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Australian Centre for International Agricultural Research

COVID-19 in the Indo-Pacific: Gendered risks, impact and response



COVID-19 in the Indo-Pacific

Gendered risks, impact and response

Sara E Davies Robin E RobertsEditors



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Foreword

The COVID-19 pandemic was a global health and economic crisis that disrupted the lives and livelihoods of diverse communities around the world and will continue to have impacts for many years to come. Beyond the health impacts of the pandemic, the pandemic negatively impacted food production and supply chains in many parts of the world. The affected population included almost 500 million smallholder farmers who produce food for half of the world's population, many of whom are among the 2.7 billion people globally living on less than \$2 per day.

The Australian Centre for International Agricultural Research (ACIAR) is mandated under the ACIAR Act (1982) to work with partners across the Indo-Pacific region to generate the knowledge and technologies that underpin improvements in agricultural productivity, sustainability and food systems resilience. We do this by funding, brokering and managing research partnerships for the benefit of partner countries and Australia.

ACIAR supported partners from Griffith University to train local research collaborators in the Philippines, Myanmar and Papua New Guinea to conduct surveys and face-to-face interviews with women to understand the pandemic-related public health measures implemented in each country and the effects of these measures on the food insecurity and economic hardship experiences of women in these countries.

This report presents the capacity building outcomes of this project, as well as the research findings in the area of women's food insecurity and their experiences of official communication and information availability during the pandemic. It is the second of 3 'deeper dive' assessments of research-for-development issues related to the CVOID-19 pandemic, which are the conclusion of a three-stage assessment process that began with ACIAR Technical Report 95 Food systems security, resilience and emerging risks in the Indo-Pacific in the context of COVID-19: a rapid assessment.

This technical report highlights the differing experiences of women during a health crisis and the importance of considering the gendered nature of effects of pandemic response measures when implementing policies. It also provides recommendations to ACIAR for further research and activities in the region to improve the resilience of these communities in the face of other such shocks in the future.

Wendy Umberger Chief Executive Officer

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The sub-contracted institutions included:

- · National Young Women's Christian Association, Myanmar
- University of the Philippines Visayas Foundation, the Philippines
- · Hauskuk Initiative Association, Papua New Guinea
- · University of Hong Kong, Hong Kong.

The in-country lead researchers were:

- · Zin Mar Oo and Yadanar, Myanmar
- Claire Samantha Juanico and Darlene Joy Calsado, the Philippines
- · Naomi Woyengu, Papua New Guinea.

The research project team would like to thank those who gave their time freely during the research activities: the in-country researchers, farmers, traders, market stall vendors, and public service officers involved in agriculture trade in Myanmar, the Philippines and Papua New Guinea.

Finally, for their advice and support throughout the project, we extend our appreciation and acknowledgement to:

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- Clare Wenham, London School of Economics and Political Science, United Kingdom.

Acronyms and abbreviations

FIES	Food Insecurity Experience Scale	
MMK	Myanmar kyat	
USD	United States dollar	
PHP	Philippine peso	
PPE	Personal protective equipment	
YWCA	Young Women's Christian Association	
DA	Department of Agriculture (Philippines)	
COMSCA	Community-Managed Savings and Credit Association	
СООР	Credit Cooperative	

Summary



Summary

This technical report presents the summary and outcomes of the *COVID-19* gendered risks, impact response in the Indo-Pacific: Rapid research and policy guidance (LS/2020/203) project. The Australian Centre for International Agricultural Research (ACIAR) funded the project.

In 2021 and 2022, the project looked at the risks related to economic hardship and food insecurity that women experienced during the first and second years of the pandemic in:

- Myanmar
- · the Philippines
- · Papua New Guinea.

The project undertook a quantitative and a qualitative study at the same time:

- Modified Food Insecurity Experience Scale (FIES) surveys to capture an experience-based metric of the national food insecurity situation in Myanmar and the Philippines.
- Face-to-face data collection approach to examine gendered impacts within the 3 focus countries on women in the small-scale agriculture industries affected by COVID-19 public health interventions and the pandemic itself.

This report collated and reviewed outputs from 7 small activities with inputs from 14 reports.

The findings and recommendations from this project will contribute to broader development outcomes. It will inform ACIAR in the design of longer-term research and development programs to reduce poverty and improve many livelihoods in the Indo-Pacific region.

Insights from rapid research study

The rapid research study was designed as a 'deep dive' to understand:

- the diverse experiences of low-income women working in the agricultural sector across 3 countries experiencing the pandemic
- public health interventions at different phases.

This approach included rapid surveys and close engagement with local researchers who had strong connections with local communities.

Insights from the research experience and impact of the pandemic include evidence that:

- food rationing was already present before the crisis hit
- financing alternatives for women, especially low-interest loans, were a challenge
- there was a lack of gender-specific access to affordable crop insurance and training to use on-farm equipment
- women could not access free personal protective equipment (PPE) and inkind relief assistance for market stall operators
- access to vital information during a crisis was difficult
- there was a lack of communication, clarity, and inclusion pathways for rapid welfare – especially access to staple foods and cash.

Insights from the food insecurity experience scale surveys – Myanmar and the Philippines

- Increased food insecurity was identified in both countries during the 2 studied periods during the pandemic.
- There was evidence of food insecurity in rural and urban areas in both countries.
- Food insecurity was already higher in rural areas than in urban areas in both countries, but the gap worsened during the pandemic.
- The COVID-19 pandemic was responsible for increased food insecurity experiences.
- During the height of the pandemic, a high proportion of respondents blamed COVID-19 for both less severe and severe food insecurity indicators.
- Gaps in food insecurity levels between women and men in Myanmar rose during the pandemic compared with before the pandemic.
- Food insecurity levels for women in the Philippines during the pandemic were significantly higher than for men.

Key research and impact lessons

- Local networks of women are vital for conducting this type of research but time is needed to train and co-design approaches, collect data, and conduct consistent thematic analysis.
- Local women farmers and vendors wanted to share their story and gave suggestions for their recovery and resilience.

- The women identified barriers in accessing the minimal social welfare available. Awareness of gendered experiences during a crisis is vital to identify the barriers to accessing welfare support.
- Return to community is vital to learn about recovery but there is a limit to data collection without it being extractive. Next step would be to design and implement an action-based research project or use a 'thinking and working politically' community-ofpractice study.
- Consideration should be given to engaging with men as well as women to ensure a holistic study of gendered impacts during crises. This was especially noted in Papua New Guinea.
- Farmers were not protected from food insecurity. Food prices and food staples quickly increased. Where information was missing, rumours affected livestock and produce. Yields were destroyed and livestock were killed expecting risk (affecting income and livelihood). Farmers could at first cushion the food insecurity impact of COVID-19 by producing for their own consumption. In the longer term the lack of markets for products and a lower-level of cash crop production (because of needing to feed themselves) led to much worse outcomes for rural dwellers than urban dwellers (confirmed in interviews and FIES COVID-19 surveys).

- · Access to information is needed. People predicted risk based on past experiences. To describe behaviours as working on 'misinformation' lacks nuance. It appears rumours did not start on social media. They came from past experiences of disasters and emergencies (for example, Avian flu, African Swine Fever, pest infestations). There is a need to follow up after emergencies to find where communication broke down. Consistent and accurate information may not travel into rural communities. Failing to followup risk communication after crisis at local community level has consequences for the next emergency.
- Diversify information sources. During the health emergency, the local health sector was not the only trusted information source for areas like animal health, farming or vending. These sectors were needed for public health measures.

- But cohorts did not say they sought advice or information from the health sector. The farmers and vendors sought information to do with their business even though it had public health implications. Public health interventions did not reduce risk taking behaviour.
- From a broader perspective, the insights
 of this rapid research study outline
 opportunities and future research
 approaches to mitigate harm caused
 by dynamic disruptions at individual,
 household, and community levels. This
 report makes recommendations for
 more areas of inquiry.

Recommendations

Recommendations to inform ACIAR research and development activities linked to insights from this project are summarised below.

R1	Examine the feasibility of cash assistance schemes during a crisis response
R2	Undertake a review of financial loan schemes available to small income farmers in a post COVID-19 recovery
R3	Lead an annual women's agriculture finance forum that seeks to support understanding of financial security for women in agriculture ventures across the Indo-Pacific
R4	Revise and develop best practice material to support disaster communications in rural areas and among sectors
R5	Examine how One Health-focused communications, through radio, web, and social media platforms can get information out in a more timely and accurate manner
R6	Introduce an annual women in agriculture digital economy showcase
R7	Examine the feasibility of an ACIAR gender One Health research network group to inform training and development
R8	Develop ACIAR training partnerships that develop skilled in-country facilitators
R9	Examine how regional research and training through online platforms can connect stakeholders in rural and remote areas

Background and project planning



Background and project planning

The project was commissioned to analyse the gendered impacts of COVID-19 on women who were self-employed in the food sector in the Indo-Pacific region. There was a specific focus on Myanmar, Papua New Guinea and the Philippines. These are 3 countries that faced significant food security challenges before COVID-19 and have a high representation of self-employed women.

The study aimed to identify and understand the specific gendered impacts of COVID-19 on food and income security for women already in economic insecurity across the 3 countries. This would identify the specific risk of economic hardship and food insecurity that women experienced during the first year of the pandemic (January 2020 to January 2021).

Through capturing productive and reproductive labour - such as care giving and domestic work - the project focused on how women farmers and market vendors managed income and food security while impacted by public health interventions such as:

- lockdowns
- · school closures
- reduced transport.

The project undertook 2 studies at the same time:

- a quantitative survey
- qualitative interviews and focus group discussions.

Quantitative study 1.1

The first investigation was a pilot study using the United Nations Food and Agriculture Organization Food Insecurity Experience Survey (FIES) in Myanmar and the Philippines. Participants completed the survey using a computer-assisted process.

The Voices of the Hungry program from the United Nations Food and Agriculture Organization developed the FIES survey. It is an experiencebased metric of food insecurity severity and captures people's responses to questions about their experiences in situations where access to food is difficult.

The Voices of the Hungry program developed evidence-based protocols to examine food insecurity rates across countries used in this study. In 2020, an adaptation of the FIES for COVID-19 was created to do rapid food insecurity research during the pandemic. This project used the FIES COVID-19 survey instrument.

Qualitative study 1.2

The second study conducted 'deep dives' using interviews and focus group methods. The deep dives examined gendered impacts on women in Myanmar, the Philippines and Papua New Guinea who were affected by:

- COVID-19 public health interventions
- · the pandemic itself.

In cooperation with women-led research teams in each country, this study focused on the immediate impacts that small-scale women farmers and women vendors experienced during the second half of 2020 and first half of 2021. Interviews were conducted:

- in August 2021 in Myanmar and Papua New Guinea
- in September 2021 in the Philippines.

There were unexpected delays in data collection since all 3 countries were affected by the COVID-19 wave during our data collection period, shown in Figure 3.1.

With rising infections from May 2021, the decision was made to postpone data collection until peak infection rates declined. In the Philippines, data collection was limited to Western Visayas due to ongoing travel restrictions. In Myanmar, the military coup which began on 1 February 2021 led to delays in travel for safety reasons. In Papua New Guinea, collecting data was affected by:

 different rates of COVID-19 infections in different regions

· weather conditions affecting travel.

