ASP framework.

# 1. Introduction

The Kingdom of Tonga comprises 172 islands, of which 36 are uninhabited. Of Tonga's total population of 100,179 people, more than two-thirds live on Tongatapu Island, where the capital Nuku'alofa is located (Tonga Statistics Department, 2021). In the 2021 World Risk Index, Tonga was ranked as the country with the third-highest disaster risk worldwide, just behind Vanuatu and the Solomon Islands (Bündnis Entwicklung Hilft, 2021). Tonga is located in an area known for the occurrence of tropical cyclones, destructive winds, heavy rain, and storms. It is also situated within the Pacific Ring of Fire, with a high risk of earthquakes and tsunamis. It is therefore predicted that Tonga will face severe financial and human losses due to natural disasters in the future; studies forecast that Tonga will experience around US\$15.5 million per year in losses due to earthquakes and tropical cyclones (Government of Tonga, 2018a; GFDRR, 2011).

This report assesses Tonga's social protection response to the elderly population in the months after TC Gita that hit the country in February 2018. In the aftermath of the cyclone, Tonga provided top-ups to the two pre-existing social protection programs, the SWS and DWS, to provide assistance to those most in need.

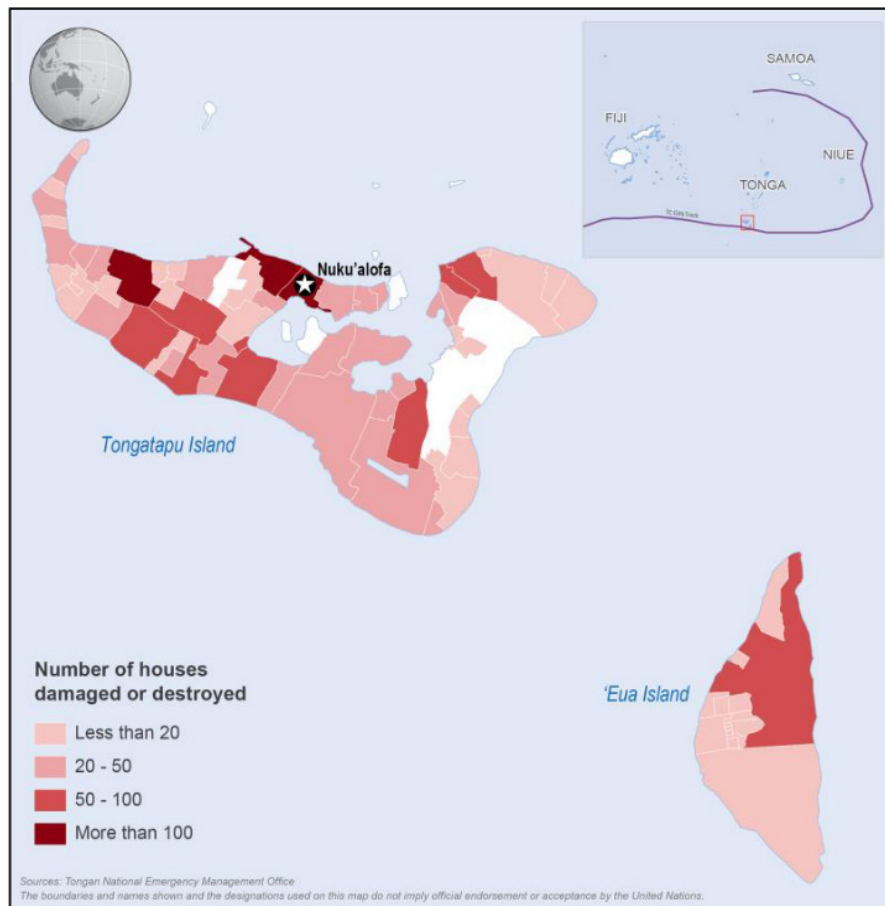


## 1.1 Impacts of Tropical Cyclone Gita

TC Gita was the strongest cyclone to hit Tonga since TC Isaac in March 1982. TC Gita passed over the Tongatapu and 'Eua island groups on Monday, February 12, 2018. It caused significant damage on both islands, bringing down power lines, damaging and destroying schools, ruining crops, and destroying public buildings, including the airport, the parliament building, and Tonga meteorological services. Over 4,000 people self-evacuated to 120 evacuation centers in Tongatapu and 'Eua, preventing the loss of lives.

TC Gita affected around 75 percent of Tonga's population (approximately 80,000 people), resulting in T\$356 million (US\$153 million) in damage and losses, equivalent to approximately 38 percent of Tonga's nominal gross domestic product (GDP). The housing and tourism sectors experienced the highest levels of damage, with the housing sector accounting for 61 percent of the damage costs incurred and the tourism sector for 13 percent (Government of Tonga, 2018b). In total, TC Gita destroyed 808 houses and damaged around 3,965, out of the total estimated 13,838 houses in Tongatapu and 'Eua. 'Eua bore the brunt of the damage, with 50 percent of houses impacted (Government of Tonga, 2018a).

**FIGURE 1:** Map of damaged and destroyed houses in Tongatapu and 'Eua



Source: Tropical Cyclone Gita Immediate Response Plan (Government of Tonga, 2018c).

Varying levels of damage affected families and individuals differently depending on their social and economic backgrounds, their capacity to withstand shocks, and their potential to re-build their livelihoods. The Disaster Recovery Framework for TC Gita reports that the greatest economic losses occurred in the agricultural sector (82 percent of the total losses) (Government of Tonga, 2018b). During the time of the disaster, a substantial proportion (48 percent) of Tonga's population was engaged in the agricultural sector and derived all or some income from agriculture (Government of Tonga, 2018a). It is expected that agricultural losses will continue to be felt for years to come.

## **1.2 Tropical Cyclone Gita disaster response: Social assistance top-up transfers**

In response to the devastation wrought by TC Gita, the Government of Tonga outlined a draft response plan 10 days after the cyclone which aimed to prioritize shelter, water and sanitation, essential services, education, safety, and protection so that evacuated families could return to their homes as quickly as possible. Multilateral organizations, bilateral aid agencies, international and local non-governmental organizations (NGOs), and the private sector were mobilized to provide disaster response, under the overall coordination of the National Emergency Management Committee (Government of Tonga, 2018c). The Australian Government provided a \$A 14 million (around US\$9.5 million) response and recovery package to meet the immediate needs and support longer-term reconstruction efforts, using a range of mechanisms and partners (DFAT, 2019).

The Government of Tonga outlined several recovery activities in its Disaster Recovery Framework (Government of Tonga, 2018a). The framework included a *vertical expansion* of Tonga's existing social protection system, meaning an additional 'top-up' benefit was paid to the households that were already identified as vulnerable through the existing social protection programs. Prior to TC Gita, the Government of Tonga operated two social protection programs (SWS and DWS). Thus, in response to TC Gita, the government provided top-up payments to the recipients of these two programs – which was the first time that the social protection system had been utilized in this manner.

Since resources were limited, it was important for the Government of Tonga to clarify who would receive the top-ups. The government focused their efforts on the two most affected islands – Tongatapu and 'Eua – and decided to make payments available to all eligible beneficiaries of the SWS and the DWS living on these islands. Several factors influenced this decision including: (i) effectiveness – there was a system in place able to reach out to these two islands with functional disbursement operational procedures; (ii) timeliness – the identification criteria were simple enough to quickly verify participants;

(iii) fairness – these beneficiaries are considered to be disadvantaged and any additional shock increased their vulnerability. The government thus determined that this strategy represented a suitable, safe, and effective response to the emergency situation for vulnerable Tongans (Government of Tonga, 2018a). The top-ups drew on World Bank technical advice and were financed by the Australian Department of Foreign Affairs and Trade (DFAT) under an existing budget support program with the Government of Tonga. This donor support mechanism provided much needed flexibility and allowed the Government of Tonga to top up their social protection programs in a timely manner.

