

# Economic and Social Impacts of the Recent Crises in Tonga

Insights from the April-May 2022 round of High Frequency Phone Surveys



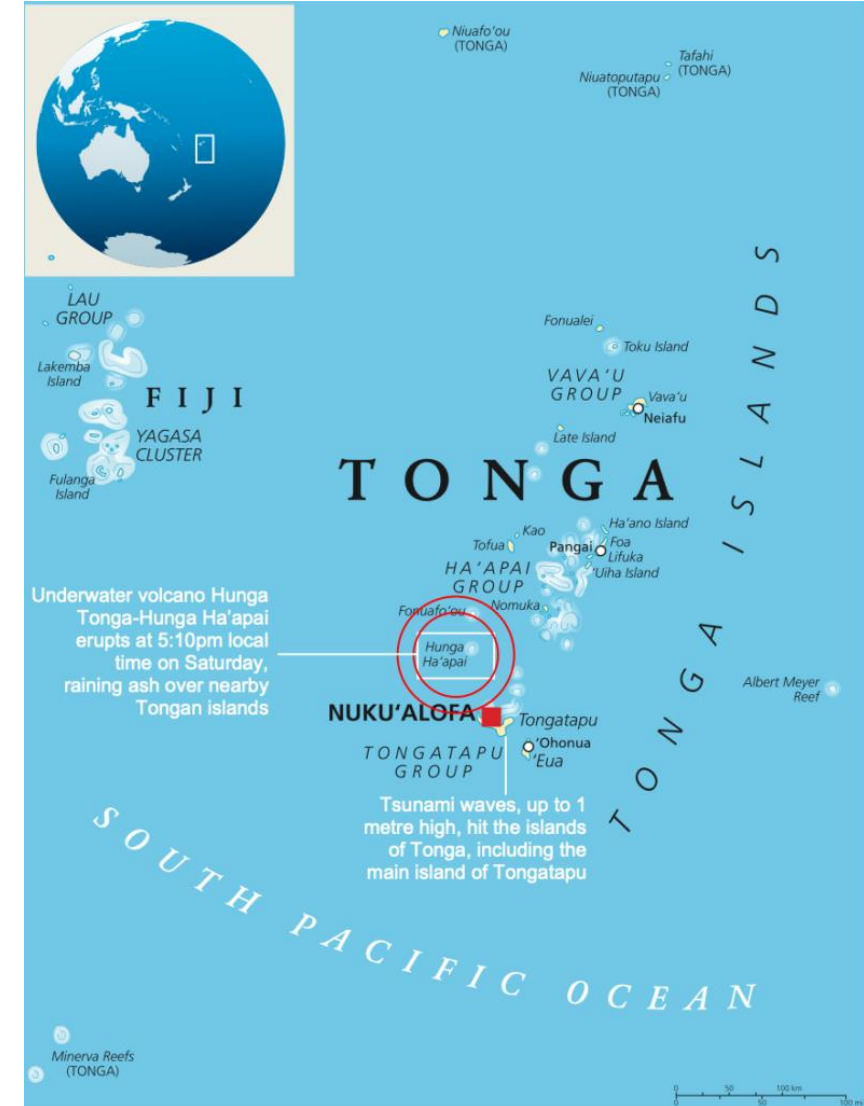
# Background

## Context: Tonga recently experienced multiple crises

- The Hunga Tonga-Hunga Ha'apai (HT-HH) volcanic eruption (January 15, 2022) and a subsequent tsunami
- COVID-19 outbreak and the associated lockdown (starting on February 2).

## High Frequency Phone Survey (HFPS)

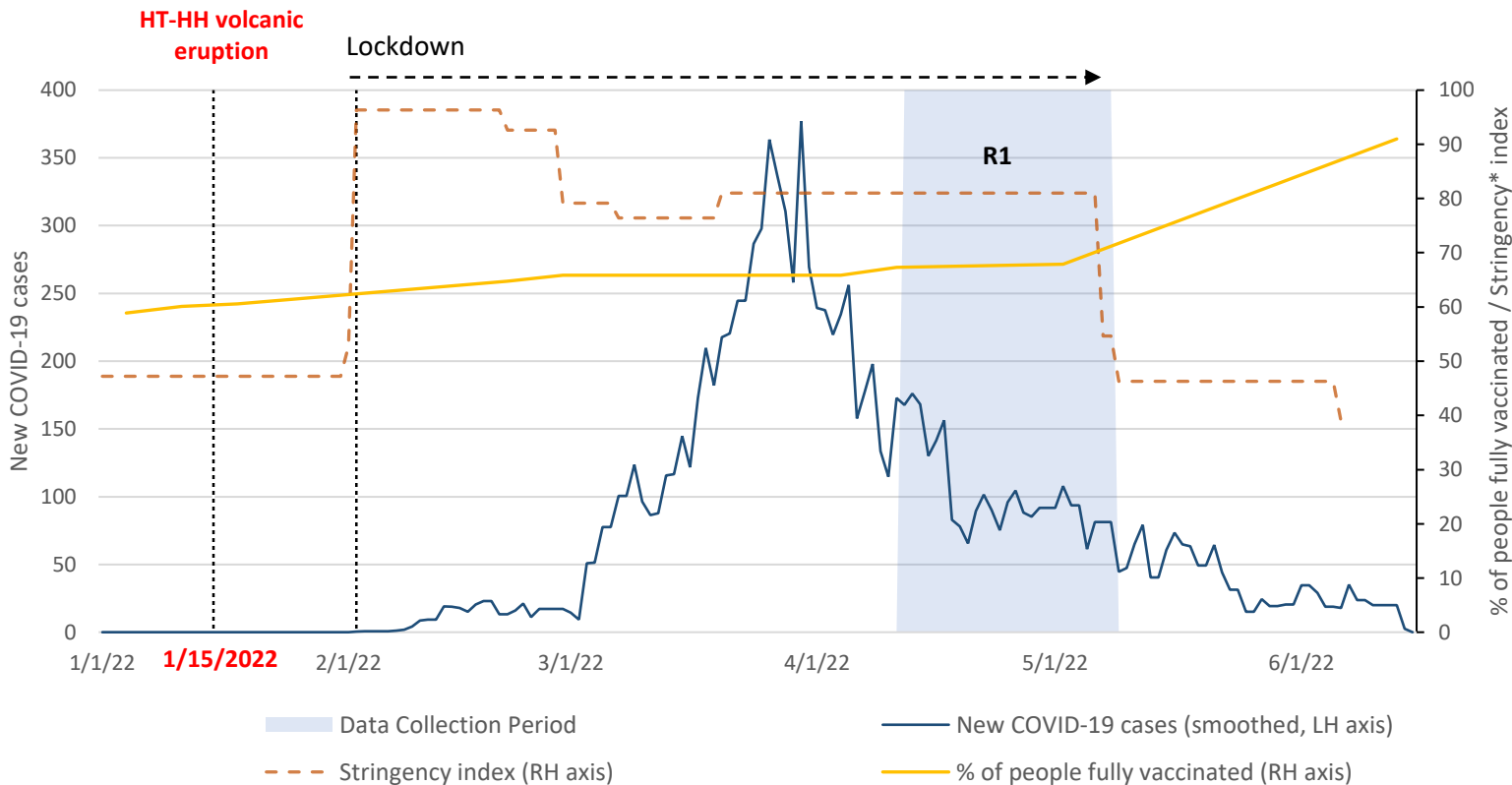
- To assess and monitor the economic and social impacts of the crises, the World Bank launched household-level HFPS with a plan to collect 6 rounds of surveys until mid-2024.
- Surveys interview the same households across rounds to monitor various socio-economic outcomes and inform policy and government programs.
- Similar HFPS have been implemented in Papua New Guinea and the Solomon Islands with Vanuatu and Fiji in the pipeline, under the World Bank Pacific Observatory initiative.