When the team had finished data collection from Phase 1, they presented their findings at a webinar co-sponsored by Griffith University and ACIAR on 8 December 2021. The team started to prepare the final report, examining what women farmers and vendors identified, including:

- the impact of the lockdowns in the areas of economic security
- care responsibilities
- · diversification of income.

The 2021 FIES COVID-19 survey in Myanmar and the Philippines also found some women in rural locations experienced slight rises in food insecurity.

A follow-up Phase 2 study with original participants in March and April 2022 focused on their experiences of recovery since the first interviews. In 2022, there was:

- a second round of interviews across the 3 countries
- repeated national FIES COVID-19 surveys in Myanmar and the Philippines.

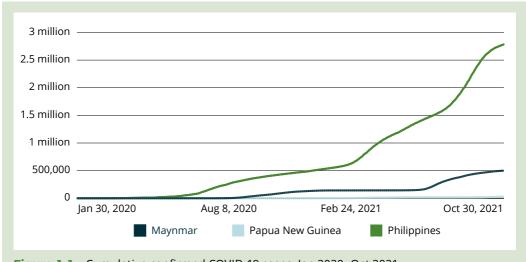


Figure 1.1 Cumulative confirmed COVID-19 cases, Jan 2020-Oct 2021

Note: Due to limited testing, the number of confirmed cases is lower than the true number of infections Source: Johns Hopkins University CSSE COVID-19 Data

2 Objectives



The overall aim of the project was to develop an evidence-based approach that identified the specific risk of economic hardship and food insecurity women experienced during the first and second year of the COVID-19 pandemic in:

- Myanmar
- · the Philippines
- · Papua New Guinea.

Within this broader goal, the 2 highlevel objectives of the project were to:

- 1. identify and understand the specific gendered impacts of the COVID-19 response on food security and socio-economic outcomes for women across the 3 countries
- 2. use these insights to discover opportunities and design approaches that will begin to mitigate the harms at the individual, household, and community levels that were caused by COVID-19.

Additionally, the project aimed to improve gender equity and the empowerment of women and girls in line with ACIAR strategic objectives.

There are 3 main sections to this report:

- 1. A brief background on the method and research design.
- 2. A short summary of the key findings across the 3 countries that show how rapidly women experienced food and income insecurity at the start of the crisis, sometimes before intense COVID-19 waves reached their community.
- 3. Research and impact lessons and recommendations to address livelihood improvements for women after the pandemic.

The study in each country was subcontracted to an organisation and facilitated by a lead researcher with support from a broader in-country team (see Figure 4.1).

- Myanmar Young Women's Christian Association Myanmar
- The Philippines University of the Philippines Visayas
- Papua New Guinea Hauskuk Initiative, Madang

Advice in the early and mid-stages of the project was received from the London School of Economics and Political Science, Simon Fraser University, and University of Hong Kong.



Figure 2.1 Research team members

Source: Author's image

3 Method and research design



Method and research design

The study used a mixed-methods approach to capture detailed information during a 2 year period in 2021 and 2022. This structured approach included:

- national surveys
- · traditional field research through interviewing
- · capacity building with the incountry research teams from Myanmar, the Philippines, and Papua New Guinea.

3.1 Research studies

- National FIES COVID-19 surveys Myanmar and the Philippines in 2021 and 2022.
- Semi-structured interviews/focus group discussions - Myanmar, the Philippines and Papua New Guinea.

Capacity building 3.2

Griffith University led bespoke online training and development workshops for all in-country researchers. This training helped the researchers understand why they should employ a systematic approach for the study design, data collection and outputs. The researchers gained a micro-credential as a record of their achievement.

Weekly/fortnightly meetings brought people together for planning and research across all countries and allowed two-way communication between the project teams.

Lead researchers presented the results of Phase 1 (Gendered risks, impact and response in the Indo-Pacific) via an online webinar hosted by the Griffith Asia Institute. The researchers were guided to prepare and present and supported to do practice sessions before the formal online event (see Figure 3.1).



Figure 3.1 Online research webinar

Source: Author's image

3.3 Key informant interviews and focus group discussions - Myanmar, Papua New Guinea, the **Philippines**

To include the voices of local women in semi-rural and rural locations affected by the pandemic, the team used semistructured interviews and focus group discussions. These interviews enabled reflection and understanding through shared conversation.

In consultation with partner researchers in each country, the decision was made to conduct:

- semi-structured interviews with women in Myanmar and the Philippines
- · focus group discussions with women in groups of 6 to 10 participants in Papua New Guinea.

The first phase captured information and experiences from 183 women (93 farmers and 90 market vendors) from key study sites in the 3 countries (see Figures 3.2, 3.3, 3.4):

- Myanmar
 - Mandalay Kyauk Se and Patheingyi
 - Ayeyarwaddy Pathein and Pyarpon
- · The Philippines
 - Antique Hamtic and Sibalom
 - Iloilo Cabatuan and Dumangas
- · Papua New Guinea
 - Alotau Milne Bay
 - Kokopo East New Britain
 - Madang
 - · Goroko Eastern Highland

Having focus group discussions in Papua New Guinea ensured:

- efficient collection of data from farmers who would travel to markets to sell produce for a short time
- market vendors' acceptance to discuss the issues collectively.

Because the locations were remote, that research teams had to use their time efficiently in each place.

Semi-structured interviews (with an interviewee, interviewer, and a notetaker) were chosen for Myanmar and the Philippines. In Myanmar, given the political and security situation, it was determined that women would prefer discreet individual interviews. In the Philippines, focus group discussions could not happen under social distancing rules. Like Myanmar, local partners in the Philippines also said women would rather do individual interviews.

Digital interview methods could not be used in any of the study locations because of their remoteness and participants' low incomes. Mobile and telephone interviews could also not happen in Papua New Guinea and Myanmar. All engagements were designed to be sensitive to the time and place needs of participants including:

- existing care responsibilities
- · income priorities
- health and physical safety priorities.

The proposed interview sample size was 50 participants per country (25 farmers and 25 market stall holders), with an estimated 150 completed interviews. In the end, the project secured 183 interviews (93 farmers and 90 market vendors) across the 3 countries. All interviewees self-identified as women.

Civil society and academic researchers handled contact with farmers and market stall holders in the locations within each country. They used existing relationships to make contact with interviewees.

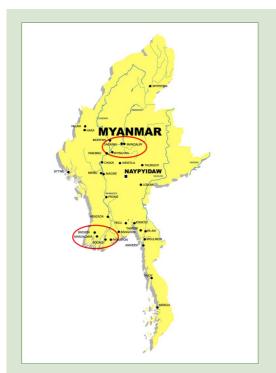


Figure 3.2 Myanmar study sites

Source: vector.com

PHILIPPINES

Figure 3.3 The Philippines study sites

Source: vector.com

APUA NEW GUINEA PORT MORES

Figure 3.4 Papua New Guinea study sites

Source: vector.com

Griffith University gave the study and all associated survey instruments ethics approval in April 2021 (GU references 2021/147, 2021/148 and 2021/149). The research instruments included semistructured interview checklists and focus group moderators' outlines. These instruments were structured to find out how women farmers and market stall holders viewed the health crisis affecting:

- · the affordability of food
- household duties and chores
- income
- decision-making autonomy.

The instruments were designed to understand how women perceived the crisis while managing competing social, economic, and political impacts caused by the crisis on their small enterprises.

As a feminist research project, the emphasis was on partnerships with local women researchers and local civil society organisations located in each of the 3 countries.

The project drew together a team of:

- cross-institutional multidisciplinary (agriculture, health economy, global health, and political science) researchers
- civil society practitioners from research, data-collection, and community backgrounds across multiple locations (Australia, Myanmar, Papua New Guinea, and the Philippines, in consultation with research partners in Canada, Hong Kong and the United Kingdom).

The first phase of the research project was completed within a 12-month period. In this time the project team co-designed the research instruments. All researchers viewed the instruments and discussed their structure, themes, and the translation to local language over 3 one-hour workshops in each country.

The next step was to do training to prepare for the field research, as presented in section 5.2. In the return visits for Phase 2 data collection in April and May 2022, the decision was made to alter the interview and focus group instruments to pursue how women viewed the pace of:

- · economic recovery
- food insecurity
- · access to vaccines.

This study is a starting point to improve local-level understanding about COVID-19's impact on women in agriculture, especially small-scale farmers and market stall holders. The report does not attempt to test causal relationships between COVID-19 pandemic surges and socio-economic impacts across the 3 countries.

The project's purpose was to reach out to small-scale women farmers and market stall holders to find and document the **differentiated** and **dual** impacts of the pandemic on them and their families. The project sought information on:

- income
- access to food
- increased labour (productive) and care (reproductive)
- · decision-making capacities.

Through these conversations the project also learnt about participants' additional needs and concerns, shown in this report. The research team believe the study was timely. The women interviewees were ready to share their stories at such a length (average interview time: 55 minutes) because the participants trusted the local researchers, who were close with their communities.

All interviewees self-identified as women. They were recruited through the local research team's existing relationships in each country with:

- women's community associations
- · women's farmer groups.

The project used feminist research methodological principles to prioritise co-design and collaboration through all stages of the research, data collection, and data analysis. Local women researchers interviewed women in their local areas (there were 2 male notetakers in Papua New Guinea). They could therefore build trust and rapport with the participants, who were often experiencing great stress and exhaustion.

It was important that the study centred the women's own voices to get at 'the subjugated knowledge of the diversity of women's realities that often lie hidden and unarticulated' (Hesse-Biber 2007). At all times, interviews and focus groups were designed to be time- and location-sensitive to the participants' existing:

- care and work responsibilities
- time priorities
- safety.

The team is immensely grateful to the women who shared their experiences during this period of high stress.

3.4 Online training and development workshops

The way data was collected sought to empower both the participants and the researchers who led the data collection for this project. This research approach also helped to develop in-country researcher capacity across 3 partner countries.

The project team members co-designed the research instruments. In 3 one-hour workshops in each country, all research partners viewed the instruments and discussed their:

- structure
- themes
- translation to local language

Six training modules were developed and delivered online to facilitate the research field work completion, including:

- qualitative research methods
- interviewing
- · focus group discussions
- gender analysis
- thematic analysis.

These special modules were free and easy to access (online and to download) to all local research teams. Follow-up training and discussion groups were held online with in-country researchers to:

- address outstanding questions from the modules
- test their knowledge
- address context-specific questions
- ensure their competency in data collection and compiling reports.

The training was delivered across 6 weeks. It combined self-paced and online learning sessions so researchers could engage with the content alone and as a group.

Not long after the training in data collection methods began, a military coup started in Myanmar in early February 2021. There was a one-month pause with the Myanmar research team. During this time the lead country researcher stayed in contact with the local team using WhatsApp to monitor their safety.

The pandemic wave continued to rise in the Philippines, then the COVID-19 Delta wave intensified across all 3 countries. Two of the Philippines team members contracted COVID-19 and another was deployed to help with the new testing program in Iloilo. The decision was made in May 2021 to hire more local researchers to assist with data collection. This would reduce needless travel and exposure risk.