### **The Social Welfare Scheme (SWS)**

This welfare program for the elderly was introduced by the government in September 2012. It originally targeted Tongans aged 75 and over, who resided in Tonga, no longer worked in a paid job, and were not receiving any benefits from other pensions. The age eligibility was lowered in July/August 2014 to 70 years. In July 2017, the scheme was opened to Tongans who received benefits from other pension schemes. As of July 2020, and until today, the SWS is a universal program and all Tongans aged 70 and above, who have been living in Tonga for more than 3 months are eligible for the scheme regardless of their job status. Eligible Tongans receive a monthly stipend. Between July 2017 and July 2020, (i.e., during the time relevant for this report), the amount of the transfer varied between T\$70–80<sup>6</sup> and was dependent on the age of the beneficiary. Ages 70–74 years receive T\$70 (US\$30) per month; ages 75–79 receive T\$75 (US\$32) per month; and ages 80 and above receive T\$80 (US\$34) per month.<sup>7</sup> The scheme is administered by the Tonga National Retirement Benefits Fund and Social Welfare Scheme (NRBF & SWS), with payments made through its national and regional offices directly to members. In the fiscal year (FY) 2016/17, the SWS program had 4,043 beneficiaries and the total payouts for the SWS as a whole amounted to roughly T\$2.9 million (US\$1.2 million), which was equivalent to 0.31 percent of Tonga's GDP (Government of Tonga, 2018a).<sup>8</sup>

### **The Disability Welfare Scheme (DWS)**

Also known as A'u Ki Ai cash assistance, the DWS was introduced in March 2015 for persons living with severe intellectual, psychological, or sensory disabilities. The program is managed and implemented by the Division of Social Protection and Disability, under the Ministry of Internal Affairs. The DWS

<sup>6</sup> According to the 2015/2016 Household Income and Expenditure Survey (HIES), the national average monthly household expenditure is T\$2,543 (US\$1,093) and the average monthly household expenditure in the bottom 20 percent of the income distribution was T\$1,786 (US\$768). The average household size is 5.5, hence the national average monthly per capita expenditure is T\$462 (US\$199) and T\$325 (US\$140), respectively (Tonga Statistics Department, 2017). The SWS hence covers on average around 15 percent of monthly per capita expenditures and 25 percent of per capita expenditures for those in the bottom 20 percent.

<sup>7</sup> The criteria and payment amount have since been updated twice. Currently (as of July 1, 2021), people aged between 70–79 receive T\$80 (US\$34) per month and people aged 80 and above receive T\$100 (US\$43).

<sup>8</sup> Between 2020 and 2021, the SWS reached 4,091 people and paid a total of T\$3.86 million (US\$1.7) (NRBF & SWS, 2022).

provides a monthly payment of T\$75 (US\$32).<sup>9</sup> The payment is made directly to the recipients' bank account, which can be accessed by an authorized family member or caretaker. In 2017, the scheme had 894 members and payments amounted to T\$0.8 million (US\$0.3 million) – roughly 0.01 percent of Tonga's GDP (Government of Tonga, 2018a).

On March 8, 2018, existing beneficiaries of the SWS and DWS living in Tongatapu and 'Eua received a one-time top-up payment of T\$225 (US\$97). The payments were made in addition to their regular monthly payment. This amount is the equivalent of approximately 3 months' worth of regular benefit payments. According to the government, the disaster assistance reached over 3,500 beneficiary households, or almost 20,000 people (20 percent of the total population) (Table 1).<sup>10</sup>

**TABLE 1:** TC Gita social protection top-up payments in 2018

Program	Number of beneficiary households in Tongatapu	Number of beneficiary households in 'Eua	Total beneficiary households reached	Total people reached	TC Gita top-up payments (\$T millions)	Amount of top-up as share of GDP
Disability Welfare Scheme (DWS)	493	41	534	2,937	0.12	0.01%
Social Welfare Scheme (SWS)	2,811	213	3,024	16,632	0.68	0.07%
<b>Total</b>	<b>3,304</b>	<b>254</b>	<b>3,558</b>	<b>19,569</b>	<b>0.8</b>	<b>0.08%</b>

**Source:** Government of Tonga (2018b), Table 59, p.59 and own calculations based on GDP data from the same report.

**Note:** Total household size of 5.5 people is used to approximate the number of people reached (Government of Tonga, 2018b). GDP data are based on estimates from the Government of Tonga (2018b), which estimated the GDP for 2018 at T\$1,000 million.

<sup>9</sup> The 2020/2021–2022/2023 Corporate Plan of Tonga's Ministry of Internal Affairs (MIA) outlines an increase of the amount paid under the DWS from T\$75 (US\$32) to T\$100 (US\$43) (MIA, 2020).

<sup>10</sup> A separate assessment of the DWS top-up was conducted by Naunau o'e Alamaite Tonga Association (NATA), Tonga National Visual Impairments Association (TNVIA), and the Social Protection and Disability Division (SPDD) of the Ministry of Internal Affairs in Tonga – funded by the New Zealand Ministry of Foreign Affairs and Trade (MFAT). This paper primarily focuses on findings from the assessment of the SWS top-up.





## 2. The Assessment of the SWS Top-up: Views from the Beneficiaries

This section analyzes the findings of a survey among SWS top-up recipients from Tongatapu and 'Eua. It explores the extent to which the top-up helped SWS beneficiaries and their households cope with the impacts of TC Gita on their livelihoods. In particular, this section looks at characteristics of surveyed beneficiaries and their households<sup>11</sup> such as: income sources and assistance; spending patterns of the top-up; decision-making and independence; and the effectiveness of the top-up to address the needs of beneficiaries.

### 2.1 Study design and sampling

To evaluate the SWS top-up, an ex-post non-representative cross-sectional survey among SWS top-up beneficiaries was carried out, which meant that data about the SWS top-up were collected only after the payout.<sup>12</sup> The objectives of the survey were: (i) to have a broader understanding of the various sources of income available for the SWS beneficiaries; (ii) to understand the spending patterns of the SWS top-up beneficiaries; (iii) to provide nuanced insights into decision-making, health, and wellbeing; (iv) to review the process of the top-up transfers; and (v) to assess the overall effectiveness of the top-up transfer after TC Gita.

In consultation with the government, the survey was conducted at the collection point of the NRBF & SWS in Tongatapu and 'Eua during the first couple of days of the monthly payment. According to the NRBF & SWS, the regular monthly payment for the SWS takes place around the 8<sup>th</sup> of each month. This survey was carried out in 2019 and took place on the first and second days of payment distribution (i.e., Friday, November 8<sup>th</sup> and Monday, November 11<sup>th</sup>).<sup>13</sup>

The survey collected data from 356 respondents. A total of 299 beneficiaries were interviewed on Tongatapu and 57 beneficiaries in 'Eua, as part of a purposive sample.<sup>14</sup> Access to the elderly was facilitated by the NRBF & SWS, which also provided the infrastructure necessary for the interviews. At the beginning of each day, the NRBF & SWS introduced the team members, the purpose of the study, and asked for the beneficiaries' collaboration. It was therefore possible to obtain a high response rate of 97 percent. The sample represents 11 percent of the total SWS beneficiaries in Tongatapu and 27 percent in 'Eua.

<sup>11</sup> Please note that all data and results from the survey represent findings for the surveyed beneficiaries and their households only. The results are not representative for all SWS top-up recipients.

<sup>12</sup> The study was commissioned by DFAT and designed by the World Bank team.

<sup>13</sup> Tebutt Research was responsible for the data collection.

<sup>14</sup> Please refer to Appendix A.1 for more information on the sampling process as well as limitations of the study design.

Even though there are issues with representativeness, the sample includes a good range of interviewees and a high level of cooperation – as demonstrated by the good response rate. Several sampling techniques were used to ensure a homogenous sample, such as narrowing down to the sub-population of interest, focusing on a typical case, pre-screening outliers, and excluding extreme cases. Although the findings of this report can neither be generalized to the whole population nor used to obtain net effects of the top-up intervention, the methods employed for this assessment had a systematic approach to inquiry and data collection. The findings are indicative of the effects of the top-up on the beneficiaries, with no claim to representativeness beyond the sample analyzed.

## 2.2 Sample characteristics

The survey collected information on the demographics and characteristics of SWS top-up recipients and their households.

### Respondent characteristics

The sample includes slightly more female than male respondents with the difference being larger in 'Eua than in Tongatapu (Table 2). Surveyed beneficiaries were on average 78 years old and the majority (60 percent) were married. Around 87 percent of recipients were either the household head (69 percent) or the spouse or partner of the household head (18 percent). A substantially larger proportion of male respondents were the household head compared to female respondents; around 92 percent of male respondents reported being the head of the household. In comparison, only 48 percent of female respondents were the household head and a large proportion of those women were widowed. Around half of the surveyed beneficiaries (53 percent) reported having completed secondary school, with 59 percent of those being females and 41 percent males. A relatively large share of respondents, around 25 percent, completed tertiary education. However, this number is much higher in Tongatapu than in 'Eua, potentially reflecting the rural location of the latter.

### Household characteristics

More survey participants were located in rural rather than urban areas. The proportion of rural residents was higher for 'Eua, where around 65 percent lived in rural areas as compared to 52 percent in Tongatapu. This is most likely a reflection of the fact that 'Eua is more rural in general than Tongatapu, which is home to the country's capital, Nuku'alofa (Tonga Statistics Department, 2021). This is reflected in some of the other household characteristics described below. The average household size was similar in both Tongatapu and 'Eua (around 5.7 people)<sup>15</sup> and households included on average 3.64 adults.

<sup>15</sup> This is most likely an underestimation because the dataset aggregates households with 10 members or more. Around 15 percent of sampled households have more than 10 members.