# First round of Tonga HFPS

## The HT-HH volcanic eruption and COVID-19 outbreak in Tonga



Source: Our World in Data <https://ourworldindata.org/>. Data retrieved on June 7, 2022.

Note: Stringency index is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest).

## The first-round survey was collected 3 months after the volcanic eruption and amid the COVID-19 lockdown

- The first round of Tonga HFPS interviewed 2,527 households between April 12 and May 7, 2022.
- The survey asked households about various socio-economic characteristics – such as heads' age and sex, livelihood, asset ownership/loss, food insecurity – to assess the impacts of the recent natural disasters and COVID-19 outbreak.\*
- Round 2 survey was collected in July/August 2022.

\* See the Annex slide for the details of the survey methodology.

# Highlights

- **Having multiple occupations is common in the country.**
- **After natural disasters and COVID-19 crisis, households expect their income to drop across several occupations.**
  - 60% of households employed in plant agriculture and 70% of those raising livestock and fishing expect no income this year from those occupations.
  - Volcanic ash is cited as a major reason for the disruption of plant agricultural activities.
  - Those with wage employment feel most stable in their financial expectations.
- **Food insecurity has become more severe after the tsunami and volcanic eruption.**
  - Almost 20% of respondents went at least one full day without eating anything—doubling of the pre-crisis level.
  - Food insecurity is especially prevalent in disaster-struck islands and poorer households.
- **One in five households could not access routine care after the disasters.**
- **Coping strategies limiting households' well-being were common:** 50% of poorer households cut down on food consumption.
  - Government assistance and insurance mechanisms played only limited roles in coping.

# Policy implications

- **Need of support for the recovery of agricultural activities and the resilience against climatic shocks** via, for example, the rehabilitation of farming areas/activities; the planting of acid-tolerant species; and the facilitation of the outreach capacity of agriculture extension workers.
- **Setting up and implementing adaptive social protection systems to build household resilience before shocks, to quickly respond during shocks and to promote recovery after shocks**, through the following options: top-ups to the existing social protection programs; cash for work; and combining emergency transfers with specific disaster needs.
- **Need to improve targeting and identify vulnerable non-recipients of social assistance** with better data collection coordination and the implementation of a social registry and interoperable systems.
- **Needs of disaster preparedness for future shocks**, such as differentiated needs for community preparedness, contingency planning, and awareness-raising needs; targeted initiatives and communications channels for early warning systems implementation and awareness-raising; potential needs/options for asset and household insurance.

# Livelihood

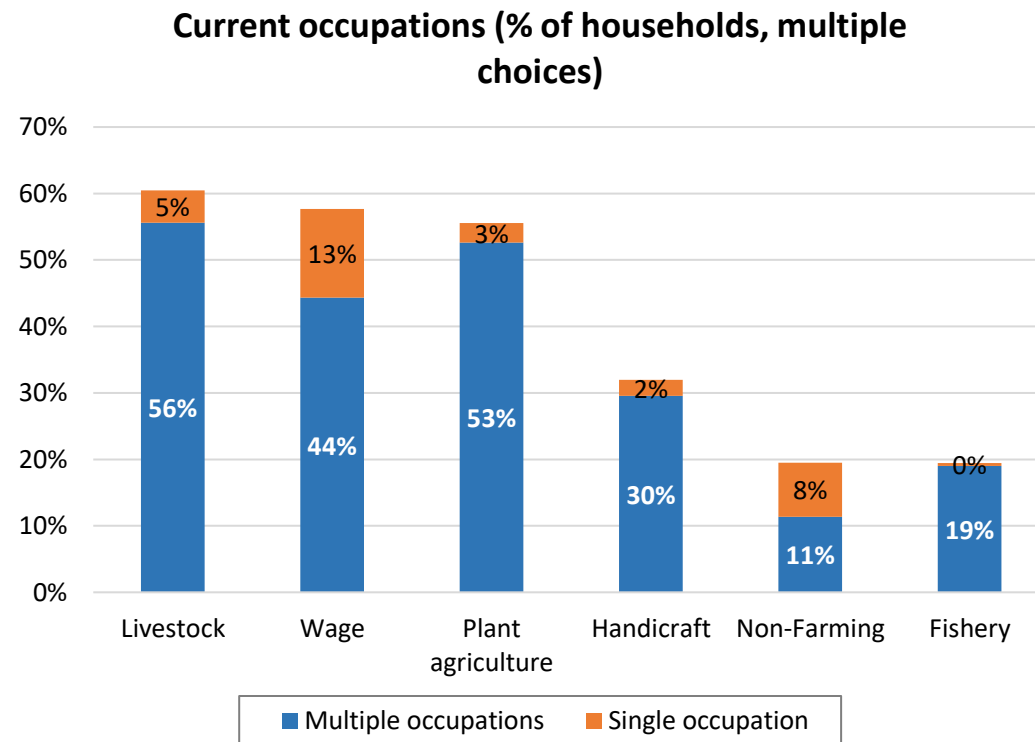
Agricultural activities have been severely disrupted by the recent crises, resulting in income declines/losses.