The training in data collection grew to include more research assistants in each country (4 in the Philippines, 6 in Myanmar, and 15 in Papua New Guinea). This experience was invaluable for in-country team dynamics (getting to know each other). However, it required innovative ways to manage remote access challenges in each place. Many participants used mobile phones to access the online training sessions.

Food insecurity 3.5 experience scale COVID-19 survey - Myanmar and the **Philippines**

A modified FIES instrument was developed and used to conduct surveys in Myanmar and the Philippines in 2021 and 2022. This was to capture food insecurity experiences in relation to the COVID-19 pandemic, broken down by gender.

This modified survey was based on the extension of the FIES survey to study the impacts of COVID-19 proposed by the United Nations Food and Agriculture Organisation (FAO 2020). Griffith University gave the survey formal ethical review approval (GU 2021/156) in April 2021.

The survey instrument included:

- a set of categorical demographic and socio-economic questions (including, for example, questions relating to gender, location and education levels)
- · a set of experiential questions to measure levels of food insecurity severity
- a set of questions to find links between food insecurity experiences and COVID-19.

The analysis of the FIES data was based on applying an Item Response Theory model.

Using Item Response Theory in this case rests on assuming that:

- i. for each respondent, the severity score of each of the observed variables (food insecurity experiences) are all on the same one-dimensional scale as the overall food insecurity experience of the respondent
- ii. higher levels of overall food insecurity are associated with a higher probability of positive responses on observed variables.

The Rasch Model (Rasch 1960) was the parameter logistic model used to estimate food insecurity experience levels. Rasch says that the probability of a respondent reporting an experience is a logistic function of the distance between:

- the position reported by the respondent
- · the position of the item on the severity scale.

This is described by the equation: $Prob(xh,i=1||\theta h,\beta i)=e\theta h-\beta i1+e\theta h-\beta i$Probxh,i=1 θ h, β i= e θ h- β i1+ e θ h- β i

Where:

 $xh_ixh_i = response given by$ respondent h to item i (yes or no)

 $\beta i\beta i$ = set of items within the model (in this case the eight FIES questions)

 $\theta h\theta h$ = food inexperience severity condition of respondent h

Food insecurity experiences were measured using a set of 8 experiential questions relating to increasing severe levels of food insecurity. The respondents were asked to answer 'yes' or 'no' to whether, over the past 12-month period, they had a particular food insecurity experience. Below is a list of the questions.

During the last 12 months:

 was there a time when you were worried you would not have enough food to eat because of a lack of money or other resources? (Coded as WORRIED)

- was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources? (Coded as HEALTHY)
- was there a time when you ate only a few kinds of foods because of a lack of money or other resources? (Coded as FEWFOOD)
- was there a time when you had to skip a meal because there was not enough money or other resources to get food? (Coded as SKIPPED)
- was there a time when you ate less than you thought you should because of a lack of money or other resources? (Coded as ATELESS)
- was there a time when your household ran out of food because of a lack of money or other resources? (Coded as RANOUT)
- was there a time when you were hungry but did not eat because there was not enough money or other resources for food? (Coded as HUNGRY)
- was there a time when you went without eating for a whole day because of a lack of money or other resources? (Coded as WHLDAY)

Responses to each question were coded as:

- 1 for yes
- 0 for no.

Summing the responses for the 8 questions gives a raw score between 0 and 8 for each respondent. This raw score can be considered a sufficient basis to determine the latent food insecurity experience level of the respondent. The FIES has been statistically validated against the assumptions of the Item Response Theory based Rasch measurement model (FAO 2016; Rasch 1960).

Food insecurity levels for each respondent were noted against the country-specific cut offs for mild and moderate food insecurity levels defined by the Voices of the Hungry project. In the case of Myanmar and the Philippines this provides 3 levels of food insecurity:

- at least Mild Mild+ (raw score of 2 or more)
- ii. at least Moderate *Moderate*+ (raw score of 4 or more)
- iii. Severe (raw score of 7 or 8).

Links between food insecurity experiences and COVID-19 were found through a series of extra questions added to the standard FIES questionnaire. If the respondent answered 'yes' to any of the 8 standard food insecurity experience questions, they were then asked if they thought that COVID-19 was the reason for them having the food insecurity experience (FAO 2020). The supplementary questions were coded

- 1 for yes
- 0 for no.

In Myanmar this detail is captured by state and in the Philippines by region. In each country the sample was designed to be:

- nationally representative
- · gender balanced
- composed of urban and rural locations.

In 2021 the survey was administered between 14 and 23 June in Myanmar and between 16 and 25 June in the Philippines. The 2022 survey was administered between 23 May and 3 June in both countries.

In each year, 1000 people in each country were surveyed, using a 12-month recall reference period relating to a respondent's food insecurity experience. Respondents completed the survey through computerassisted telephone interviewing. This allowed fast data collection, with the data entered as the interviewer conducted the survey.

The research team applied to the Voices of the Hungry Program for access to previous FIES datasets for 2020 for Myanmar and for 2014 to 2019 for the Philippines. Licences were granted. This gave the team an interpretative basis for the data from both surveys, and for an inter-temporal context. They chose these datasets because data were not available for 2020 in the Philippines nor before 2020 for Myanmar.

The available data have been analysed using the same methods that were used for the 2021 and 2022 surveys. Papua New Guinea was excluded from the survey because of poor mobile data coverage beyond the capital (less than 23% of the population) and limited mobile phone access by gender.

Key results and discussion



Key results and discussion

4.1 Phase 1: Rapid assessment

Table 4.1 shows the rapid assessment summary based on thematic analysis of the interviews with women in August and September 2021. This presents the experiences of women who were asked to reflect on the first 12 months of the COVID-19 pandemic in each country. There were common themes across the 3 countries for women including:

- the need for rapid financing which placed them in high-risk credit situations
- difficulties in following inconsistent lockdown information which heightened physical insecurity
- · women had prepared in advance, but the duration of the situation constrained food and income access
- difficulty accessing government support and knowing if they were eligible for support.

Table 4.1 Common rapid assessment results, 3 locations – Phase 1

Farmers and Vendors	Farmers	Vendors
Misinformation about COVID-19 – how it spreads and public health measures required.	Loss of income due to inability to reach markets during lockdown (negative).	Loss of income due to inability to open usual hours.
Rapid financing was a huge problem. Access to cash reduced (practically) overnight.	Food rotting and pest infestations. Inability to capitalise on the next farming cycle.	Limited produce to sell and loss of income due to inability to open usual hours.
High dependence on short-term high-interest loans, loans from family, and prior savings.	Access to produce grown for eating but families had a very limited diet (for example, no meat, noodles or rice).	Women vendors reported more food rationing or meal skipping. Around 3 women vendors reported this for every one woman farmer.
The need for extra PPE was an added cost. No money or support was given to meet this cost.		Feelings of insecurity in markets due to uncertainty about hours, and whether they could be open. Higher risks of violence, theft, and bribery.
Nearly all respondents did not know about the small number of social welfare schemes available from their governments.		Cost of available produce rose so vendors had to sell at an even price or at a loss.
Education of children and access to income to continue their education (school fees, books, uniforms) was mentioned across all 3 countries.		

Source: Author's analysis

A summary of the welfare available in each location is in Appendix 9.1.

Table 4.2 shows some country-specific results, including:

- misinformation about the pandemic and how it infects individuals
- uncertainty around market opening times
- · physical risks to women vendors
- lack of diverse income opportunities.

Findings were consistent with other COVID-19 rapid gender assessments and confirmed the overwhelmingly harmful economic impact of the COVID-19 responses on women already close to the poverty line (Sanderson et al. 2020; United Nations Women 2021). As the pandemic continued, respondents referred to:

- food price rises
- · loss of income
- · inability to access welfare support
- entrenched economic hardship.

At the same time, women's work and care labour rose significantly. Unique to findings were women's descriptions of adopting risktaking behaviours and risk management activities across all 3 countries.

In terms of <u>risk management</u>, women prepared for the crisis before it arrived because they could observe that food costs were rising. There was a high number of women who sought loans to cover rising costs to their business. There was a smaller but significant number of women who tried to do business in breach of restrictions to earn income despite the risk of bribery and physical violence.

In addition to women rationing food before the crisis hit their province, they also engaged in <u>risk behaviours</u> to mitigate against food and income insecurity. These included:

- skipping meals
- going without PPE to afford food
- · taking out high-risk loans
- continuing to trade during lockdown despite risk of fines, infection, and physical insecurity (abuse and violence for trading during lockdown and walking home after dark).

All cohorts interviewed made decisions about food rationing whether COVID-19 was in the community or not.

4.1.1 Anticipation of rising costs

In all 3 countries farmers referred to the farming conditions being difficult and costly before the pandemic. The impacts of COVID-19 made this worse. They listed 2 interconnected difficulties:

- rising costs (seeds, fertiliser, and equipment)
- · weather impacts.

Poor harvests worsened the economic impact of higher input costs. In the Philippines, farmers noted that 'almost everyone has a poor harvest right now' (PHILO F13). This made the rise in the cost of farm inputs such as fertilisers, seedlings, pesticides, and labour even harder to navigate.

 Table 4.2
 Country specific results – Phase 1

Myanmar	Papua New Guinea	The Philippines
The locations were under stayat-home township rules during the interviews.	Most markets remained open but with reduced hours and reduced number of people allowed to access markets. This affected farmers and vendors alike.	Restricted mobility and transport increased costs of all staple foods for farmers and vendors.
Local YWCA (Young Women's Christian Association) members were crucial in facilitating access to participants for interviews.	Women farmers and vendors were adaptive and clever at finding produce to sell, like peanuts, clothes and donuts.	Women vendors reduced size of meals and number of meals.
The coup had an impact on food security and movement. Women reported they were uncertain whether COVID-19 or the coup was impacting on their situation.	Farmers had access to produce but still needed staple foods which were expensive. More vendors mentioned skipping meals and reducing meal sizes.	Many women vendors lived away from families in makeshift houses in market and sent money home and reduced their food intake to send food to family.
Farmers had access to crops for food. Cost of oil, eggs, garlic, rice and meat rose. Items were available but cost too much. Diets started to change in anticipation of shortages.	Salt, soap, sugar and oil were hard to get. On announcement of restricted movement, the prices for these items went up. Seed feed for chickens was hard to access and a higher cost. Betelnut prices went up as did their illicit sales.	Women vendors were affected due to transport suspensions – they had to walk to reach public market (took more time and effort).
Women farmers took on extra work in other farms to earn money.	Travelling to markets took (more) time and produce could spoil (reducing income).	High number of women (farmers and vendors) took out high interest loans from cooperatives and moneylenders (Bombays).
Flooding and snails were rising concerns before COVID-19.	Travelling to markets with produce or to open stalls was dangerous because of, for example, bribes, physical violence, and theft.	In Antique, people received welfare in 2020 (bags of rice and sardines) but no more after that. In Iloilo welfare and food packages were more available in 2020 and 2021.
Rising costs of seeds, fertiliser and gasoline (doubling of costs) – concerns for next crop and crops after that.	Access to reproductive products was difficult and expensive. Access to maternal healthcare was almost impossible during lockdown.	Smallholder farmers discussed having to compete against larger farmers for fertilisers and produce sales. This was difficult before COVID-19 and the pandemic made it worse.
Expressed need for rapid advice and support networks among women farmers.	Women farmers expressed a strong interest to diversify produce and move into livestock farming.	Concerns about access to PPE and fines, and about need to maintain sales (farmers and vendors) versus risk of COVID-19 fines.
Expressed need for disaster and risk management training from farmers and vendors.	Women vendors expressed interest in digital economies and training.	Farmers and vendors expressed concerns about impact of lockdown on schooling (including not being able to afford digital education items).
	Some women became sole income earners for family and had more control in finances.	Some women became sole income earners for family and had more control in finances.