There were around 16 percent of households with more children than adults, with approximately 71 percent of those being in Tongatapu and 29 percent in 'Eua. Reported house ownership was higher in 'Eua than in Tongatapu (at around 93 percent in 'Eua).

**TABLE 2:** Characteristics of elderly recipients of the top-up to the SWS

	Survey			Tongatapu			'Eua		
	Total	Females	Males	Total	Females	Males	Total	Females	Males
N	356	190	166	299	157	142	57	33	24
<b>Respondent Level</b>									
Male (%)	46.6%			47.5%			42.1%		
Female (%)	53.4%			52.5%			57.9%		
Average age (in years)	78.16	78.09	78.24	77.96	77.96	77.96	79.21	78.72	79.87
Married	59.5%	55.3%	64.5%	58.2%	52.9%	64.1%	66.7%	66.7%	66.7%
Widowed	34.6%	39.5%	28.9%	36.5%	42.7%	29.6%	24.6%	24.2%	25.0%
Household head	68.8%	48.4%	92.2%	72.2%	53.5%	93.0%	50.9%	24.2%	87.5%
Spouse of household head	18.0%	32.6%	1.2%	15.4%	28.3%	1.4%	31.6%	54.6%	0.0%
Education (primary)	18.3%	16.3%	20.5%	16.1%	12.7%	19.7%	29.8%	33.3%	25.0%
Education (secondary)	53.4%	59.0%	7.0%	51.8%	58.0%	45.1%	61.4%	63.6%	58.3%
Education (tertiary)	25.0%	20.5%	30.1%	28.1%	24.2%	32.4%	8.8%	3.0%	16.7%
<b>Household Level</b>									
Urban	46.1%			48.2%			35.1%		
Rural	53.9%			51.8%			64.9%		
Household size	5.74			5.71			5.89		
Number of adults	3.64			3.7			3.29		
House ownership	83.7%			81.9%			93.0%		
Access to commercial waste collection	79.8%			94.0%			5.3%		
Water supply (Pipe)	40.7%			39.8%			45.6%		
Water supply (Cement/Tank)	51.4%			51.8%			49.1%		
Electricity supply	89.9%			90.3%			87.7%		

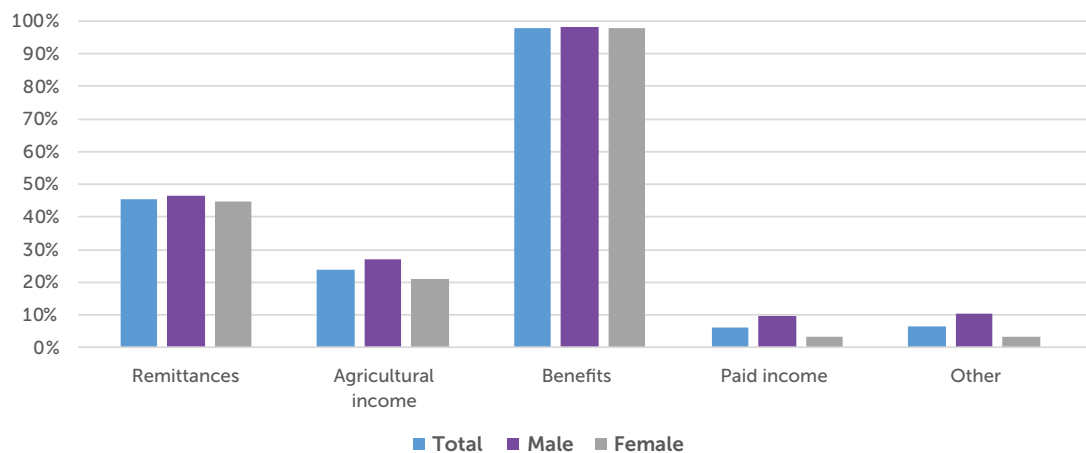
Source: TC Gita Survey, November 2019.

## Sources of income and income diversification for the elderly

Benefits, such as the SWS and DWS, are an important source of income for recipients and their households. Figure 2 and Figure 3 provide an overview of respondents' main income sources and those of their households. Main income sources differed at the personal and the household level.<sup>16</sup> The majority of surveyed beneficiaries (98 percent) indicated that benefits, which included SWS and DWS benefits,<sup>17</sup> were one of their main sources of personal income. Other important sources of income for beneficiaries were remittances and agricultural income (i.e., income from informal sales at markets of agricultural products or craft and/or subsistence agriculture). Around 61 percent of beneficiaries reported more than one main source of income. However, for around 37 percent of recipients, benefits were their sole main income source.

Surveyed beneficiaries lived in households that had a substantially lower household income than the average Tongan household. According to the 2015/2016 Household Income and Expenditure Survey (HIES), the monthly national average household income was around T\$2,711 (US\$1,166) and the monthly household median income was T\$2,080 (US\$894). The average monthly household income in the bottom 20 percent of the income distribution was T\$990 (US\$426) (Tonga Statistics Department, 2017). The average monthly household income within the sample was T\$765 (US\$329),<sup>18</sup> which indicates that the sample included relatively poor households. The average personal income within the sample was T\$195 (US\$84).

**FIGURE 2:** Main sources of income for the elderly by sex (personal level)<sup>19</sup>



**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations: Total = 356; Male = 166, Female = 190. The graph shows the main income sources on the individual level sex-disaggregated. Benefits = SWS, DWS; Paid income = income from casual and ongoing work; Other = (private) pensions, benefits from friends, and formal business income.

<sup>16</sup> Respondents were asked to name their own and their household's main sources of income. They could indicate multiple main sources of income.

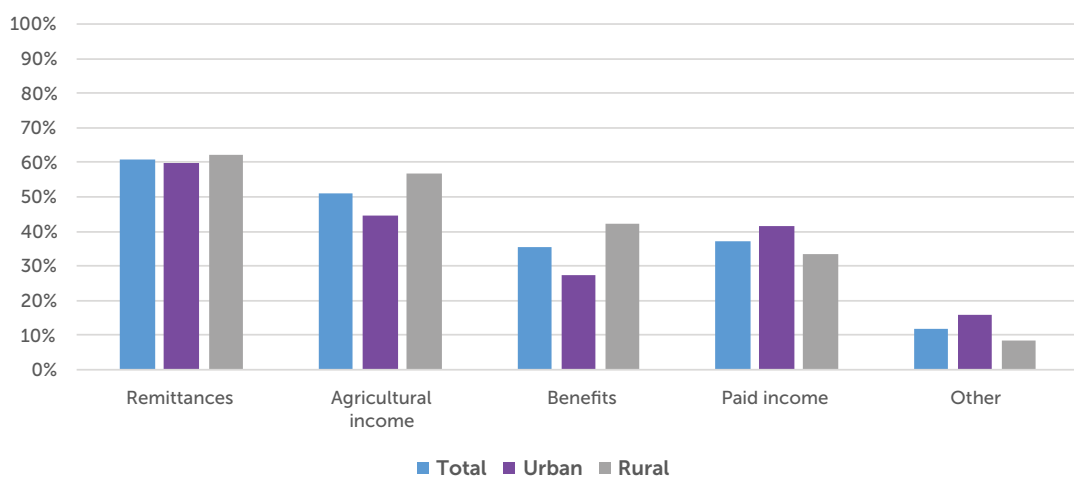
<sup>17</sup> Please note that the survey was conducted among SWS beneficiaries. There are 22 respondents in the sample that also received the DWS (6 percent of the sample). However, this survey cannot infer any wider conclusions about the DWS benefit as it was designed to evaluate the SWS top-up.

<sup>18</sup> Please note that the average survey income is only a rough estimate and might be subject to measurement errors. The measurement is not nearly as elaborate as the income measurement in the HIES. However, it provides an idea about the economic situation of households in the sample compared to the national average.

<sup>19</sup> Some of the graphs are based on multiple response questions, not adding to 100. The total number of responses for a question exceeded the total number of respondents.

Moreover, the main income sources at the household level differed from those at the personal level (Figure 3). While benefits were named as a main source of income by almost all beneficiaries, this varied with respect to household income. The three main reported income sources at the household level were remittances (60 percent), agricultural income (45 percent), and paid income (41 percent), depending on the location. In rural areas, benefits were more often named as a main income source and fewer households received paid income. Agricultural income also played a more significant role in rural areas, where it is often an important source of income – which explains the survey results. By contrast, remittances were often named as one of the main income sources regardless of location. The importance of remittances for household income is not unexpected. A total of 85 percent of beneficiaries interviewed had between 3–4 family members living overseas, with 93 percent of them receiving remittances. These results further indicate that the economic situation of sampled households differed from that of the average Tongan household. The latest HIES found that remittances account for around 17–21 percent of the total household income in Tongapatu and for around 5 percent in ‘Eua (Tonga Statistics Department, 2017). One potential reason for this might be the fact that the survey focused on the elderly. Elderly households might differ from that of the average Tongan household because they might include grown children that would be able to remit. However, the survey did not collect that data and therefore no further explanations can be provided.