# Households tend to have multiple income-generating activities

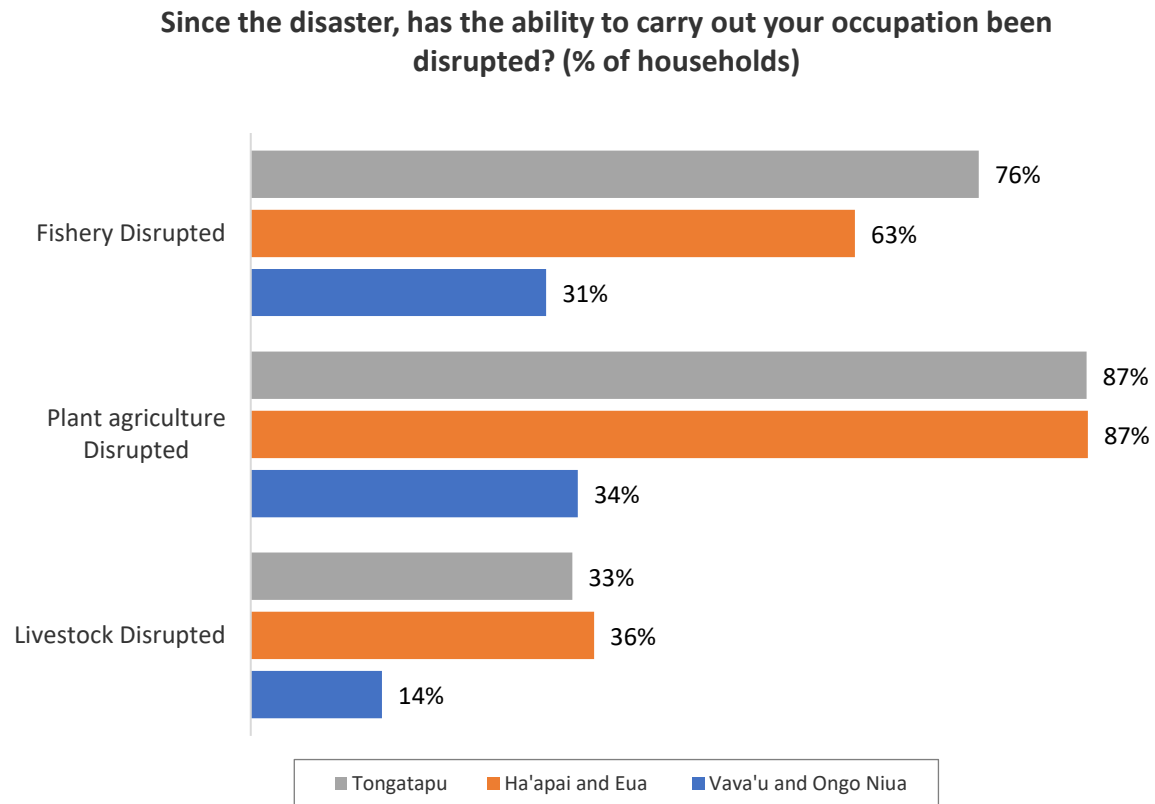
- Having multiple income-generating activities is very common in Tonga: 69% of households have 2 or more jobs; 43% have 3 or more jobs.
  - Most frequently combined occupations are plant agriculture and livestock-raising.
  - More than 30% of those with wage employment also engage in livestock/agricultural activities.
- Most common occupations at the time of the survey were livestock-raising (60% of households), wage employment (58%), and plant agriculture (56%).
- Wage employment is common among wealthier households, largely an urban phenomenon concentrated in Tongatapu.



Source: Tonga HFPS R1 (April-May, 2022)

Note: Each value label is rounded.