Source: Author's analysis

Among the farmers interviewed, women frequently reported higher costs for agricultural items such as seed, fuel, fertiliser, and labour. For example, one farmer interviewed in Antique said:

'[It's] too much, that's the problem now. Fertiliser is expensive. The price of the pesticide is expensive. Then, once we have a product, it seems that businessmen are almost asking for it [for free]. It's really like that. Then sometimes you don't seem to have an option...because the prices are somehow the same.' (PHIANT F3, p.21)

The lockdowns impacted farmers' access to markets to sell their produce. In Papua New Guinea, one farmer described how a loss of income meant she couldn't purchase necessary household goods:

'We are just village mothers we sell our garden food to support our husbands and children but after COVID-19, we no longer sell our produce, and it made it very difficult for us to buy store goods like soap, salt, and oil. But now with COVID, we aren't able to sell and aren't able to buy these small things for us.' (PNGEHP F10, p.6)

Another farmer in Papua New Guinea described how market restrictions had impacted her sales:

'For me, I can say that the prices of goods in the shops especially canteens in the villages has affected the affordability of food and so, when we come to the market (that's like last year when COVID-19 started), it was very hard to bring our goods and sell it at the market. Market was very restricted, so many of us, they put us market in zones each day so if the Yalavas are marketing on that [particular] day, the Maramatana, West Tau'ala, East

Tau'ala, we are not marketing on that, they stop us not to come and sell. And most of our goods are...we bring fruits and they're rotten and oily, so I see that that it was a big problem for us when COVID-19 came.' (PNGMBP F8, p.2)

Farmers in Myanmar also reported higher costs of fertiliser and pesticides. There were different explanations for the price rise:

- · the pandemic
- the 'instability' (coup)
- · farming being more difficult due to climate and costs.

The pandemic certainly had a dramatic effect. In Irrawaddy, prices doubled. The cost of seeds also rose. One farmer said:

'Seeds for the crops are getting expensive. It used to be like MMK60,000.00 but now it is MMK100,000.00 for one bag... so one tin would cost MMK1 million.' (MMAIWD F15)

One farmer in the Mandalay sighed when she discussed the impact of COVID-19:

'I think the outbreak has continued to affect the price of food because it is not easy for the price to fall once it gets higher. But farmers' produce does not get a good price and the cost of produce is not just doubled. The fertiliser price was MMK23,000 last year but now it is MMK60,000. Currently, the buying price of onions is very low.' (MMACDZ F14)

Only one farmer interviewed in the Mandalay said that she did not have any worries about her farm before the pandemic. Business was much more difficult with the combination of higher costs, instability brought about by the pandemic, and the urban and rural guerrilla conflict.

In Myanmar, farmers did not seem to have experienced a severe shortage of food, but they struggled to afford their general expenses due to the lack of regular income. One explained how she had sent her eldest daughter to work at a gas station nearby to support the family while her school was closed.

Vendors also reported loss of income because of the effects of, or responses to, the pandemic. In Myanmar, all food vendors (12) interviewed in the Mandalay region reported higher prices of goods such as fish, meat, rice, and cooking oils. Some items, such as garlic, rose to fourtimes the original price (MMK1,800.00 to MMK7,500.00) during the pandemic. One viss (Myanmar unit of measurement, 1 viss = 1.6 kg) of chicken doubled from MMK4,000.00 to MMK8,000.00 since the beginning of the pandemic.

As a result of price rises, women reported that they could not buy the same amount of food that they could before the pandemic. Women in the Irrawaddy region also reported higher food prices which meant they could not buy as much food as they normally would, instead buying small amounts more often.

One vendor said, for example:

'We just do it with the handful we have. We couldn't buy things in advance and store them. We can buy only a handful.' (MMAIWD V16)

Another stated:

'It was hard to get cooking oil. Now the price of cooking oil is going up. We used to buy it for MMK24,000.00 and it is now MMK37,000.00. All prices are going up now.' (MMAIWD V17)

Three market vendors interviewed in Irrawaddy described how a rise in wholesale prices meant they had to increase their selling price, even though demand for the products was not as high as before. One vendor told us:

'In the past, one bundle of rosella is not much...around MMK20.00 to MMK30.00, you know. But now, I pay MMK70.00 per bundle.' (MMAIWDV12)

Four vendors interviewed in Irrawaddy said they worried about the increasing wholesale buying prices, which affected their selling price.

In the Philippines, the rise in staple items' prices had a large impact on household food intake. Most items were locally available before the pandemic, but the imposition of border restrictions and the disruption of supply chains meant the majority saw a major spike in the price of fish, chicken, pork, and beef. Some farmers stressed that the:

'...difference in prices is really big: it's unaffordable, really expensive.' (PHIILO F12)

The government discouraged buying in bulk so everyone could access limited supplies, but the price of individual goods kept rising. One vendor said:

'...some prices went up [and] you cannot buy in volume since it is being limited.' (PHIILO V12, p.6)

According to one food vendor in Iloilo, food was:

"...expensive: the canned goods, fish, meat, rice - almost everything is expensive now.' (PHILO V9, p.12)

The price surge was mostly attributed to restrictions in mobility and transport. Where transport was available, fares were inflated and transport routes often changed. Women were concerned their incomes were dropping while prices were rising.

In some regions of the Philippines, local governments introduced mobile markets (vehicles that travelled around town selling food to multiple neighbourhoods on a schedule) during the pandemic. This meant fewer people at the permanent markets in the town centre. This approach was replicated in Antique, where the local government created cluster markets. Though these were convenient for some locals, the women farmers interviewed said:

'...the pricing is different of course; it became expensive.' (PHINT F8, p.24)

The market vendors that interviewed also reported higher food prices, including for fish, meat, fruit, rice, and vegetables. One vendor told us that:

'The price of pork, rice, everything essential, [including] fruits – the pricing is too much now...it's limited, and too expensive.' (PHILO V2, p.7)

The rise in food prices, fish in particular, was made worse by the effects of typhoons and a longer monsoon season during the pandemic.

Among the women interviewed, many described the home-schooling demands as especially difficult for rural households. Online learning was challenging, in some cases impossible, because of:

- poor internet infrastructure and connectivity
- the cost of equipment and data.

Farmers and vendors across the 3 countries expressed deep concern about the impact of school closures on their children's future opportunities. As well as the added labour of caring for children at home.

When women spoke about access to income to continue their children's education (school fees, books, uniforms) it was a primary concern across the 3 countries. It was second to food affordability. Women absorbed the cost of lockdowns by:

- · working longer hours
- sacrificing their food intake in anticipation of rising costs
- losing income to ensure their children were keeping up with their studies and being fed.

The everyday reproductive labour of women (and girls) rose. This was an economic contribution not formally measured in this study. However, it made a big difference for communities in 2020 and 2021.

Across the countries studied, women were observed limiting their individual and sometimes household food intake. They might:

- eat less meat and less rice
- buy cheaper brands or products.

The FIES COVID-19 survey results also supported this finding (see Section 7.3). Of note, women described making these choices before lockdowns arrived in their communities. They all referred to predicting rising food prices that led to their adaptive behaviours. In almost all cases, intake changes were from predicted or actual rises in food prices and/or declines in income.

4.1.2 Risk management and risk-taking behaviours

In response to higher food prices, women often reported either:

- · reducing their food intake
- adapting their intake (for example, buying cheaper products or brands or eating less amounts of expensive foods such as meat)
- · going without other essential items.

Buying PPE to do business meant there was less money for non-essential items, such as clothes and personal care items. These extra costs impacted women's individual and household food security, limiting funds for buying food. Of note, women reported adaptive behavioural changes in response to these additional costs: they ate less food to afford PPE, or they went without PPE to buy food.

In Myanmar, farmers often said that there was no shortage of food, but they could not afford to buy some items because of price rises. Only one farmer interviewed in Irrawaddy reported having to reduce her food intake due to the higher prices. Respondents said that while they were still able to eat 3 meals a day, they were eating more rice and vegetables and less meat. They estimated they now ate meat once every 3 or 4 days.

In Mandalay, 5 of the farmers interviewed stated there was no shortage of food but, because of food price rises, they could not afford to buy some items. Of all the farmers interviewed in Mandalay, 2 said they had to reduce their food intake to 2 meals a day. One told us, for example:

'We used to eat breakfast, but we could not eat it anymore: we ate 2 times a day'. (MMAIWDF29)

Findings showed that vendors in Myanmar were fairing worse. In Mandalay, one food vendor said that before the pandemic she would buy a 24 kg bag of rice. But since the start of COVID-19, she could only buy smaller bags and had to buy them more often. Five of the vendors interviewed said they had reduced their food intake during COVID-19 and 2 reported changing what they put in meals, rather than the meals themselves. For example, they would:

- change to a cheaper type of rice
- use less cooking oil
- eat more rice and vegetables
- · mix meat with other ingredients, such as potato
- · eat less meat and fish.

One food vendor described how, in response to higher prices, she would make her meals stretch further, and stated:

'For MMK1,500 of chicken, we mixed 3 or 4 parts of chicken with potatoes and ate that till the next day. So [a one-day meal] it was for 2 days.' (MMACDZ V8)

Another food vendor in Mandalay said she reduced her breakfast portions and instead ate more for lunch and dinner during the pandemic. Another explained how, while she did not reduce her intake of food, she ate less meat and oil since the pandemic had begun. She described paying for cooking oil and rice in instalments:

'In the beginning, I paid MMK2,000 per day for buying cooking oil in instalments. It was MMK25,000 per 9 L of cooking oil. As I am selling vegetables in the market every day, I have some regular income, so I took a 9-L [bottle] of cooking oil from the shop and paid MMK2,000 each day. It is the same with buying rice: I cannot buy the whole bag of rice so pay MMK2,000/3,000 daily. I try to stay economical in every possible way with spending during the COVID-19 period.' (MMACDZ V23)

Of the food vendors interviewed in Mandalay, 2 described having to reduce their food intake to 2 meals each day because:

'We can't afford 3 meals a day.' (MMAIWD V23)

Vendors in Irrawaddy reported that some medicines, potatoes, dry tea leaves, and cooking oil were out of stock in July because of travel restrictions and transport disruptions, which meant prices rose.