**FIGURE 3:** Main sources of income by location (household level)



**Source:** TC Gita Survey, November 2019.

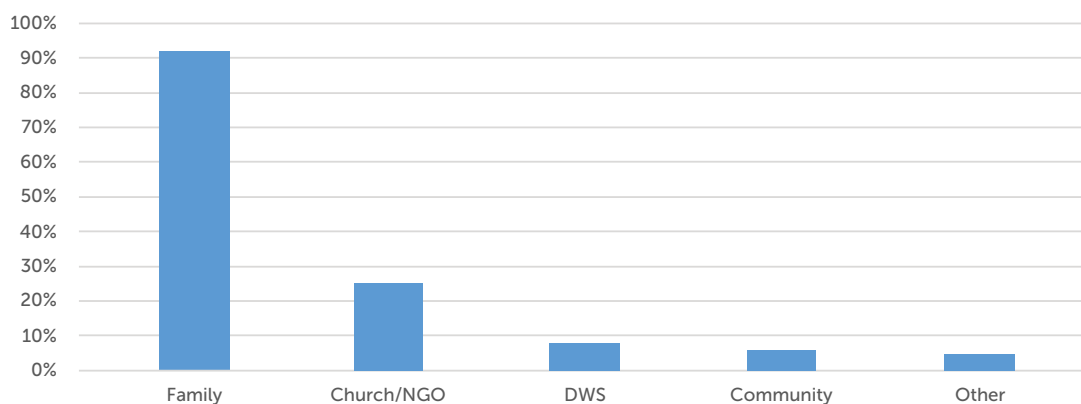
**Note:** Multiple answers possible. Number of observations: Total = 356; Urban = 192, Rural = 164. The graph shows the main income sources on the household level by urban and rural areas. Benefits = SWS, DWS; Paid income = income from casual and ongoing work; Other = (private) pension, benefits from friends, and formal business income.

The results presented above indicate that elderly household members were highly reliant on benefits as they were not as engaged in other income-generating activities as other household members, presumably because of their age. However, at the level of the household, benefits were less important and were ranked as the third or fourth most important income source depending on location. Generally, household income was more diverse than personal income, and therefore benefits were on average of lesser importance for household income than for personal income.

### Cash transfers and in-kind assistance

In non-emergency situations, the government provides cash assistance through social protection benefits, which are an important source of income for respondents and their households, as shown in the previous section. However, informal social protection mechanisms provide important additional support. Most surveyed beneficiaries (89 percent) reported receiving additional cash assistance in the 12 months prior to the survey (i.e., in 2019), mainly via informal sources (Figure 4). This additional cash assistance was provided predominantly by family members (mainly as remittances) and churches or NGOs. The majority of beneficiaries who received additional cash assistance received this assistance from family members (92 percent). Most surveyed beneficiaries thus relied on a combination of formal and informal cash assistance, highlighting the importance of those two social protection mechanisms. For example, in 74 percent of cases, beneficiaries received both the SWS and support from family members, and in 19 percent of cases, they received the SWS and benefits from the church. In a minority of cases (10 percent), beneficiaries reported that the SWS was the only cash benefit they received.

**FIGURE 4:** Sources of additional cash assistance in 2019 (personal level)

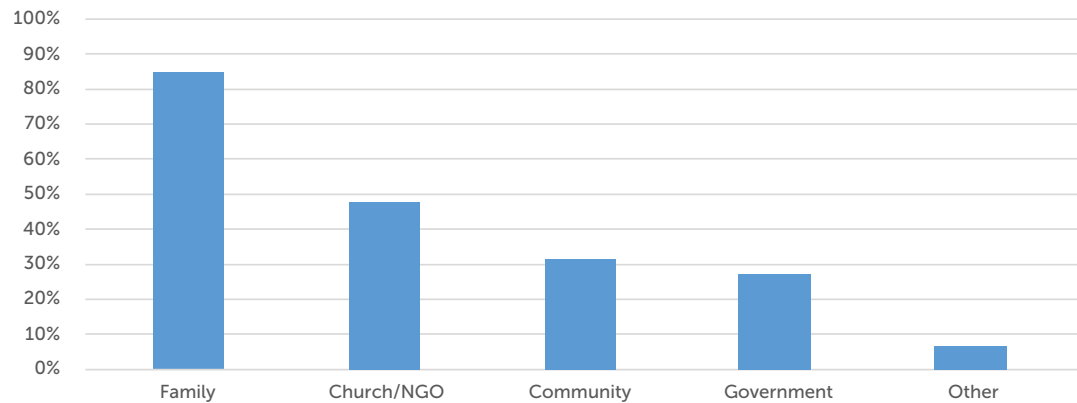


**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations = 319. Since all respondents received the SWS top-up, the figure only shows additional assistance from formal and informal sources. The figure depicts results for respondents that received additional assistance. Around 89 percent of surveyed beneficiaries reported having received additional assistance. Community = friends and villages.

Additional in-kind support<sup>20</sup> was received at the household level (Figure 5). Around 78 percent of respondents reported that their household received some form of in-kind assistance prior to the survey. This assistance mainly came from relatives within the wider family network (85 percent of households). Around half of the surveyed households received support from churches and NGOs and one-third received assistance from the community.

**Figure 5:** Sources of in-kind assistance in 2019 (household level)



**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations = 277. The figure depicts results for those households that did receive some in-kind support. Community = friends and village.

Informal social protection was thus an important support both for the elderly and their household as a whole (Figure 4 and Figure 5). While government support via the SWS and DWS schemes was clearly very important in assisting with expenses, assistance from other sources, especially via remittances, further supported the recipients in meeting their needs.

### 2.3 Assistance in the period immediately after TC Gita and usage of SWS top-ups

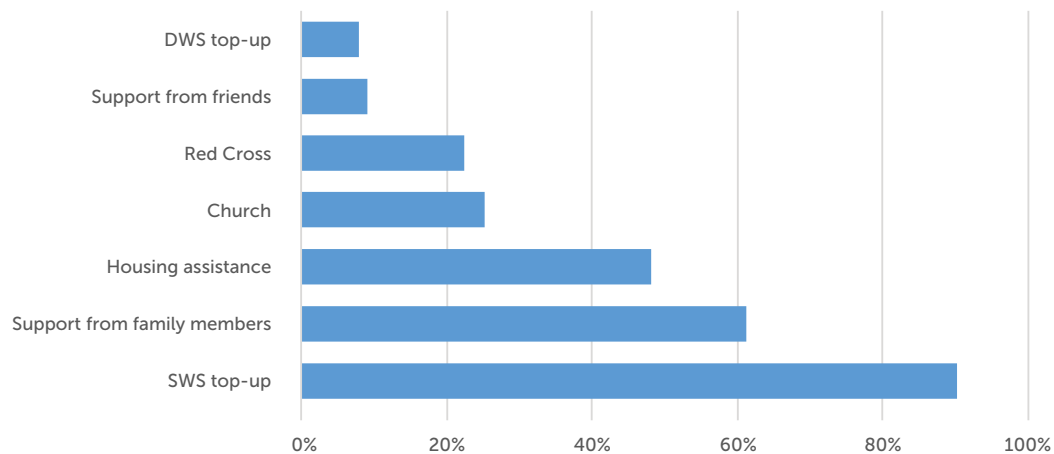
Within the three months following TC Gita, SWS beneficiaries primarily received assistance from the government and their family members (Figure 6). The government provided support through formal social protection systems, including the SWS and DWS top-ups and housing assistance.<sup>21</sup> Around 76 percent of households received the SWS top-ups within one month after TC Gita and 90 percent within three months. Just under half (48 percent) of SWS beneficiaries interviewed also received housing assistance, mostly to the value of T\$500 (US\$215). Assistance also came from the church, the Red Cross, friends, and through the DWS top-up.

<sup>20</sup> The type of in-kind assistance was not further specified by surveyed individuals.

<sup>21</sup> An emergency government payment was made available for housing reconstruction. The amount of support depended on the level of damage to the house and ranged between T\$500 (US\$215) and T\$3,000 (US\$1,290). The disbursement of funds was dependent on certain conditions, such as repair work being in line with the Ministry of Infrastructure's (MOI) technical assessment on structural soundness of buildings (Government of Tonga, 2018a).

These results show that in the aftermath of TC Gita, support was provided through both formal government assistance and informal social networks.

**FIGURE 6:** Different types of assistance in the 3 months after TC Gita



**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations = 354. The graph shows the percentage of households that received assistance from any of these sources in the 3 months after TC Gita.