# Agriculture has been widely disrupted in disaster-struck islands



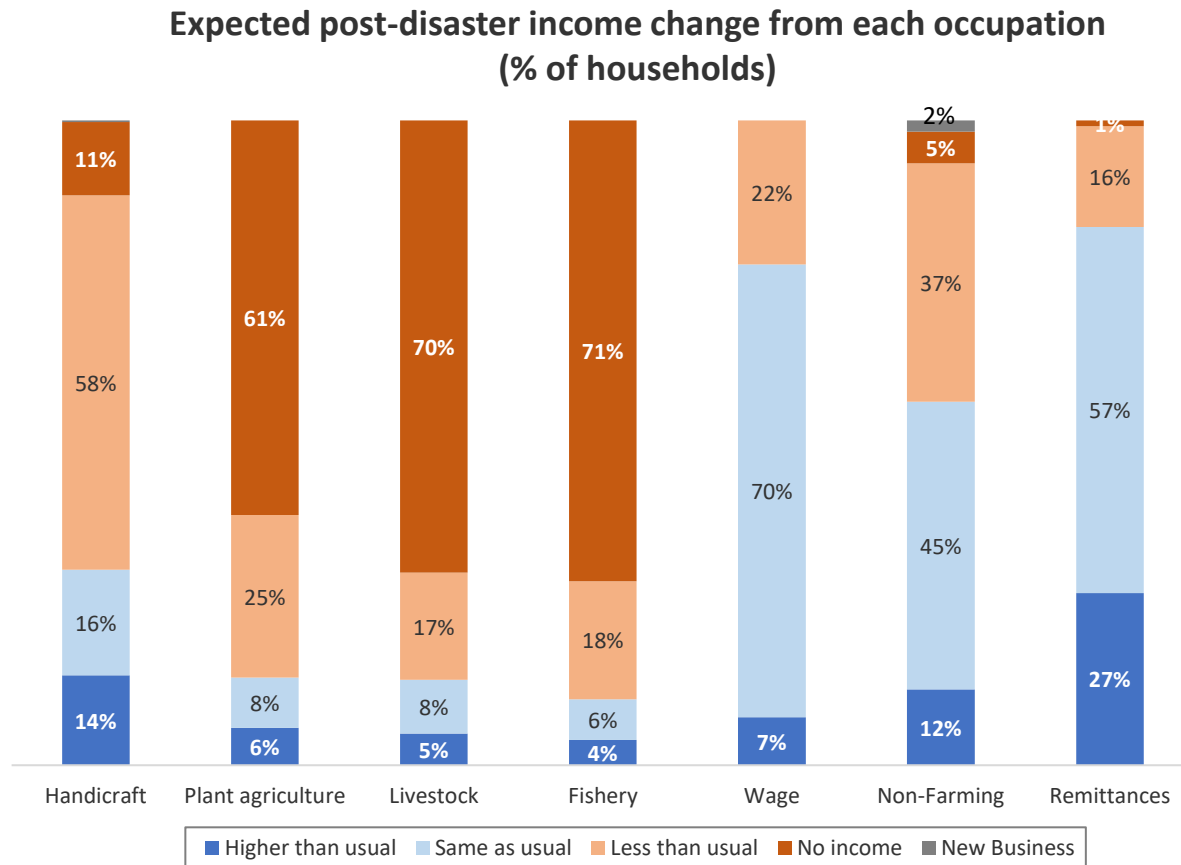
Source: Tonga HFPS R1 (April-May, 2022)

Note: Although a third of households experienced disruptions in raising livestock in disaster-struck islands, the reasons reported are not crises-related. Around 8% of respondents in Tongatapu and 12% in Ha'apai and Eua report death of livestock as the primary reason for disruptions in raising livestock.

- A large proportion of households experienced disruptions in raising crops (nearly 90% in Tongatapu, Ha'apai, and Eua) and fishery (around 70%).
  - Ash is cited as the reason for disruption by 66% of respondents in Ha'apai and Eua (38% in Tongatapu).
- Similarly, many households experienced disruptions in fishery due to the following common reasons: seas too rough; air pollution; afraid to go into ocean; unable to acquire or transport inputs; and advised to stay home.
- A majority of households engage with agricultural activities for home consumption.



# Agricultural incomes are expected to be the most affected ones after natural disasters



- Many households expect decreased income from each occupation after the disaster.
- Corresponding to the disruptions (shown in the previous slide), a significant portion of households expected no income in fishery (71%) and livestock (70%), followed by plant agriculture (61%).
- Wage income is expected to stay the same for the majority of households; none expects to lose income.
- 27% of households received higher remittances, compared to the pre-disaster period.

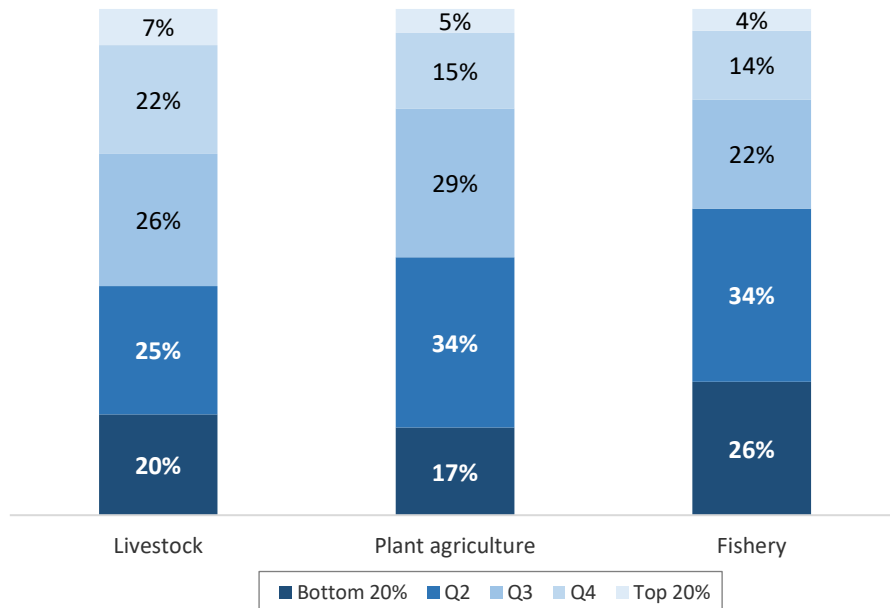
Source: Tonga HFPS R1 (April-May, 2022)

Note: Respondents reported income change for each occupation type, instead of household-level total incomes.