In the Philippines, women farmers and vendors were more likely to report limiting their food intake by skipping meals or reducing portion sizes in response to price rises. One farmer in Iloilo said:

'You just take it slow when eating...
just a little, just a little, so you
won't get too hungry.' (PHIILO F3)

Another said that while they did not go without food:

'...you could not look for some delicious [food], like nutritious [food].' (PHIILO F12)

One food vendor in Antique said she had already experienced less eating and described saving cold rice to have for dinner rather than eating it for breakfast. Most market vendors interviewed in the Philippines opted to eat vegetables and rice because they were the cheapest and most nutritious.

For other vendors, the rise in prices meant less food on the table or limiting meals from 3 to 2 a day:

'So that was it, we could...sometimes we could still eat 3 times a day, sometimes, twice only [laughs].' (PHIILO V11, p.14)

'Yes, it became smaller. The food you wanted to buy before – anything you like. Like, for example, you can eat up to 3 dishes before. Now, you're OK with just one.' (PHILOV2, p.8)

Farmers and vendors in Papua New Guinea described similar challenges. One farmer said:

'We are just village mothers: we sell our garden food to support our husbands and children but, after COVID-19, we no longer sell our produce and it made it very difficult for us to buy store goods like soap, salt, and oil. But now with COVID, we aren't able to sell and aren't able to buy these small things for us.' (PNGEHP F10, p.6)

One vendor described her experience:

'Most of us were not prepared during the first lockdown and suffered. Those who saved money were able to afford food and they ate well but for us who were not prepared we had it hard.' (PNGEHP V5, p.9)

Food shortages were not a big concern for most of the farmers interviewed. Families could eat the food that they normally sold or ate the produce they grew in their gardens. However, FIES COVID-19 survey research found that farmers were about to have more food insecurity heading into 2022 (see Section 7.3). Some farmers at first had enough food, though intake was limited because they could not afford supplemental foods as reported in Phase 2 (see Section 7.2). This was clearly a different situation for vendors who had no access to land. The outcomes are below.

In all 3 countries, farmers and vendors said they had impossible choices and vendors described big impacts to their income. Vendors across all study locations had to limit their trading hours, resulting in loss of income from commerce restrictions, including:

- curfews
- social distancing requirements
- · limitations to market trading hours.

Curfews in the Philippines shortened usual business hours. As one vendor in Antique said, vendors needed to close their stalls 'early, because there's a curfew there.' She explained that:

'It's prohibited to stay late. You need to be gone by 5 o'clock. Well, it's needed and there on our road, there in Egania, there's traffic there that - no one should pass, so at around 3 o'clock, ma'am, I should go home already because I'm just walking.' (PHIANT V7, p.12)

The vendor's home was often not near the market where they traded. During lockdown the risks and costs of travel added to time and income pressures. Several vendors in Antique spoke about a new public market a few kilometres away from the town centre. They said its location stopped people from coming to the market and buying their products:

'It has become worse since the pandemic: there's no people who come here to buy, as you can see there's no people roaming around here in the market.' (PHIILO V10, pp.4-5)

To limit the growth of COVID-19 cases, movement was restricted. It was not practical for people to travel to the town's public market. This meant lower sales and income for many market vendors.

Papua New Guinea had a similar issue. Journeys to the town market could be long and hard to do during the lockdowns. For vendors and farmers in Papua New Guinea, travel into towns to sell their produce became one of the biggest concerns because of intimidation from police. Several described police intimidation and threats of violence. This created high levels of fear and stress among women trying to sell their produce. For example, one farmer (also a vendor) described how police would rush farmers. She would drastically lower the cost of her produce so she could leave the market and 'walk home quickly'

(PNGMBP F7, p.4). One farmer described the risk of being 'chased by police' and said that - unlike vendors who lived in the town - farmers 'don't know where to run to' (PNGEHP F10, p.3).

As well as higher food and farming costs, women also often described the costs to protect themselves and their children from COVID-19 infection. There were extra household costs, such as for:

- children's education (for example, phone credit or internet to facilitate online learning during lockdowns)
- PPF
- medicine
- transport (at different times during the lockdown bus services stopped in Papua New Guinea and the Philippines, forcing women to walk or hire private transport to reach markets).

Women felt that the authorities expected them to absorb these costs.

One woman in Papua New Guinea shared her thoughts about the financial and emotional burden of caring for herself and her family:

'They [government] told us that those who have money they can help their family and those of you who don't you are on your own. These kinds of remarks made us feel bad. They said we should not be spending all our money; we have to spend wisely to take care of our family if they happen to be sick or in danger. That's why we are really suffering. Whatever little money that we have, we managed it wisely to look after our family and support us during emergencies or to the hospital.' (PNGEHP F7)

Another farmer in Papua New Guinea advised that, because of COVID-19, all health clinics were closed. Even medicines sold in pharmacy were low. They said that because of this:

'Health officers advised us to go home and practise COVID-19 protocols and buy lemons and drink 2 times a day. But lemons are also expensive at the market because of COVID-19. For us, the dry season has made it another problem as our lemon trees are not bearing fruit, so I had to pay PGK2.00 for 4 lemons at the market, which is expensive.' (PNGEHP F4, p.12)

Being told they were 'on their own' changed priorities about what they bought. For example, some of the vendors and farmers interviewed opted to buy vitamins, medicines, and other basic needs instead of buying clothes. Therefore, over the counter medicine costs increased.

In Irrawaddy, Myanmar, one farmer said:

'Before COVID-19, the price of medicine was fair. But now they are expensive. For example, the Para we used cost MMK1000. In the past it was not that much.' (MMAIWD F5)

In the Central Dry Zone, Myanmar, all but one of the vendors interviewed said the extra cost of PPE created a financial challenge. One explained she had to pay MMK3500 for a box of masks. For the same price, she could buy 4 kg of rice, which could feed her family for 4 days. She also said:

'I cannot afford to buy hand gel because I don't have the extra income.' (MMACDZ V10)

All but 2 of the vendors interviewed in Irrawaddy also reported extra costs impacting their household budget, specifically masks, hand gel, and soap:

'Of course, masks and hand gel were extra costs, costing MMK3000/4000. With that money, we could buy valuable curries, but I had to buy them to protect myself. I worry I would get infected.' (MMAIWD V23)

In all countries the vendors mentioned they risked fines (and sometimes were fined) for selling market produce outside of allowed hours. The restricted hours did not allow them to make enough income. For example in Myanmar:

'Earlier, if I was not able to sell until out of stock, I could still sell at neighbourhood market...But now, there was time limitation, I could not sell like this and did not have enough time.' (MMACDZV23)

Women often described the tension of balancing fear and stress of fines or police intimidation with their need to earn income to cover essential costs, including for:

- food
- business
- · children's schooling.

In Papua New Guinea, chewing and spitting betel nut was considered a risk to spreading the virus. Farmers kept selling betel nuts against health restrictions because they needed to 'make money' (PNGEHP F10, p.13).

During the pandemic, the productive and reproductive everyday tasks rose drastically. They were a high risk to women's physical, financial and mental health.

4.1.3 Rapid Assessment summary

Phase 1 Rapid Assessment found that COVID-19 impacted women in each of the 3 countries at different stages of the pandemic. It did so in distinct political, economic, climatic, and social contexts. However, all women described an impact on their labour (productive and reproductive) and private households. Their primary concerns were:

- not having enough food to eat
- the growing prices of food and other household products (such as medicine)
- extra household costs (such as those with PPE and online or remote learning)

- · having to work while caring
- · ensuring children could go to school (and going without other things for this).

The rapid assessment summary was based on thematic analysis of the interviews with women in 2021. It indicated that women across the 3 countries experienced serious financial and personal hardship after nearly 2 years of the pandemic risk and response measures. The situation had lowered:

- food security
- income security
- access to government support (already limited for some).

Financial stress was leading to more household debt. Women were physically and mentally exhausted after 2 years of seeking other income, including through:

- · selling produce by the road
- planting different crops
- · cooking take-away meals
- · selling clothes and other essential items.

Across all countries studied, women were seen:

- skipping meals
- · limiting food intake
- · getting high-interest or high-risk loans to buy food or keep their businesses running
- working without PPE or against public health restrictions and with the risk of fines, illness, or abuse.

These food security risk-management behaviours left women open to big health, safety, and economic risks.

The evidence in this study shows the pandemic greatly impacted the women in Myanmar, Papua New Guinea and the Philippines in their daily life and personal health. It also placed a high level of risk on their physical, social, and economic security.

4.2 Phase 2: The recovery

By the start of 2022, the general population in each country could get the COVID-19 vaccine. The start of March 2022 was 2 vears since the official declaration of the pandemic. At this time vaccine access was very low in Papua New Guinea (5 doses administered per 100 people) compared to Myanmar (78 doses per 100 people) and the Philippines (114 doses per 100 people).

The reason for going back six-months later was to:

- · see if productive and reproductive labours, risk behaviour(s), and access to social welfare had reduced, grown or stayed the same.
- understand country-level knowledge of COVID-19 about infection risks and access to vaccines.

In Phase 2, it was hard to reconnect with the same farmers and vendors across the 3 countries. In Myanmar, the same cohort was interviewed but fewer were available for interviews (13 rather than 24 individuals were interviewed). In Papua New Guinea nearly all of those interviewed came from a new cohort (9 out of 12 farmers and 10 out of 12 vendors). Therefore, Phase 2 findings were given with caution. The size of the cohorts were much smaller in Phase 2. Data collection was limited to one location in one region or province.

There was evidence of:

- patterns of higher financial debt across the 3 countries for both farmers and vendors
- a pattern of food insecurity caused by rising food prices in each location.

Diets were less varied, and intake was smaller than before COVID-19. Recovery took different forms in each of the 3 locations. As such, the findings are by country rather than theme in this section.

4.2.1 Myanmar - Mandalay region

The team interviewed farmers and vendors in the first week of March 2022 in Pyin Oo Lwin, Mandalay. Myanmar's first Omicron cases were reported in late 2021 but these locations were not included in stay-athome townships. Violence was growing in the region because of political instability in the country. This region was experiencing more bombings and shootings around the villages since 2021. Many respondents could not leave their villages because of growing rates of theft and violence. Most of those interviewed (8 of 13 respondents) were vaccinated.

Feedback showed the financial impact on women farmers and vendors was high. The impact for farmers was so severe that some had to sell their farmland to start new businesses. Some vendors had closed their businesses and taken on labouring roles. Over the last 6 months there had been dramatic changes among the women farmers and vendors. For example, one of the women vendors was in tears while sharing her experiences:

'I never thought that I would need to take such job as a rice seller going on different places where I had never been to by a 12-wheeler truck. I had to carry 31.2 kg rice bag to sell to houses on the hillside. I even slipped and fell with a rice bag and got injured. I earned only on the number of rice bags I could sell. My husband also wouldn't be welcoming if I came back home empty-handed. What kind of woman would want to do such terrible job? I never talked about that to my family because I don't want to distress them.' (MMA CDZ-Vendor-06-11092021)

One farmer sold their farm in their home village and relocated. Their financial situation has not improved:

'Sometimes, I sit by myself thinking if I made a wrong decision to come to Pyin Oo Lwin and it would even be better to work in my hometown, Kyaukse. I didn't have that much debt when I was working in my hometown farm. You know now I have got lots of debt to repay and I couldn't even sleep well at night because of these thoughts. But then, when I think back, I am not alone in this and every farmer has the same struggle and even some are worse than me. That's how I consoled myself.' (MMA CDZ-Farmer-03-10092021)

Vendors described ongoing food shortages from rising food costs and lower incomes, along with ongoing debt repayments. Farmers described rising costs of fertilisers, seeds, and petrol. Women were farming more on their own because their husbands moved to search for work. Several women vendors closed their business because of the impact of COVID-19 and the conflict. All interviewees said they could not predict their situation. They lost any gains made before COVID-19, with minimal information about the:

- pandemic
- rising costs of health care
- country's political instability.