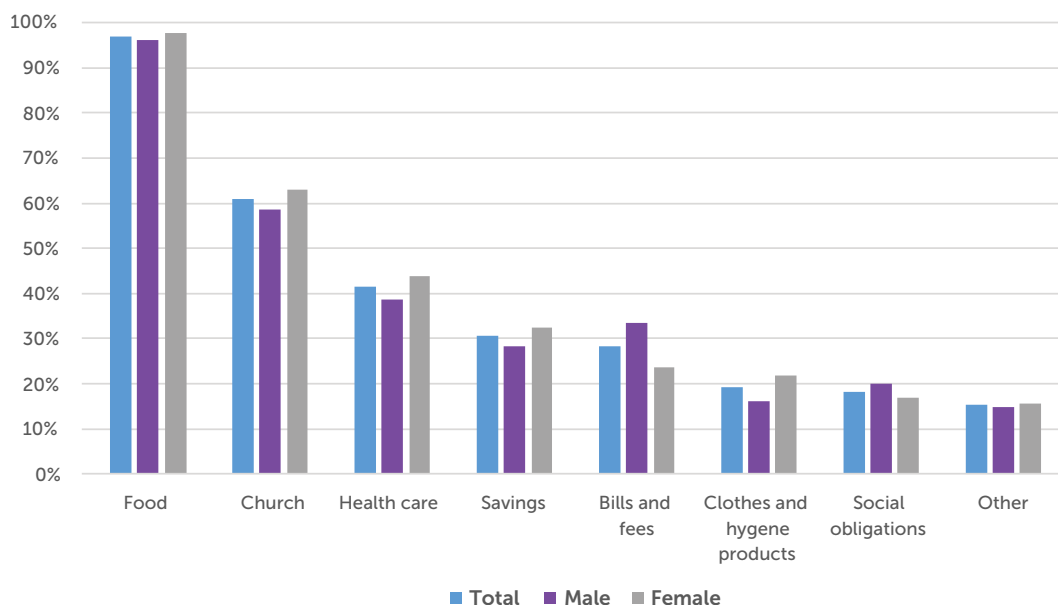
The SWS benefit is an important source of income for beneficiaries (see Section 2.2), and the SWS top-up transfer assisted surveyed beneficiaries in meeting their needs during the aftermath of TC Gita (Figure 7). Purchasing food was one of the main uses for the top-up transfer, with more than 90 percent of beneficiaries spending at least part of the top-up money on food. Other usage of the money included meeting church obligations and health care needs, as well as paying bills and fees (mainly for transport),<sup>22</sup> and buying clothes and hygiene products. Importantly, the top-up also contributed to beneficiaries' savings. This was true for around 32 percent of surveyed beneficiaries.

Spending patterns were similar for men and women, with both genders prioritizing food purchases. However, there were differences in the use of the top-up for paying bills and fees, with men using the money significantly more often for this purpose. Male respondents were also more likely to be the household head, which may explain this pattern.

<sup>22</sup> Of those 28 percent of beneficiaries that spent money on bills and fees, around 19 percent spent some of the top-up on school fees. This indicates that some of the money is transferred within the household.



**FIGURE 7:** Top usages of SWS top-up according to the elderly (by sex)



**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations: Total = 333; Male = 155; Female = 178. Food = food for myself, family members, and friends; Social obligations = marriage, funeral, gifts; Bills and fees = school fees, transport, bills; Clothes and hygiene products = clothes, diapers.

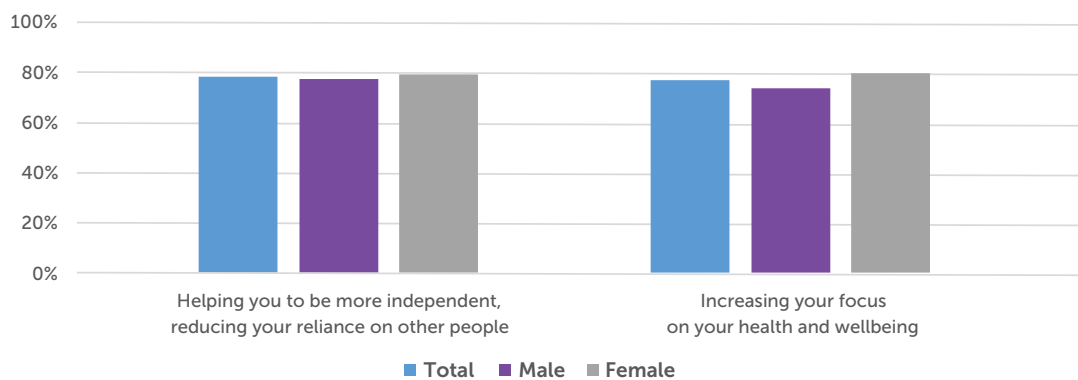
Donations to the church are important in Tonga. According to the 2015/2016 HIES report, church donations made up around 8 percent of total national household expenditure. The importance of prioritizing spending on church and social obligations has been documented in other studies. Community support (e.g., church and village support), as well as church and social commitments (e.g., marriage, funeral, gifts) are important components of traditional social protection in the Pacific (ADB, 2011; ILO, 2006; World Bank, 2015). These traditional systems play an important role in ensuring wellbeing, as well as cushioning the impacts of idiosyncratic shocks and economic pressures. Actively participating in the church and local communities is not only a risk mitigation strategy but also a way to fulfil other social needs. At the same time, and despite their cultural importance, these community financial commitments may place vulnerable members of the community under pressure if they are not in a position to contribute. Cash transfers can help to mitigate these economic pressures on vulnerable community members and support them in fulfilling certain social obligations. The data analysis revealed that surveyed beneficiaries were not actively approached by the church to give their money away. However, the reasons for why beneficiaries made contributions and whether beneficiaries experienced other indirect pressures to contribute to the church is beyond the scope of this report.

## 2.4 Impacts on the elderly's independence and wellbeing

The previous section showed that beneficiaries used the top-up money to purchase food, pay bills, or increase savings. However, the survey results also reveal that the SWS top-up transfers had additional intangible benefits for the surveyed beneficiaries in promoting a positive impact on the beneficiaries' decision-making, independence, and wellbeing.

When beneficiaries were asked to indicate how the SWS top-up assisted them in different areas, most (80 percent) surveyed beneficiaries reported that the transfer assisted them in focusing on their health and wellbeing, and 78 percent reported an increase in their independence. These results were similar for male and female beneficiaries, with a slightly higher percentage of women reporting an increase in focusing on their health and wellbeing.

**FIGURE 8:** Impact of the top-up on the elderly's wellbeing (by sex)



Source: TC Gita Survey, November 2019.

Note: Multiple answers possible. Number of observations: Total = 333; Male = 155, Female = 178.

These findings are consistent with findings from the existing literature on cash transfers (Bastagli et al., 2016), which demonstrate the powerful effect of cash transfers in promoting psychosocial wellbeing through mutually reinforcing:

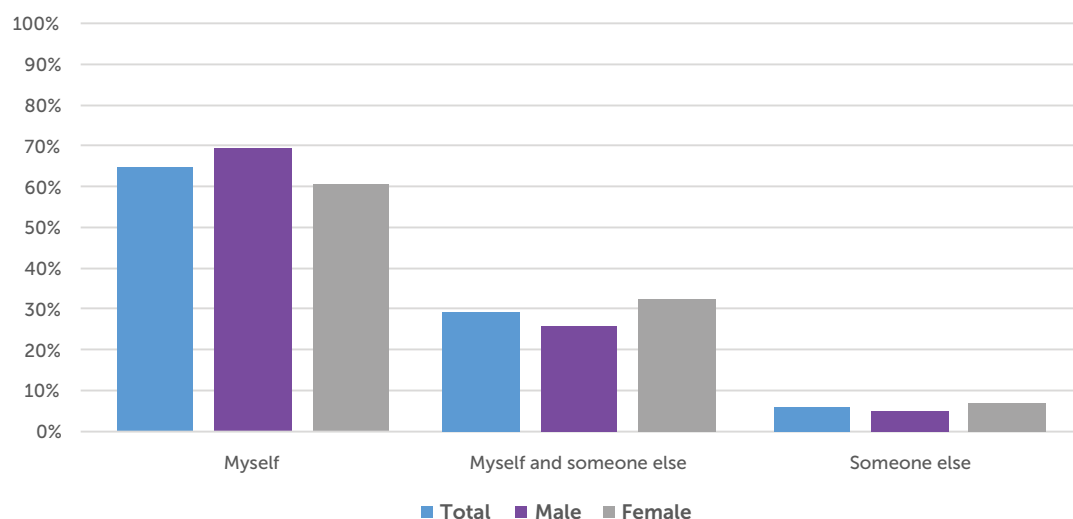
- independence, self-esteem, dignity, and health
- mental health, by reducing stress due to liquidity and credit constraints
- ability to re-engage in meaningful and effective relationships with others by increasing participation in faith-based groups, traditional events, and contribution-based networks.