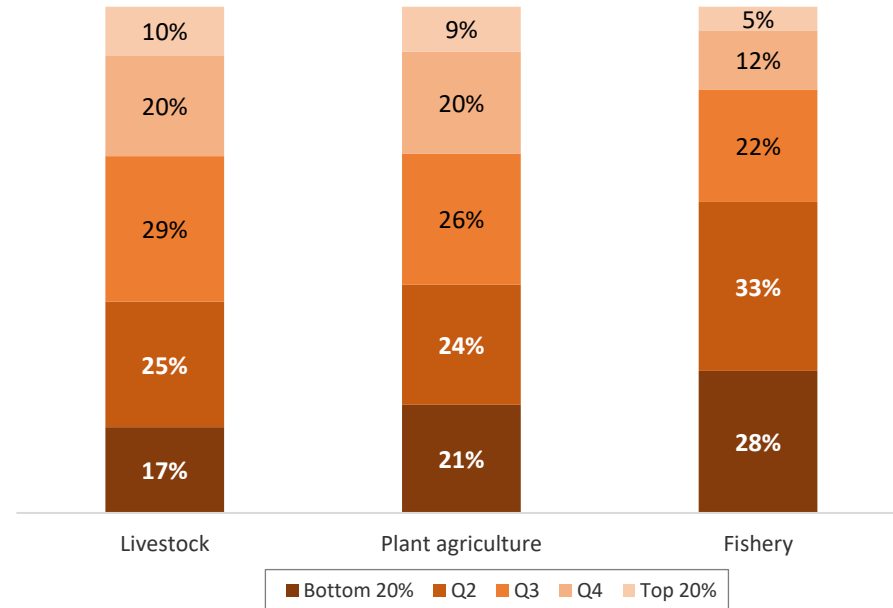
# Agricultural income losses are experienced by all wealth groups

- Households expecting less or no income from agriculture—livestock, plant agriculture, and fishery—are a mix of poor/middle-class/rich
- Households who expect lower/no income from fishery tend to be poorer.

Composition of wealth groups among the households with less income expected



Composition of wealth groups among the households with no income expected



## Food insecurity, assets, and access to health services

Food insecurity has become prevalent after the crises.

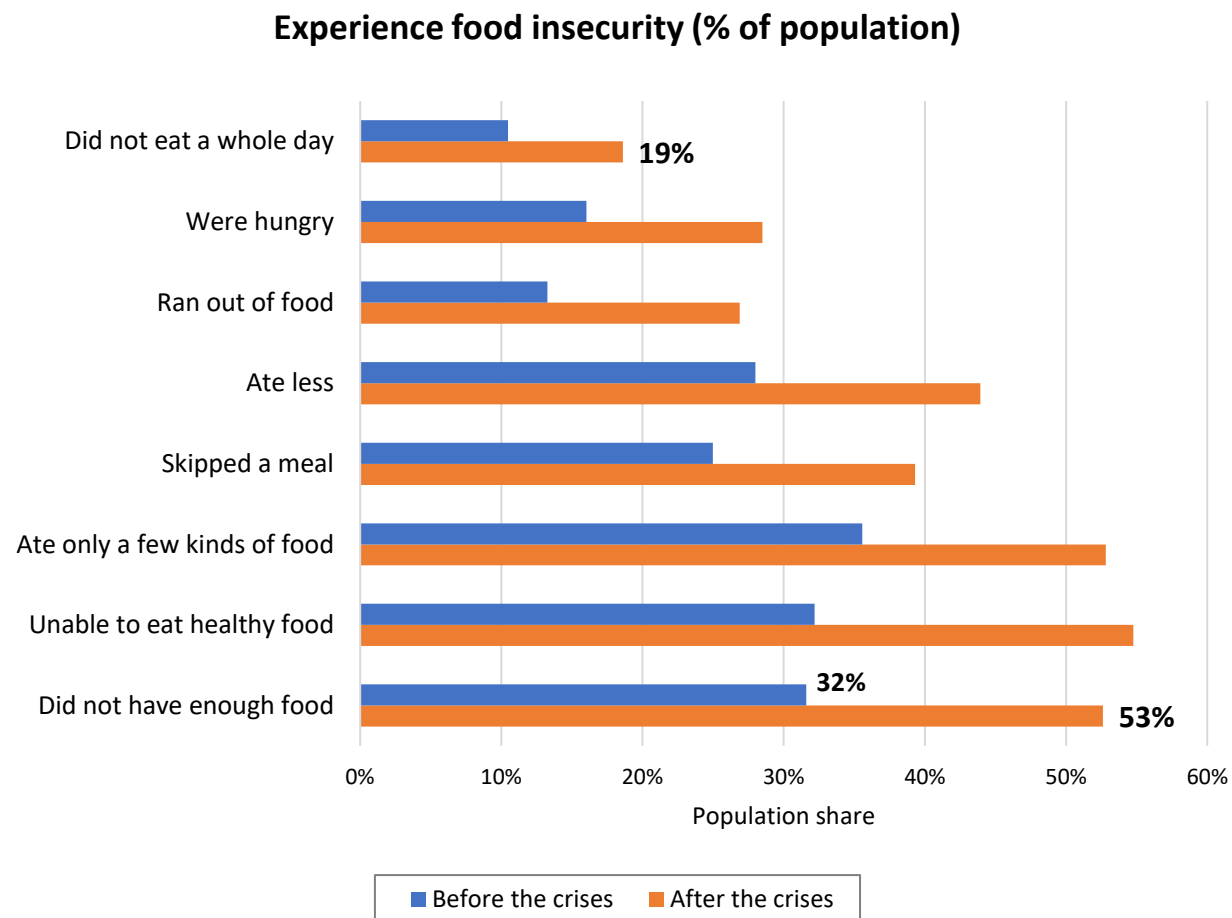
Productive assets were lost in disaster affected areas.

One in five households could not access routine health care.





# Experience of food insecurity dramatically increased since the crises



Source: Tonga HFPS R1 (April-May, 2022)

- Since the crises, 53% of people had an experience of not having enough food—a lot higher than the pre-crisis level (32%).
- Nearly 20% of people had an experience of a whole day without eating since the crises. Other food insecurity experiences prevailed as well.
- Most indicators are higher in Ha'apai and Eua and/or among the poorer population.