4.2.2 Papua New Guinea – Goroka province

The team held focus groups with 12 farmers and 12 vendors in Goroka, Eastern Highlands on 7 and 8 March 2022. After collecting data in Phase 1, Goroka hosted several big events that resulted in a huge spike in COVID-19 cases in September 2021. The province was shut down and an isolation order was put in place until December 2021. The order was for no travel outside or within the province.

Farmers stated that little had changed since the last study in 2021. They still had lower prices for the same yield from pandemicrelated restrictions.

'I will share my experience. During the COVID time, I was planting the big broccoli. Four plots of it and all of them were growing so nicely but when the time came for me to market them, there was a lockdown. COVID hit us the Eastern highlanders badly, a number of people died during that time and my broccoli was ready. The broccoli was not small, the people at Kabiufa saw this broccoli and was shocked. It was like the size of a man's head. Broccoli that I'll be getting PNK7.00 or PNK6.00 for each if COVID did not hit us. I would be sitting at the market and charging PNK6.00 but COVID made it and there was curfew. There was no one to buy my food so I dropped my price all the way down to PNK3.00, that PNK6.00 broccoli, I sit and market in the morning to midday...12 o'clock, that was curfew...I see the time when it's 12 o'clock I put all my broccoli price down to PNK2.00...During the COVID it has really spoilt us the farmers. This sick COVID made it and some food had no proper place to store and market again, so in the morning we come and sit and market. We have to sell those things so the price must go down in order to sell. So that's what most of us been doing and it affected us the farmers so bad...The sick has ruined us. I've shared my experience. Thank you.' (PNG EHP FF2 [29:37-31:39])

The farmers shared how affording food was a challenge because:

- · staple food prices rose
- it cost a lot to access farming fertilisers and seeds

 new expenses came with the pandemic, such as PPE and smartphones and internet data for children to do school work at home when schools were (again) closed in late 2021.

Produce sales were bad during lockdowns while farmers faced higher costs:

'The prices of food were increased and our marketing did not make enough, we thought we could buy more food but we saw that our money was not enough to buy food from the store to take care of our family.' (PNG EHP FF4 [39:58-40:17])

Although the pandemic affected most farmers and it was hard to recover financially, of the farmers interviewed, none sought banks loans. They did not understand the process:

'Why I did not get a loan is because I thought that only working people are allowed to get loan, and a village lady like me have no right to get a loan. So that is my opinion on why I don't go and ask the banks for loan.' (PNG EHP FF9 [1:24:15-1:24:32])

Despite this province having a serious second virus wave, only one woman farmer was vaccinated. Some did not want to talk about vaccines. Those who did expressed doubts about the safety of the vaccine.

Several farmers suggested that to recover from COVID-19, and prepare for the next shock, they had to diversify skills. Farming was not earning enough income. Women wanted to learn to bake, sew, run a store, cook and sell meals.

The shortage of water was causing crops to die and was influencing women to turn away from farming as their sole income. Crops did not yield enough or return a profit. Women farmers had:

- 2 years of longer travel times because of market curfews
- limited time to sell, which led to lower prices and less income.

Farmers had concerns about the market fee system and the lack of support for sellers. Produce was not selling in markets where there was too much of it.

For the vendors in Goroka, the challenge was the cost of food and the income returns for selling produce. The big challenge for vendors was financial recovery:

'I have to go to Lufa and even to Lopi to sell my produce. Prices have increased after COVID, and the price of sweet potato has also increased from PNK60.00 per bag to PNK120.00 per bag. There has been a lot of changes since the pandemic started. Operational costs have also increased, and I will not be able to make the money that I used to make before the pandemic. And shipment and transport from here to other places has affected us badly. We are hoping that this situation will improve for the better soon.' (EHP FV10 [01:22:11–01:21:20])

The women vendors reported that they did not get help from local government. Most did not understand the loan process. One vendor had tried but failed. For vendors, school opening again was both a positive and a negative. It meant they did not have to care for children during the day, but there was a return to paying school fees and pandemic-related costs for their children's education.

'Sorry I forgot to mention this when I spoke before. One of our great expenses was the purchase of phone credits. Where the lockdown was imposed students were told that they will be getting materials through the phone so we spent a lot of money on flex cards to get data.' (EHP FV4 [46:37])

Vendors were at high risk of COVID-19 exposure, but few seemed to be vaccinated or willing to speak on the topic. Focus groups revealed that when someone mentioned the virus or vaccination, the room went quiet. Most participants' body language showed that they were not comfortable with sharing. Two participants shared their vaccine status openly. Because of the economic and emotional impact of the pandemic in the province (illness and deaths), it was deemed too sensitive to push for further discussion.

It was clear that the vendors and their families made bold decisions during the recent lockdown. Some of the decisions included moving and business changes to 'survive':

'When the pandemic started and the markets closed, I stopped selling there and I sold what I could here in my community and that is how I made a small income.' (EHP FV11 [26:36])

'Thank you, COVID-19 really affected us. Some of us have to travel to buy produce to resell. Since the pandemic started, I now stay at home and make doughnuts to sell here at my home and that is how I make my income.' (EHP V10 [26:58])

'So, I started baking and selling at the market and that income helped sustain my family and helped me survive in the village.' (EHP FV4 [28:14])

In focus groups, a common topic was the physical and emotional exhaustion and fatigue. Despite these challenges women had no other option than to push through with their farming or diversify their businesses if they were vendors. All discussed:

- higher food pricing
- extra costs relating to the pandemic, including PPE for themselves and their children, who had returned to school.

Family finances remained strained.

4.2.3 The Philippines -**Antique province**

The team interviewed 15 female farmers and 16 female vendors in Hamtic and Sibalom in Antique province in late April 2022. From the original group interviewed in 2021, 25 of 31 could return for a repeat interview. Antique province had far less lockdown restrictions compared to the previous year's data collection period. Reported cases of the virus were low. Many interviewees were double vaccinated.

Farmers and vendors experienced food insecurity within their household. In the 6 months between 2021 and 2022, interviewees said the situation got worse. The farmers were continually affected by the pressure to sell fresh produce for lower prices during the pandemic. They could not sell some produce at all during restriction periods because of issues with food storage. In 2022, the ease in restrictions made it easier for trade, but there were new issues with fuel price hikes. The price of fuel went up as did the cost of machinery and transport. The price of food staples continued to rise and women were carefully managing the family food budget. The pandemic made it hard to sell crops, while the seasonal typhoons destroyed what was left:

'We experienced a typhoon. [Loss] was very huge, 3 crops were destroyed. Second crop, first crop. During the second crop that's when I spent too much. That's when I had huge expenses.' (PHIANT F14 p.10)

'The problem now is that we sell for cheap price, I mean, they buy our produce for a low price, but when we buy our needs, it's expensive. *How can they [government]* help us?' (PHIANT F8 p.11)

Interviewees said access to government help was a benefit. Most of the women farmers could also get help from the Municipal Agriculture Office including:

- · free seeds each season
- cash.

'PHP5,000.00 cash assistance which I quickly used to buy 2 bags of fertilizer since money can easily be gone buying. Then seeds from *DA, too. Those were the assistance* we got from the DA [Department of Agriculture].' (PHIANT F2 p.10)

There was also a clear dependence on community-based associations which helped some women acquire farm equipment such as tractors and provide for their children's school allowances:

'There's COMSCA (Community-Managed Savings and Credit Association)' (PHIANT F12 p.22)

'Others [borrow] from the COOP (Credit Cooperative).' (PHIANT F8 p.13)

Members of the Farmers Association could access credit to buy seeds and fertilisers. Despite the hardships, women were optimistic about being able to access these supports and the range of support available.

Understanding of the virus varied. Some believed it:

- · was 'man-made and written in the Bible'
- was the result of disobedience to health protocols
- came from other countries (PHIANT F12 p.18).

The impact of the virus on the families was not questioned. Several participants described financial distress after having the virus. Many had to quarantine for 14 days. This put a strain on the family and the business.

All farmers discussed no longer having savings. Most had debt and said there would be no available funds to invest in their farms in the near future:

'If I had an extra budget, I could allot for savings. But now, not anymore. Delayed payment, then we go into debt. It's because the income is really slow.' (PHIANT F14 p.18)

Women manage the budget and daily household expenses. They had the burden of taking out loans to meet the growing demands of the household and the farm.

'In desperate times, I joined the AGAP (a microfinance institution).' (PHIANT F10 pp.17–18)

'Desperate because money lenders have charged exorbitant interest rates as high as 20% [interest]'. (PHIANTF14 p.13)

Despite their optimism, many worried about the debt to survive the pandemic and remain on their farms.

For vendors, the hardships continued despite lower pandemic-related restrictions. For these women, their daily survival depended on the income from their market stalls. However, the recent ease in restrictions led to many women vendors diversifying their income. Some vendors bought small farming plots to sell their produce. One vendor expanded her business and added a second-hand clothes shop. She also worked as a hairdresser, manicurist, seamstress, a masseuse and a take-away cook.

The vendors worried about the ongoing surge of food prices since the start of the pandemic.

'It's extreme. The prices of everything increased.' (PHIANT M7 p.6)

Women vendors still described 'scaling down' the meals they served the family and looked for lower-cost food choices.

'The truth really ma'am, our food really is on budget. We cook one small cup of rice only, 2 small cups. That's it. Then sometimes if there is bread, that will be the breakfast of the children. Bread. They will just eat rice at lunch time.' (PHIANT M16 p.5)

Many of the vendors spent their money on food and essentials, such as PPE and alcohol sanitisers. Unlike the farmers, vendors did not say they had access to welfare or aid. They relied on loans from individuals or microfinance lending. The vendors described their preference for the loans because it involved less paperwork:

'There's an Indian [migrant] that offers a loan if you don't have extra [income], or loans from a cooperative. Yes, when there's an emergency, but it's easier from an Indian, it's lighter. Of course, it's easier. There's no request, right? Compared to others, there's a lot of signatures, if you say that you are a good payer, they will lend you.' (PHIANT M3 p.9)

'They're easier to approach because when you tell them, it's good that they won't have any questions as long as they know that you're paying. No talks.' (PHIANT M5 pp.3-4)

One vendor lamented that many like her could not rely on the government to help with their financial situation. She shared her attempt to seek help from the Department of Social Welfare and Development. She gave up because of the length of time it took, and the need for paperwork and travel which she could not afford:

'There's no one here in Sibalom. You can only resort to lendings. Just there. But in the government, none. You can't really approach them.' (PHIANT M7 p.13) Overall, and despite the ongoing challenges, many of the vendors said it felt normal to return to their everyday lives:

'Yes. Slowly. It seems that everything is okay now. Everyone I ask, they said it's getting okay now.' (PHIANT M9 p.25)

'For me, it came back to normal just a little bit. We were able to sustain the virus but the prices of goods are very high.' (PHIANT M12 p.20)

Some still felt the lingering effects of the pandemic:

'I haven't recovered in my business vet. I still haven't. You see, I still have a lot to sell. I'm still trying to figure out how I can pay...How will you recover from that? The months end not so slowly, days passed by fast but your business, it's just the same, it's just the same you're suffering from really weak sales.' (PHIANT M7 p.15-16)

Many farmers and vendors were double vaccinated. Many described fearing the vaccine but thought it kept them alive and was needed to return to work. However, farmers and vendors were hesitant to get the booster vaccine which had been on offer since December 2021.