A potential reason for these positive effects may be that most surveyed beneficiaries (90 percent) collected the SWS payments themselves (Appendix A.2, Figure A.1). Collecting the benefits provided a chance to interact with others at the NRBF & SWS offices. Many beneficiaries enjoyed this aspect and often ended up spending several hours socializing with others at the NRBF & SWS offices when they collected their payments.

Program requirements and implementation processes influenced how SWS beneficiaries collected their benefits. During the time of the survey, the beneficiary had to personally collect the benefit or nominate an alternate collector should they not be able to collect it themselves. Another important aspect is that the NRBF & SWS had a bus that facilitated the transport of the beneficiaries. Payments can also be collected on any day of the month, allowing beneficiaries to collect their benefit when best suits them.

The fact that beneficiaries reported an increase in their independence as a result of the transfers is further supported by the finding that the majority of beneficiaries were involved in decisions over the use of the top-up (Figure 9). Around 65 percent of beneficiaries reported that they made the decision about how to spend the transfer. Another 29 percent reported they made the decision jointly with someone else. Only 6 percent of surveyed beneficiaries stated someone else decided on the usage of the top-up. Disaggregating the results by gender, reveals a slightly higher decision-making power for male beneficiaries. Male beneficiaries reported making decisions significantly more often about the use of the top-up transfer by themselves than female beneficiaries. This might also be explained by the fact that male beneficiaries were more often the household head than female beneficiaries. However, overall, the findings indicate a very high degree of empowerment by beneficiaries in making decisions, regardless of sex.

**FIGURE 9:** Who decides the use of the SWS top-up (by sex)?



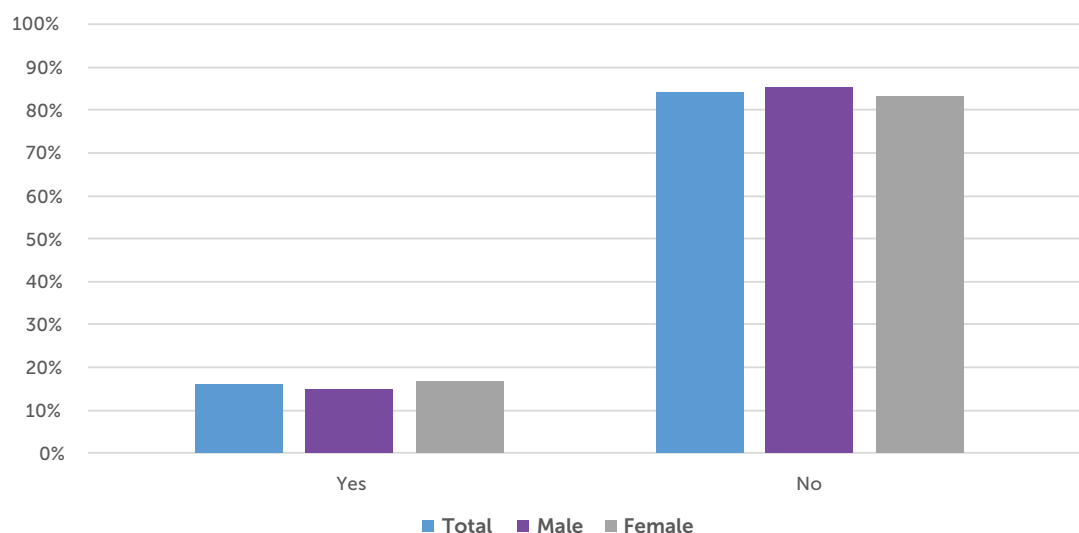
Source: TC Gita Survey, November 2019.

Note: Number of observations: Total = 349; Male = 163, Female = 186. Someone else = spouse, caretaker, child, other relatives, or friends.

As well as making decisions about how the top-up was used, the majority of surveyed beneficiaries were not asked to give their SWS top-up money away (79 percent) (Figure 10). Indeed, only around 16 percent of beneficiaries were asked to share their top-up money. Those people were asked by family

members or friends to share the money. The results did not indicate differences by gender. However, half of surveyed beneficiaries indicated that they shared some of their top-up with relatives and members of the community (Appendix, A2, Figure A.2). The fact that beneficiaries shared their top-up transfer although they were not asked to share the money, may indicate the importance of informal social safety nets, and unspoken cultural expectations and norms about sharing, exchange, and reciprocity. Nonetheless, the results of this section revealed that beneficiaries were highly involved in the decision-making process over the use of the benefits. Ultimately, this resulted in beneficiaries reporting an increase in their perceived independence and a higher focus on their personal health and wellbeing.

**FIGURE 10:** Percentage of the elderly asked to give their SWS top-up away (by sex)



Source: TC Gita Survey, November 2019.

Note: Number of observations: Total = 333; Male = 155, Female = 178.

## 2.5 Insights on the SWS top-up program operations

Around 76 percent of households interviewed collected their SWS top-up transfer within the first month (Figure 11), which indicates that the NRBF & SWS was able to mobilize and distribute funds in a timely manner. The results were similar between male- and female-headed households. The remaining households withdrew the top up after the first month. The survey was unable to identify potential reasons for later withdrawal as the top-up was made available to all SWS beneficiaries in Tongatapu and 'Eua at any benefit collection point. These findings are also in line with a separate process evaluation of the SWS top-up mechanism,<sup>23</sup> which showed positive results in terms of distributing the benefit

<sup>23</sup> The process evaluation was conducted independently of this study and took place in October 2019. The process evaluation considered the timeliness, efficiency, and effectiveness of the management processes that were used to deliver the top-up. The evaluation included reviewing TC Gita Post Disaster Needs Assessment documents and conducting semi-structured interviews with the NRBF & SWS, Ministry of Finance, MIA, and National Emergency Management Office (NEMO).

in a timely (after one month), efficient (low transaction cost), and effective (social assistance reaching the vulnerable populations) manner.

To provide a better understanding of the timeliness of the SWS top-up, Figure 11 compares the SWS top-up and another benefit that households received after TC Gita. To support households in their reconstruction efforts, the government, via the MOI, introduced a separate housing assistance program. Building on the previous experience on housing support post TC Ian (whereby the government decided to build houses), post TC Gita, households received cash support depending on the level of damage to their housing: T\$500 (US\$215) for minimal and minor damage, T\$1,500 (US\$645) for major damage, and T\$3,000 (US\$1,290) for totally damaged property (Government of Tonga, 2018a).



A total of 170 households in the sample received the housing assistance. While most of the SWS top-up benefit was distributed in the first month after TC Gita, the housing assistance took between 1–3 months to be distributed to those in need. Of those that applied for housing assistance, 81 percent found it 'very easy' or 'easy' to apply, and 84 percent found it 'very easy' or 'easy' to receive the housing assistance. This indicates that the delay in receiving the housing payments was not related to the application process *per se* but potentially to other operational issues, such as the requirements on the building structure, which were not assessed by this survey. One potential reason for a faster disbursement of the SWS top-up payment is that it was distributed together with the regular SWS payments to registered SWS recipients. Therefore, no special infrastructure or application process was needed for the top-up payouts. This was different to housing assistance payments, which were not integrated into existing program operations but were newly established in response to TC Gita.

**FIGURE 11:** Timeliness to distribute benefits: SWS top-up versus housing assistance

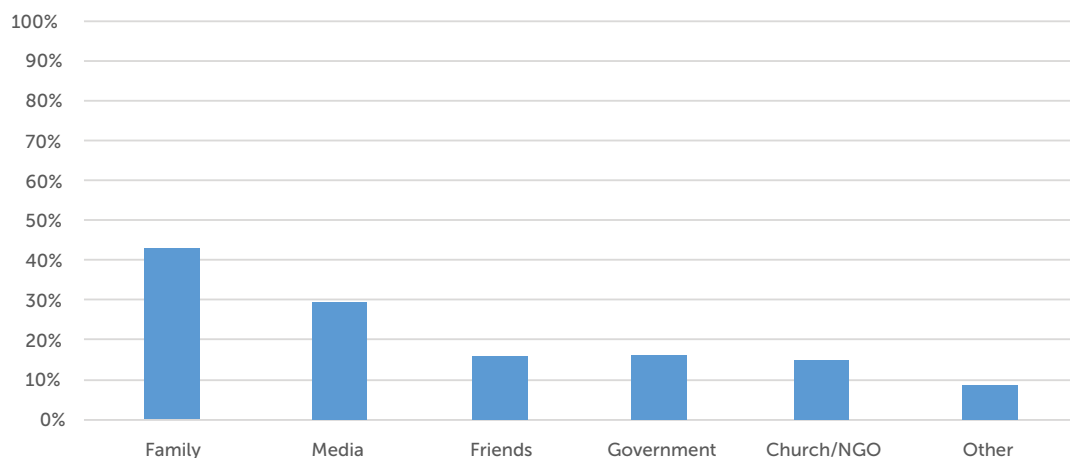


Source: TC Gita Survey, November 2019.

Note: Number of observations: SWS top-up = 333, Housing assistance = 170.