# The disaster shock has kept many people in food insecurity

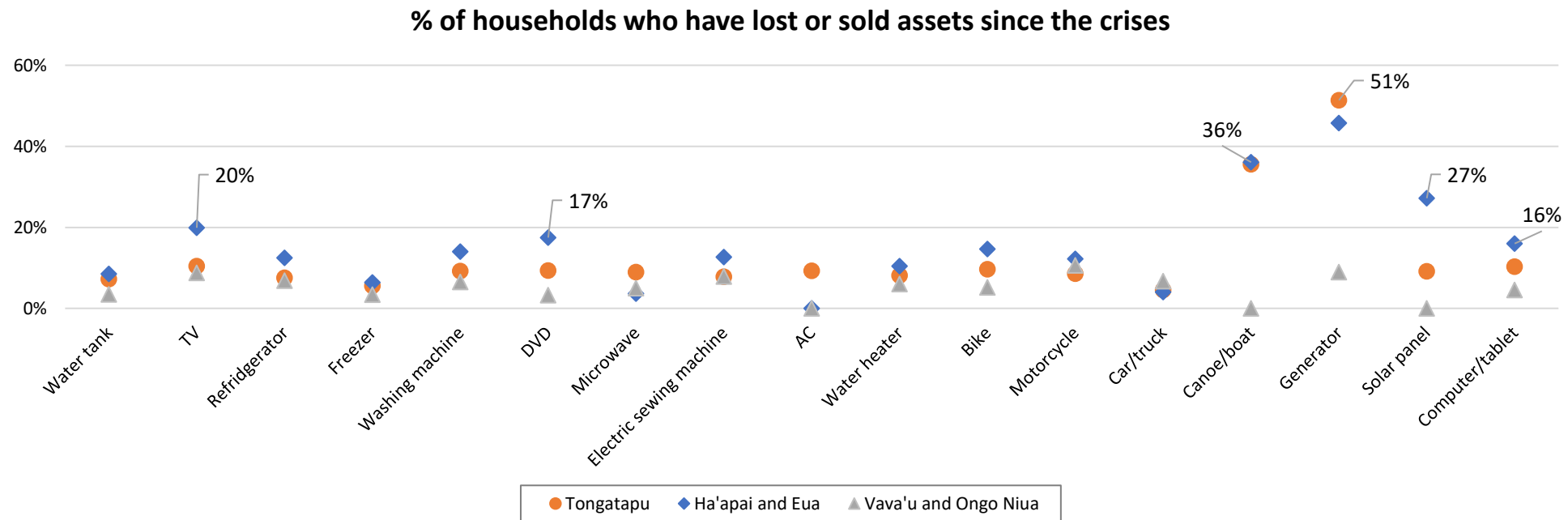


- Moderate and severe food insecurity are measured by applying the Food Insecurity Experience Scale (FIES) method, established by the FAO.\*
- The proportion of the population with moderate food insecurity went up from 20% to 35% after the crises.
  - Food insecurity is particularly prevalent in Ha'apai and Eua (45%) and poorer populations (44% in the bottom 20 group).
- Severe food insecurity more than doubled (4% to 10%)—particularly high among the poorest group (18%).

\* Moderate food insecurity is typically associated with the inability to regularly eat healthy, balanced diets. Severe food insecurity implies a high probability of reduced food intake and therefore can lead to more severe forms of undernutrition, including hunger.

# Loss of key household assets, such as canoes and boats, could have seriously impacted livelihood of the households

- Since the crises, a large proportion of households in Tongatapu, Ha'apai and Eua have lost (or sold) the following assets: generator, canoe/boat, solar panel, TV, and computer/tablet.
- Poorer households were more likely to lose canoes/boats (for example, a third of the bottom 20 group), which must have impacted their livelihood.

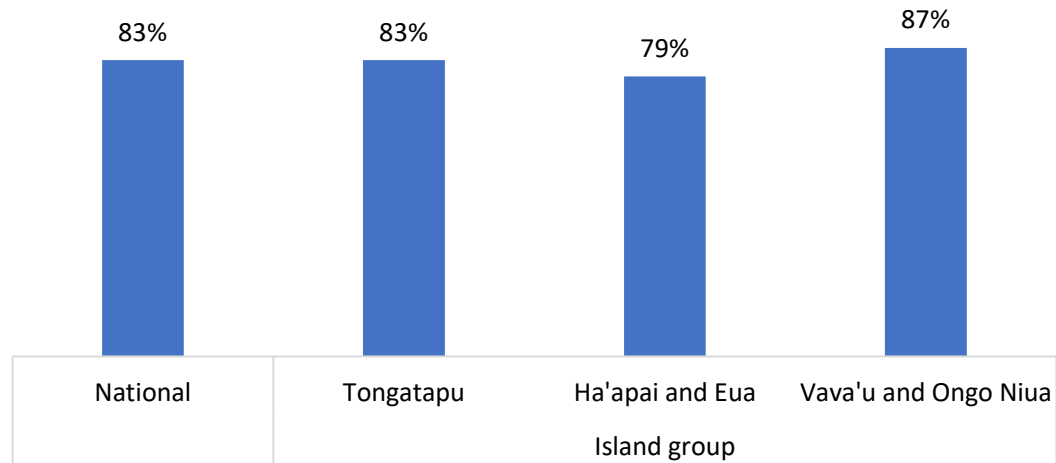


Source: Tonga HFPS R1 (April-May, 2022)



# One in five households could not access routine care after the crises

**% of households who accessed routine care when needed**



Source: Tonga HFPS R1 (April-May, 2022)

- The majority of households were able to access urgent care (94%) after the crises, though nearly one in five households could not access routine care when needed.
- Common reasons for not being able to access care were travel restrictions due to the lockdown and the unavailability of services.
- There is no difference observed in access to urgent/routine care by island groups, wealth quintiles, or sex of household heads.