4.2.4 The recovery summary

Household debt across the 3 countries was still high but vendors appeared to have been more negatively impacted (see Table 6.3). This was clear in the Philippines where farmers had access to government and organisational support while vendors did not. In Myanmar and Papua New Guinea, farmers and vendors shared the negative impacts and lack of support. Vaccine access and coverage was higher in the Philippines, which explained the optimism compared to the other 2 countries. Farming did not protect families from food insecurity.

 Table 4.3
 Phase 2 – The recovery, country specific results

Myanmar	Papua New Guinea	The Philippines
Farming respondents from the Central Dry Zone are still concerned about the higher cost of fertilisers, pesticides and rice seedling for paddy farmers. Urea fertilisers are commonly used in farming and costs over MMK3,000.00 (approx. USD1.60) for 2 kg and around MMK50,000.00 to MMK70,000.00 (approx. USD37.80) for 40 kg of fertilisers.	Goroka, Eastern Highlands, had a huge spike in COVID-19 cases between first and second interviews. Movement was restricted between September 2021 and January 2022. One of the longest periods of lockdown in the provinces was while the interviews were done.	In Antique province the farmers and vendors described being pushed closer to food insecurity (food supply and cost) between the first and second interviews. Food intake declined during this period. Farmers relied on produce to feed family. Vendors reduced their food intake. At the time of interview, farmers had more confidence in food security improving.
Access to water and fuel was limited for farmers and vendors. For farmers it affected decisions about crops to grow. For vendors it affected how far they could travel to trade.	Women farmers and vendors were still unable to access the Eastern Highlands Provincial Market in Goroka town. Of farmers and vendors, 95% were women selling produce on the dirt. They had no safe sanitation (toilet) facilities.	Cost of food staples, fertilisers, and fuel costs rose. There was 'upward pressures' for farmers and vendors. Most farmers were eligible to receive support from the Municipal Agriculture Office. This support included free seeds or cash assistance. Vendors reported no financial support and were pushed to take out loans.
Knowing what to grow and sell was a dilemma for many farmers because of market instability and the price of fuel/water/fertiliser. There was debate about growing flowers (more profit) versus kale (regular income).	Women reported having to sell produce at discount prices to get rid of produce before market curfew. Women reported huge financial losses during this period.	Most women vendors were double vaccinated and well informed about COVID-19. Vendors reported trying to be 'COVID prepared' with extra money, soap and medicines.
Vendors reported having less food to eat than farmers.	Women reported feeling emotionally, financially and physically exhausted. Many reported reduced food intake.	Most women farmers were vaccinated. Some reported being afraid of the COVID-19 vaccine and avoided vaccination or lied about vaccination.
Return to school was beneficial for women's regular return to farming and vending.	Staple food prices and cost of schooling rose. Many had not sought loans because they did not understand the process and did not have capital.	Children had not yet gone back to school. College students had. Women were still responsible for schooling. Vaccination was to be compulsory.

Myanmar	Papua New Guinea	The Philippines
Most interviewees were double vaccinated. None had received boosters. Reasons for no vaccination: too busy, preexisting health conditions (wary of vaccination).	less than half of interviewees had been vaccinated. Some were very uncomfortable	Fourteen-day quarantine restrictions for infected led to financial distress for several farmers and vendors.
Fear of COVID-19 and misinformation about how it spreads and treatments available were high in community.	Money to buy seeds was in short supply. Market fees kept rising. Women talked about the costs from COVID-19 – curfew meant fewer hours to sell, higher costs of bus fares and 'flex data' for home schooling.	Some farmers adapted to online selling with door delivery. Some vendors had diversified their business from selling food to also selling clothes and 'take away' meals.
Rising farming and food costs led most interviewees to seek loans for the second, even third time. Most could only manage to repay interest.	Children had been home schooled for nearly 4 months which meant higher food intake.	Many farmers took out loans against their farms. Some approached the Community-Managed Savings and Credit Association and Farmers Association for farm equipment, seeds, grain and fertiliser loans.
Most farmers wanted to sell their land. Many women were farming on their own (increase in female-headed households). Work was more difficult and costly.	Misinformation about COVID-19 infection, vaccination and risks were high. Many knew where to get the vaccine but were afraid.	There was a need for information about COVID-19 and other zoonotic viruses, especially among farmers.
Vendors reported borrowing to cover medical expenses from flu and COVID-19 infections.	Prolonged drought led to changes in harvest yield. Interviewees talked about what crops grew best with changing weather patterns. Water supply was low across the region.	Reports of pandemic-induced depression and suicides.
Some vendors had ceased trading.	Women reported getting no help from government despite being told they were eligible.	
	Some women reported diversifying their income – selling, making, growing, baking, renting rooms.	

4.3 FIES COVID-19 survey - Myanmar and the **Philippines**

Based on the previous FIES datasets and the 2021 survey results, food insecurity prevalence declined:

• between 2018 and 2021 in the Philippines (see Figure 4.1)

• between 2020 and 2021 in Myanmar (see Figure 4.2)

This suggests that the initial overall impacts of the pandemic on food insecurity were relatively mild. They were not enough to reverse the general trend of improvements to food insecurity in the Philippines and Myanmar.

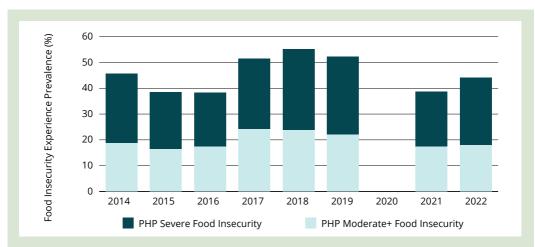


Figure 4.1 Food insecurity prevalence, the Philippines, 2014–2022

Source: Author's analysis

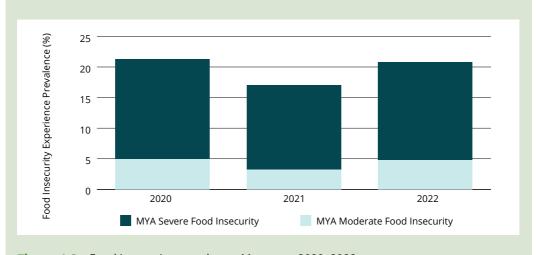


Figure 4.2 Food insecurity prevalence, Myanmar, 2020–2022

However, as shown in Figures 4.1 and 4.2, there was more food insecurity prevalence in both countries between 2021 and 2022 as a result of:

- the extended impact of the pandemic
- the impact of the February 2021 coup (in Myanmar).

As shown in Tables 4.4 and 4.5 there were:

- Mild+ food insecurity levels increasing in the Philippines
- Moderate+ and Severe levels of food insecurity increasing in Myanmar.

Table 4.4 Logit regression FIE levels, the Philippines, 2021–2022

Predictors	MILD+ Log-Odds	MODERATE+ Log-Odds	SEVERE Log-Odds
(Intercept)	0.73 **	0.09	-0.79 **
(intercept)	0.10 - 1.37	-0.51 – 0.69	-1.47 – -0.13
Aged 18 to 35	0.15	0.17	0.14
//gcd 10 to 55	-0.20 - 0.51	-0.18 – 0.53	-0.28 – 0.58
Aged 36 to 50	0.2	0.05	-0.14
7.gcu 30 to 30	-0.17 – 0.56	-0.32 - 0.42	-0.58 – 0.33
Female	0.39 ***	0.33 ***	0.32 ***
remaie	0.21 - 0.58	0.14 - 0.52	0.09 - 0.55
Living in Bural Area	0.21 - 0.38	0.14 - 0.32	0.51 ***
Living in Rural Area			
	0.14 - 0.52	0.40 - 0.78	0.28 - 0.75
Secondary Education	-0.96 ***	-0.92 ***	-0.77 ***
	-1.43 – -0.52	-1.32 – -0.54	-1.15 – -0.38
Tertiary Education	-1.52 ***	-1.46 ***	-1.17 ***
	-2.00 – -1.07	-1.87 – -1.06	-1.59 – -0.75
3 to 5 members in household	-0.15	-0.25	-0.48 *
	-0.56 – 0.26	-0.67 – 0.18	-0.96 – 0.04
More than 6 members in household	0.17	0.15	-0.1
	-0.25 – 0.59	-0.28 – 0.59	-0.59 – 0.42
Year 2022	0.41 ***	0.15	-0.03
	0.23 - 0.60	-0.04 - 0.34	-0.27 – 0.20
n	2025	2025	2025

^{*} p<0.1 ** p<0.05 *** p<0.01

 Table 4.5
 Logit regression FIE levels, Myanmar, 2021–2022

Aged 18 to 35 0.21 -0.06 Aged 36 to 50 0.27 -0.01	0.00 - 0.48 - 0.55	-0.21 - 0.47 0.1 -0.26 - 0.46	-4.36 *** -5.903.02 0.13 -0.77 - 1.17 0.31 -0.62 - 1.36
Aged 18 to 35 0.21 -0.06 Aged 36 to 50 0.27 -0.01	- 0.48 - 0.55	0.13 -0.21 - 0.47 0.1 -0.26 - 0.46	0.13 -0.77 - 1.17 0.31
-0.06 Aged 36 to 50 0.27 * -0.01	- 0.48 - 0.55	-0.21 - 0.47 0.1 -0.26 - 0.46	-0.77 – 1.17 0.31
Aged 36 to 50 0.27 *0.01	- 0.55 -*	0.1 -0.26 – 0.46	0.31
-0.01	- 0.55	-0.26 – 0.46	
	**		-0.62 – 1.36
		0.27 **	
Female 0.24	0 42		0.45
0.05 -	U. T.	0.03 - 0.50	-0.19 – 1.11
Living in Rural Area -0.02		0.21	0.37
-0.22	- 0.18	-0.04 - 0.47	-0.31 – 1.11
Secondary Education -0.03		-0.28 **	-0.77 **
-0.27	- 0.20	-0.55 – -0.00	-1.54 – -0.04
Tertiary Education -0.66	***	-0.92 ***	-0.82 *
-0.90	0.41	-1.25 – -0.60	-1.71 – 0.01
3 to 5 members in household 0.19		-0.11	-0.31
-0.12	- 0.50	-0.49 – 0.29	-1.23 – 0.80
More than 6 members in household 0.38 *	**	0.14	0.13
0.04 -	0.73	-0.28 – 0.58	-0.88 – 1.28
Year 2022 0.04		0.26 **	0.93 ***
-0.16	- 0.23	0.01 - 0.51	0.25 – 1.66
n 1904		1904	1904

^{*} p<0.1 ** p<0.05 *** p<0.01

4.3.1 Rural and urban food insecurity experience

Before the pandemic, rural dwellers were more likely to experience Mild+ and Moderate+ food insecurity than urban dwellers in both countries. This trend continued through the pandemic. During the pandemic, rural dwellers in the Philippines were also much more likely to experience severe food insecurity than urban dwellers – a situation which did not occur before the pandemic.