Timely distribution of benefits also requires an effort to disseminate information about the benefit, eligibility, and distribution. The government prioritized the use of community radio and government officials (mayor, town officer, village office, or NRBF & SWS staff) in their public information campaign. However, the survey results indicate that in most cases beneficiaries found out about the top-ups through informal sources, such as family members or friends. Official sources, such as the media or government institutions, were mentioned by fewer households (Figure 12).

**FIGURE 12:** Top-up payment information sources



**Source:** TC Gita Survey, November 2019.

**Note:** Multiple answers possible. Number of observations: Total = 240. Due to the design of the questionnaire, where media was not an answer option for this question but was named under the answer option 'other', the percentage of people who heard about the top-ups via the media might be underreported.

The majority of surveyed beneficiaries did not experience difficulties in obtaining the SWS top-up. Only 6 percent of the elderly surveyed experienced difficulties in obtaining their benefit, mostly related to waiting times and long queues. This observation might be due to the fact that the SWS scheme was already in place before TC Gita and thus existing channels could be utilized to distribute the top-up payments. Similarly, beneficiaries were already familiar with processes for receiving the benefit and receiving the top-up did not require extra effort on their behalf.

### 3. Summary of Findings

The first time that the Government of Tonga utilized its social protection system after a natural disaster was through the top-up payments made after TC Gita. This highlights the importance of this report as it assesses how this adaptive social protection mechanism supported those that were most vulnerable in an emergency situation. The main findings are as follows:

**1. Formal and informal social safety nets supported families during the immediate 3 months after TC Gita.** Surveyed SWS recipients received additional assistance via family, churches, and NGOs. Around 61 percent of households received support from family members in the aftermath of the shock. However, government support, through the housing assistance and top-ups to SWS and DWS, was the main form of assistance received. In 10 percent of cases, beneficiaries reported that social welfare programs were the only cash assistance received to support them during the aftermath of TC Gita.

**2. In both non-emergency and emergency situations, the SWS benefit was an important source of income for the elderly surveyed.** The majority of recipients (98 percent) reported that benefits were one of their main sources of income. For the elderly, benefits were important as they have few other sources of income. SWS benefits also contributed to the overall household income. Beneficiaries and their households also relied on remittances (46–60 percent) and income from agriculture (24–45 percent).

**3. The government's decision to top-up the SWS payment was an important strategy to support the livelihoods of the elderly after TC Gita.** Around 90 percent of surveyed beneficiaries reported the top-up was one of the main forms of assistance received immediately after TC Gita.

**4. Formal social protection was used to meet the elderly's immediate basic needs in an emergency and to strengthen informal social protection mechanisms.** The SWS top-up was used primarily to ensure food security of the surveyed recipients and their households (97 percent). In addition to this use, surveyed beneficiaries reported to use the money to meet church obligations (61 percent), health care needs (41 percent), or to pay bills and fees (28 percent). Around half of recipients also shared some of the top-up money with relatives and members of the community.





**5. Recipients reported that the top-up had positive impacts on their independence, health, and general wellbeing.** This finding was observed across male and female beneficiaries. Elderly women and men interviewed perceived themselves as being able to actively participate in household decision-making and were involved in the use of the cash received (94 percent). The surveyed recipients generally collected the benefit themselves (92 percent). This was facilitated by program requirements and implementation processes.

**6. The SWS top-up was delivered timely and efficiently, as the majority of surveyed beneficiaries received the top-up within the first month after TC Gita (76 percent).** The elderly surveyed considered the top-up 'very helpful' in assisting with their reconstruction efforts, particularly for those living in 'Eua. By vertically expanding the SWS benefit, through the use of top-ups, cash was able to directly reach the elderly in the aftermath of TC Gita. The government, with the help of media and networks, was able to rapidly inform the population about the top-up benefit by using radio, television, social media, and other social networks (family, friends, and the church). These results demonstrate the importance of existing social protection systems with adaptable delivery systems in the immediate time after a disaster – and they highlight the advantages of ASP mechanisms during the immediate response period.

## 4. Policy Recommendations

The findings of this report demonstrate that the SWS top-up had an overall positive impact and supported the needs of the elderly. The payments also promoted the elderly's independence, health, and wellbeing. This report shows the advantages of existing social protection mechanisms. In Tonga, those mechanisms facilitated the implementation and operationalization of a vertical expansion of an existing program in a time of need. Ultimately, this led to a timely distribution of the SWS top-ups and a rapid response of support for the elderly.

**The following recommendations are put forward for the government's consideration:**

- **The Government of Tonga could consider continuing with the use of top-ups to existing social protection programs, such as the SWS, as one of the immediate response mechanisms to shocks and emergencies.** The report demonstrated that the top-ups reached the surveyed elderly promptly, supported their needs in the aftermath of the shock, and had a positive impact on their independence, health, and wellbeing. Thus, existing social protection mechanisms are advantageous in an emergency and can efficiently support those in need.
- **The Government of Tonga could also consider investing in an ASP policy framework, which could be leveraged during a disaster to:** (i) expand the coverage of those experiencing hardship and vulnerability beyond those covered by existing social protection programs, such as women and children (during TC Gita such a framework was not in place and therefore adaptive social protection programs were only provided to those who were already social assistance beneficiaries); (ii) further integrate targeting mechanisms into disaster response, such as assessment of household risks and vulnerability; (iii) prepare institutional responses before a disaster occurs (ex-ante) that allow the government to immediately respond using social protection instruments, disaster risk financing and data, as well as information systems. In addition, ongoing social protection programs and ASP frameworks would build the resilience of the poor and enhance their capacity to prepare for, cope with, and adapt to shocks. While top-up transfers of existing social protection mechanisms are an important measure, they only cover those that are recipients of social assistance. During disasters, other groups affected by natural shocks could become vulnerable and the government could consider the use of a social registry to capture more information of

those that are vulnerable but not eligible for a social assistance benefit. Prepositioning disaster risk financing, institutional responses, data/information sharing, and strengthening on-going social protection programs (i.e., the four building blocks of an ASP Framework) could support the Government of Tonga to prepare for future shocks, resulting in a more effective, efficient, and transparent response to the needs of the affected population.

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# Appendices

## A.1 Additional sampling information

The report is based on a non-probability sample (Number of observations = 356), using purposive sampling. Several strategies were taken into consideration when collecting the sample:

- I. Criterion sampling: The team selected cases that met a predefined criterion (i.e., having received the top-up to the SWS benefit). The team pre-screened interviewees and excluded new SWS recipients
- II. Typical case sampling: The team conducted the survey only with those that had received the top-ups and generally attend the NRBF & SWS for benefit collection, avoiding extreme cases of those who were unable to attend due to disabilities and sent their caretakers in their places<sup>24</sup>
- III. Intensity sampling: The team only interviewed recipients in Tongatapu and 'Eua, where TC Gita destroyed homes and livelihoods
- IV. Homogeneous sampling: The team focused on the subgroup that collected their benefits during the first two days of payment in November 2019. The first couple of days are generally the peak payment period and excludes elderly who have a preference for 'less busy' days
- V. Convenience sampling: The team undertook the survey at the NRBF & SWS collection point, resulting in an efficient use of time and resources.

### Survey implementation: Limitations and quality considerations

Accessibility to the elderly was facilitated by the NRBF & SWS. Beneficiaries who were interested in participating in the survey waited for their interview after they had collected their benefit. Interviews lasted between 20 to 40 minutes, averaging about 10 interviews per enumerator per day. Having the NRBF & SWS as a gatekeeper helped to build trust and significantly reduced the time to introduce the study and to obtain the informed consent. Similarly, the team had access to a large sample of the population concentrated in one place, making this activity cost- and time-efficient.

One of the limitations of using this approach relates to selection bias and measurement error. There is a possibility of beneficiaries identifying the team with the government and excluding themselves from the survey. This can skew the answers towards positive responses. Also, there could be a perception that the survey would lead to additional payments. The team mitigated these risks

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<sup>24</sup> There were six cases of respondents who were caretakers of elderly who also received the DWS. These responses were excluded. The remaining 22 cases of DWS included in the sample were elderly who were able to attend the NRBF & SWS office and collect their payments.

by making sure there were no leading questions and by addressing potential misconceptions regarding additional payments on the NRBF & SWS introduction and on the informed consent prior to the interview.

Another limitation of this approach was the use of recall to capture information pre-TC Gita. Measurement error is already documented in research with elderly populations where impairment of cognitive functions will have consequences for the measurement process. In addition, data was collected in November 2019, 1 year and 9 months after the event. The inherent difficulty of recalling data is present in addition to the consequences related to the aging process compromises the potential response quality.

That being said, this report considers that the following elements render a strong case for higher chance of valid recalling:

- The significant amount of the lump-sum transferred. The SWS top-up was three times their usual monthly stipend, making it a remarkable payment
- The circumstances in which this transfer was made. Payment occurred straight after TC Gita destroyed their houses, making it a significant measure of support under difficult circumstances.