# Preparedness and coping strategies

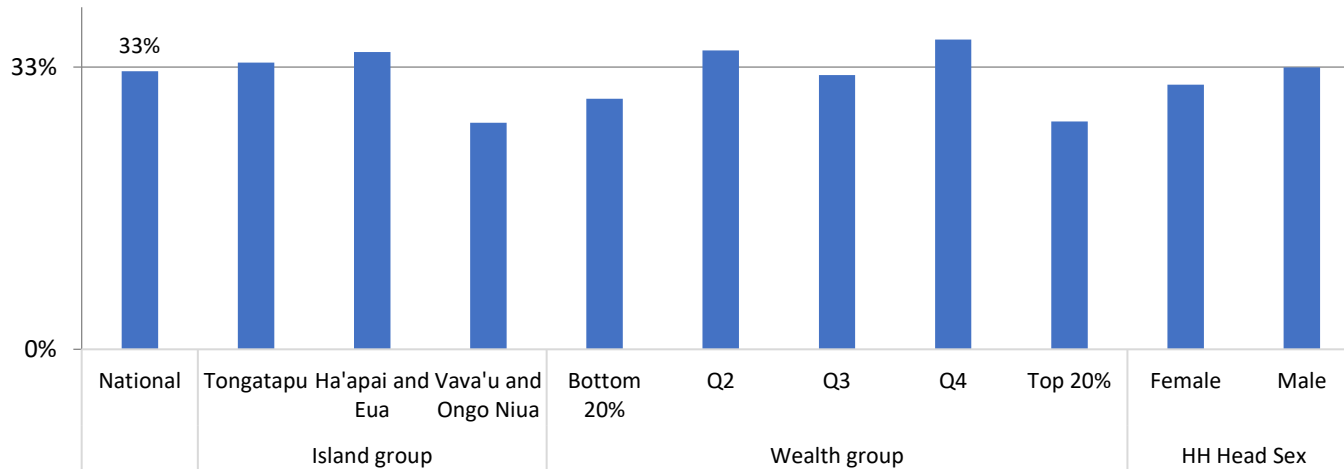
With limited preparedness against shocks, many households had to spend from savings and reduce consumption.



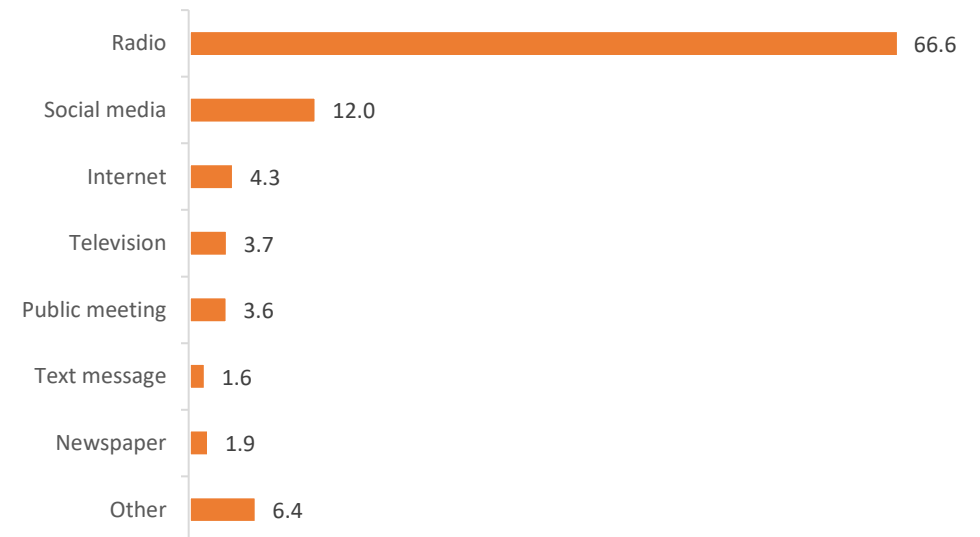
# One third of households received an early warning prior to the tsunami

- About one third of households received a warning through an early warning system prior to the tsunami.
- 43% of households are receiving current updates about what is being done to help the affected population. No clear difference by household head sex, island groups, and wealth groups.
- Two thirds of households rely on radio as the main source of information, followed by social media (12%), and television, Internet, and public meetings (4% each).

% of households receiving warning prior to the tsunami

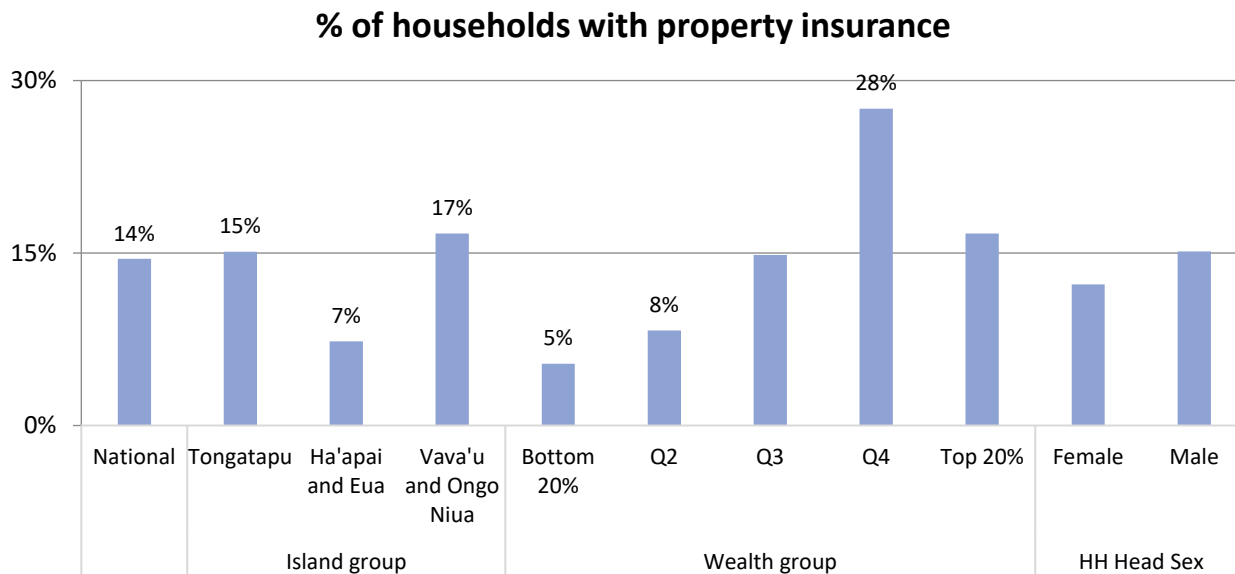


Main source of information (% of households)