The questionnaire had inputs from several experts from the World Bank and DFAT. All enumerators undertook two days of training to ensure a uniform application of the survey materials, translation to local language, a run-down of the questionnaire by sections and in its entirety, provision of practical suggestions, and improvement of the overall quality of the data.

Other data control mechanisms included the direct observation of fieldwork coordinators and post-survey quality control for both internal and external consistency. The following consistency checks were conducted:

- Visual inspection for completeness to check if all questions were answered, skips were followed correctly, and termination questions were logical
- Consistency of individual interviewers to check for straight-lining, easiest route, range of answers
- Internal consistency checks to track any contradictions within a questionnaire
- External consistency check by comparing demographic variables across interviewers.

The table below compares the sample surveyed with the NRBF & SWS's administrative dataset.

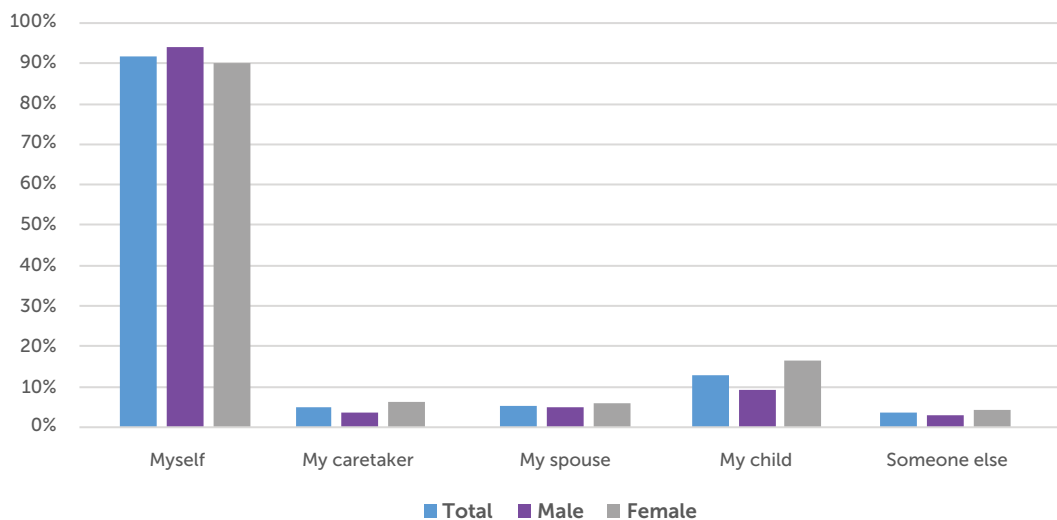
**TABLE A.1:** Cross-sectional information: SWS dataset and survey

	SWS program information (March 2018)	Survey information (November 2019)	Comparison
Total number of SWS beneficiaries	4,199		
Total number of SWS top-up beneficiaries	2,964	356	12%
Percentage of beneficiaries living in urban areas	40	54	↑ 14 pp
Percentage of beneficiaries living in rural areas	60	46	↓ 14 pp
Percentage of beneficiaries male	29	47	↑ 18 pp
Percentage of beneficiaries female	71	53	↓ 18 pp
Percentage of beneficiaries with disability	n/a	small sample size	n/a
Average age of beneficiary	n/a	78.17	
Age range	70-100	70-91	
Total number of SWS beneficiaries in Tongatapu	2,726	299	11%
Total number of SWS beneficiaries in 'Eua	238	57	24%

Source: NRBF & SWS administrative data from 2019 and TC Gita Survey, November 2019.

## A.2 Additional figures

**FIGURE A.1:** Who generally collects the SWS benefit (by sex)?

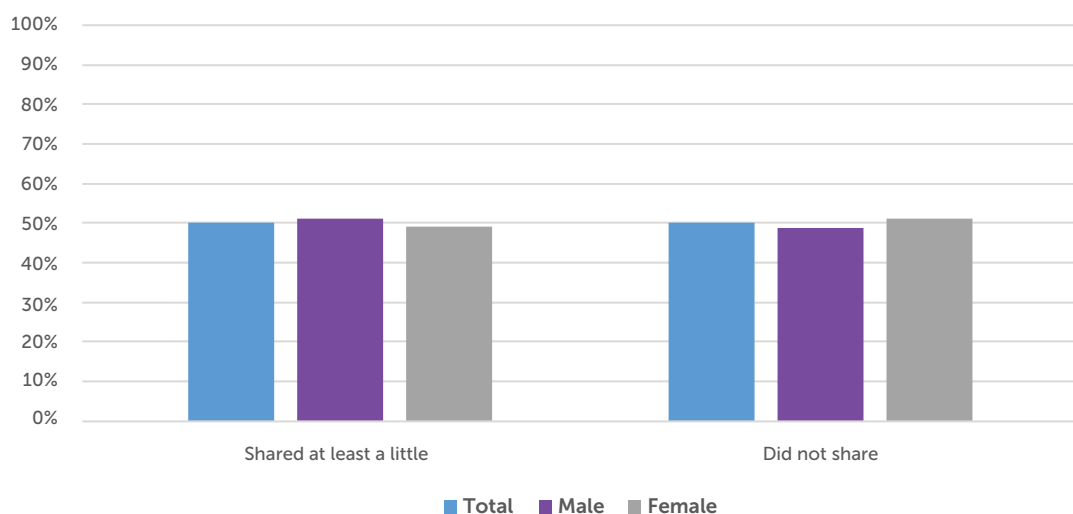


Source: TC Gita Survey, November 2019.

Note: Multiple answers possible. Number of observations: Total = 356; Male = 166; Female = 190.



**FIGURE A.2:** Percentage of people who shared some of their SWS top-up with others (by sex)



Source: TC Gita Survey, November 2019.

Note: Number of observations: Total = 316; Male = 148, Female = 168. Findings by gender are only indicative due to low-frequency count.

### A.3 Areas for future research

In the aftermath of TC Gita, the Government of Tonga provided top-ups to two pre-existing social protection schemes, the SWS and DWS. This was the first time that the government had utilized the schemes post disaster. This report assesses the top-up of the SWS. In light of this report, some areas for future research have emerged:

- **Church contributions: Future studies may further investigate the role and importance of church donations after a disaster among vulnerable groups.** This report revealed that the majority of beneficiaries (63 percent) spent part of the top-up money on church obligations. Church donations are important in Tonga and make up around 8 percent of the total national expenditures (Tonga Statistics Department, 2017). Church contributions may fulfill social and community aspects for those contributing. In addition, the church might support those in need after a disaster. This report showed that surveyed beneficiaries receive support from the church in non-emergency and emergency situations. Around 25 percent of beneficiaries received assistance from the church in the 3 months after TC Gita. On the other hand, the need to contribute to the church may place vulnerable people in a difficult position if they cannot contribute, especially after a disaster. Cash transfers can support people to meet those obligations. However, this research cannot provide further information on these dynamics. Future studies on cash transfers could therefore consider further investigating this aspect.

- **Linkages between the government response and the humanitarian response: It would be interesting to analyze how the humanitarian sector in Tonga coordinates with the government post-disaster.** While the government provided top-up transfers to existing schemes and housing assistance after TC Gita, humanitarian actors provided additional support. Future studies may assess how far those programs were aligned and whether those that received government support experience any restrictions or not in terms of receiving humanitarian support.
- **The appropriateness of housing assistance programs: The Government of Tonga has used different housing assistance programs after TC Ian and TC Gita.** In the case of TC Ian, standardized pre-fabricated houses were provided. After TC Gita, the government-provided housing assistance was designed as a cash assistance with the amount dependent on the level of damage to the house. Future studies could provide a review of the strengths and gaps of past housing assistance programs.
- **Impact and support of other vulnerable groups: In the aftermath of TC Gita, the government provided support to the elderly and those living with a disability.** However, there are other vulnerable groups, such as women, single mothers, and children. Those are not covered by this report. Future studies could assess the coverage that those groups receive after a disaster and the potential use of payments to those groups.
- **Early warning systems and supporting the poor and vulnerable:** Early warning systems can support households, communities, and governments to better prepare for, mitigate, and cope with disasters – in particular for the most vulnerable. An interesting area of future research would be to look at how to effectively develop these systems.
- **The design and set-up of the NRBF & SWS:** Over the past years, the eligibility criteria for the SWS were adapted a couple of times, reducing the age gap and increasing eligibility to include those that also have a private pension. It would be important to assess the impacts of those changes including the reduction of age, the overlap of benefits, the fiscal implications, positive and negative incentives, and the poverty alleviation impacts of those reforms. Modelling additional changes, such as reducing the age gap to match the NRBF retirement's scheme age of 60 years or the level of benefits, might provide interesting insights for potential future reforms of the scheme.