# Property insurance is not common at all in the country

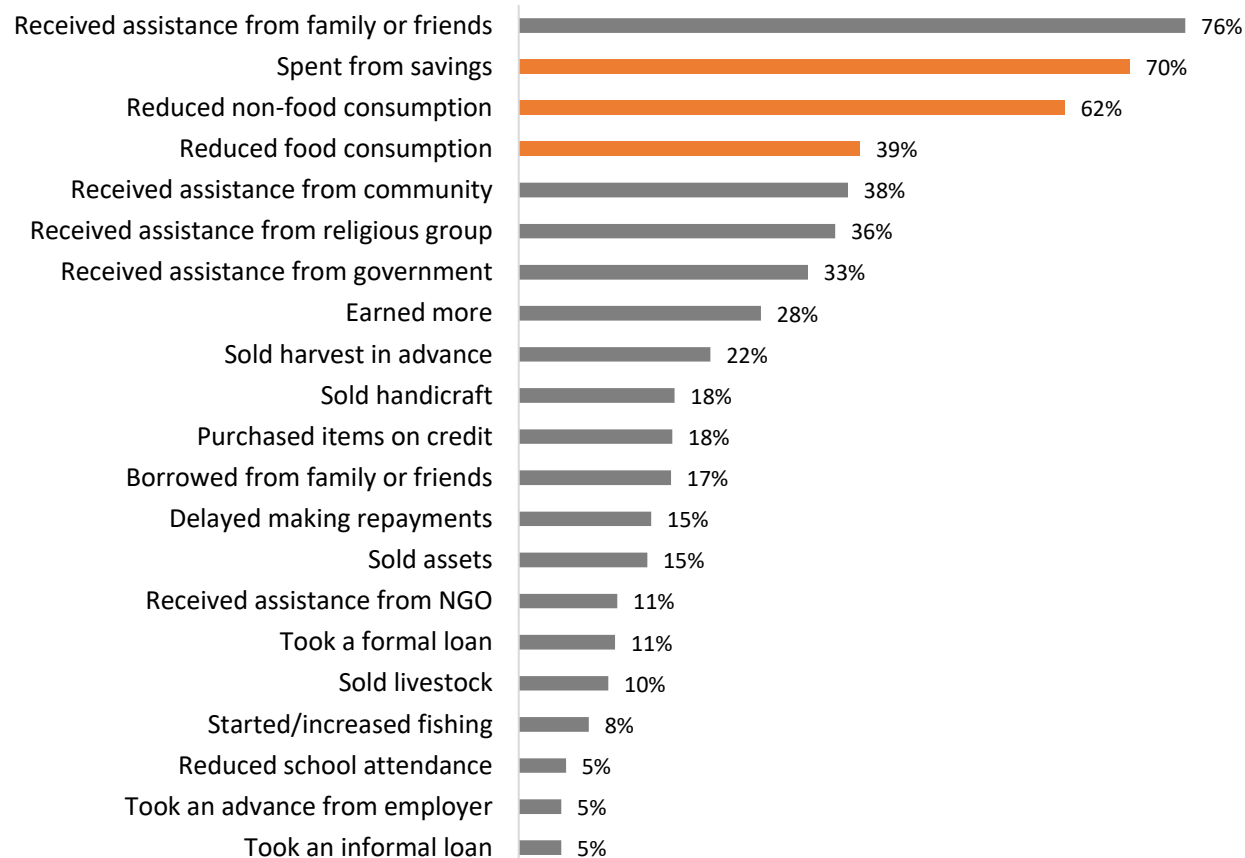


Source: Tonga HFPS R1 (April-May, 2022)

- Only 14% of households had property insurance—less common in Ha'apai and Eua and among the poorer households. Common reasons for not having property insurance are:
  - Did not think it was necessary 28%
  - Not familiar with it 26%
  - Too expensive 24%
- Among those with property insurance, 64% are expecting to receive a payout from the insurance as a result of the volcanic eruption and tsunami.
- Among those who do not expect insurance payout, 40% said eruption/tsunami is not covered by the insurance and 18% don't know how to claim.

# Unsustainable coping strategies were common, particularly among poorer households

Coping strategies (% of households)



- Many households received assistance from family or friends (76%), community (38%), religious groups (36%), and government (33%).
  - There is no difference in the likelihood of households' receiving government assistance by their wealth levels.
- On the other hand, **unsustainable coping strategies were common, such as spending from savings (70%), reducing non-food consumption (62%) and food consumption (39%).**
- Poorer households were more likely to reduce food consumption: 50% in the bottom 20 group vs 32% in the top 20 group.



## Acknowledgements and further information

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## References

[Tonga High Frequency Phone Survey of Households Round 1: microdata \(Pacific Data Hub\)](#)

[World Bank COVID-19 Household Monitoring Dashboard](#)



# Annex: Survey Methods

- The Round 1 Tonga HFPS was collected from 2,527 households between April 12 and May 7, 2022. The implementation was led by Sistemas Integrales with local support from 3SMT.
- The sample was drawn based on a Random Digit Dialing (RDD) method, covering all the cell phones in the country.
- The sample is weighted to adjust for population distributions across island groups and other socio-economic characteristics, including the wealth index.
- The wealth distribution in the HFPS is overall similar to that in the Tonga Multiple Indicator Cluster Survey (MICS) 2019, except for the underrepresentation of the bottom 10 percentile and the top 20 percentile groups.

**Number of interviewed households  
by island group**

	# of HHs
Tongatapu	2,148
Vava'u	148
Ha'apai	123
Eua	96
Ongo Niua	12
Total	2,527

**Comparison of wealth distributions in HFPS and MICS**