4.3.2 Food insecurity and education levels

In both countries, respondents with secondary and tertiary levels of education were much less likely to experience Mild+, Moderate+ or Severe food insecurity compared to those with primary or lower levels of education. Before and during the pandemic, the level of education matched with the level of food insecurity experience. This points to education as a basis for job security and resilience.

4.3.3 COVID-19 and food insecurity

It is not possible to say COVID-19 caused food insecurity in the Philippines and Myanmar in 2021 and 2022. The 2 countries had other major shocks during the same time, including:

- African Swine Fever in the Philippines (discussed in Cooper et al. 2022)
- the February 2021 coup in Myanmar (Karamba and Salcher 2022).

Despite these and other mixed factors, COVID-19 contributed largely to food insecurity in both countries. Early in the pandemic, less severe indicators in Myanmar, such as 'worried about ability to obtain food' rated COVID-19 highly as a source of worry or concern. A lower proportion of respondents said COVID-19 was directly responsible for severe indicators of food insecurity such as:

- · 'running out of food'
- 'going hungry'
- 'going without food for a whole day'.

This was also the case in the Philippines in the post-pandemic survey period.

The time of highest caseload and highest impact on food systems were:

- 2021 for Philippines
- 2022 for Myanmar.

For both countries, this was when the relationship was relatively constant between:

- · severity of food insecurity indicator
- proportion of respondents attributing the indicator to COVID-19.

Almost the same proportion of respondents attributed severe and less severe experiences to COVID-19.

4.3.4 Gender and food insecurity

In Myanmar, reports of Moderate+ and Severe food insecurity grew between 2021 and 2022. This was also the case for reports of Moderate+ and Severe food insecurity for women, which greatly increased over the same period.

The pattern of food insecurity experience by different genders in Myanmar remained through the pre-pandemic and pandemic periods. Women were significantly more likely to experience food insecurity than males at the Mild+ and Moderate+ levels during both periods.

In the Philippines, for most years leading into the pandemic, amount of food insecurity was similar for men and women. In 2019, the difference between men's and women's reports of Mild+ and Severe food insecurity was not significant. Women were less likely to have Moderate+ levels of food insecurity than men.

The relationship between gender and food insecurity in the Philippines changed a lot during the pandemic period. Women were much more likely than men to experience food insecurity at the Mild+, Moderate+ and Severe levels. This represented a major shift in the Philippines after a decade when food insecurity had little or no difference between genders.

The team completed a Blinder-Oaxaca decomposition (Blinder 1973; Jann 2008) on the FIES data from 2021-2022 in both the Philippines and Myanmar. This showed the unexplained part of the difference in food insecurity levels during the pandemic was large and significant. So, the differences in food insecurity between men and women in both countries during the pandemic were related to factors outside any socio-economic differences explored in the FIES-COVID-19 surveys.

This echoes the findings of other studies in the Asia-Pacific, including Asian **Development Bank and United Nations** Women (2022). It is also consistent with the decomposition of gender differences in food insecurity reported by Broussard (2019).

4.3.5 FIES COVID Survey Summary

The following are key takeaways and insights from the FIES survey in Myanmar and the Philippines in 2021 and 2022:

- · Increased food insecurity was identified in both countries during the 2 study periods during the pandemic.
- There was evidence of food insecurity in rural and urban areas in both countries.

- In rural areas food insecurity remains higher than in urban areas in both countries, but the gap increased during the pandemic.
- COVID-19 and food insecurity reveal:
 - most respondents in both countries indicated that COVID-19 was responsible for their food insecurity experiences and this pattern was the same for men and women
 - · during the height of the pandemic, a high proportion of respondents blamed COVID-19 for both less severe and severe food insecurity indicators
 - before the peak of the pandemic and during the post-pandemic period, a higher proportion of respondents attributed less severe indicators to COVID-19 than severe indicators.
- Gender and food insecurity showed:
 - the gap between women and men in food insecurity levels in Myanmar grew during the pandemic and in contrast to the pre-pandemic period
 - · women's food insecurity in the Philippines during the pandemic was significantly higher than male food insecurity - a stark contrast to pre-pandemic patterns
 - differences in food insecurity between men and women were largely not related to the socioeconomic and demographic variables included in the FIES surveys (age, education levels, household size and rural or urban location)
 - · differences in food insecurity were linked to structural inequalities between men and women
 - · in the Philippines in particular, progress towards eliminating structural gendered differences in food insecurity appears to have reversed during the pandemic.

4.4 Discussion – issues and opportunities

The findings from Phase 1 and Phase 2 revealed that women's income and food insecurity were linked to their roles in social reproduction:

- unpaid labour and care increased, reducing women's capacity to earn
- women's high representation in informal and self-employment (often to balance paid with unpaid labour) meant they were particularly vulnerable to the economic impacts of the pandemic, placing them at high risk of food insecurity.

Also, because it was typically a women's responsibility to manage household food security, women took risks to mitigate food insecurity. Women's roles in performing the bulk of labour, work, and care involved in social reproduction placed them at high and specific health, safety, and financial risk.

Notably, the women identified the barriers they experienced to access the minimal social welfare available. These barriers were connected to their care, labour, and work roles. They:

- · had no time to wait in line
- · felt unsafe waiting in line
- did not have the identification papers or knowledge of welfare support available.

Women vendors had no welfare supports available. Women farmers had more in the Philippines that appeared to arrive by the Phase 2 recovery interviews.

The findings from the FIES COVID-19 surveys and the interview/focus group studies complement each other. They show women close to the poverty line had more harmful and longer negative impacts of the pandemic. A disaster on the scale of COVID-19 places more productive and reproductive demands on women

to survive and leads to high risk-taking behaviours.

Based on the findings and analysis of this study, it is essential to:

- consider gender-centred responses in research and development
- · ensure women who do agriculture activities can access and engage in economic and food security in times of crisis.

4.4.1 Rapid research findings

Food rationing occurs before the crisis hits

All the cohorts interviewed made decisions about food rationing whether COVID-19 was in the community or not. Meals were reduced and diets were altered to plan for rationing. Vendors appeared to fair worse than farmers but both cohorts were affected. Two factors determined actions:

- · The cost of staples immediately rose.
- Access to pathways for income were limited because of lockdown measures, movement restrictions, market hours and population restrictions, fear of infection and fear of police response (fines led to less movement).

Women prepared for the crisis by observing food costs. Most of the women oversaw the budget.

Financing alternatives for women, especially low interest loans

There was a high number of women who sought loans to cover rising costs to their business. Cost of seed, fertiliser and livestock rose. Cost of market stall rent continued even when women could not access the stall. Women vendors wanted to keep their stalls and so had to take loans (Papua New Guinea and the Philippines especially).

Gender-specific access to crop insurance and training for use of equipment for farmers

By Phase 2, a lot of the women described being the sole farmers. Some men (especially in Philippines and Myanmar) returned to migrant work. This means women need training and support with specific information on

- loans
- · access to government initiatives
- · supply chains and markets
- labour intensive farming
- · climate resilience farming
- insurance.

Access to free PPE and in-kind relief assistance for vendors

The vendors were at particular risk of COVID-19 infection. They took risks to maintain income and were open to infection, bribery, and violence. Lockdown restrictions impacted on their curfew and transport. The PPE was necessary but costly for the vendors which led to risk taking or less food to meet PPE costs.

Information on the crisis is vital but difficult to access

It was hard to access reliable and accurate information during the crisis. Batteries for radios are an added cost and not all interviewees had mobiles (except in the Philippines). Communicating about disease events affects One Health strategies. In Phase 2, most interviewees in the Philippines were double vaccinated. Misinformation on vaccines was reported in the 2 other locations.

Communication, clarity, and inclusion pathways for rapid welfare are essential - especially access to staple foods and cash

Cohorts found it hard to access government funding and rations, with:

- a lack of knowledge (about schemes)
- · paperwork obstacles (literacy, documentation, time)
- uncertainty about the criteria (connection to information pathways above).

Cash-based assistance (hard cash and digital cash) is on the rise in humanitarian and crisis response situations. The cohorts in each case revealed a need to consider such a measure in the immediate and medium term of a crisis to help with household resilience.

5 Implications and conclusions



5

Implications and conclusions

5.1 Research lessons learned

- Local women networks are vital to help conduct this type of study but time is needed to train and codesign approaches, data collection, and consistent thematic analysis.
- Local women farmers and vendors wanted to share their stories and gave suggestions for their recovery and resilience.
- Women identified barriers to accessing the minimal social welfare available. Awareness of gendered experiences during crisis, such as this rapid research fund, is vital to finding the barriers to accessing welfare. Before the crisis, there should be trials in each location for cash-based assistance and access to digital tools.
- Return to community is vital to learn about recovery but there is a limit to data collection without it being extractive. Next step would be to design and implement an actionbased research project or use a 'thinking and working politically' community-of-practice study.
- Consideration should be given to engaging with men as well as women to ensure a holistic study of gendered impacts during crises. This was especially noted in Papua New Guinea.

5.2 Impact lessons learned

- Farmers were not protected from food insecurity. Food prices and food staples quickly increased. Where information was missing, rumours affected livestock and produce. Yields were destroyed and livestock were killed expecting risk (affecting income and livelihood). Farmers could at first cushion the food insecurity impact of COVID-19 by producing for their own consumption. In the longer term the lack of markets for products and a lower-level of cash crop production (because of needing to feed themselves) led to much worse outcomes for rural dwellers than urban dwellers (confirmed in interviews and FIES COVID-19 surveys).
- Access to information. People predicted risk based on past experiences. To describe behaviours as working on 'misinformation' lacks nuance. It appears rumours did not start on social media. They came from past experiences of disasters and emergencies (for example, Avian flu, African Swine Fever, pest infestations). There is a need to follow up after emergencies to find where communication broke down. Consistent and accurate information may not travel into rural communities. Failing to follow-up risk communication after crisis at local community level has consequences for the next emergency.

 Diversify information sources. During the health emergency, the local health sector was not the only the trusted information source for areas like animal health, farming or vending. These sectors were needed for public health measures. But cohorts did not say they sought advice or information from the health sector. The farmers and vendors sought information to do with their business even though it had public health implications. Public health interventions did not reduce risk taking behaviour.

5.3 Recommendations

While this study focused on the experiences of communities and individuals relating to the COVID-19 event, this study is not about the pandemic itself. It is about the change that happened within 3 of Australia's partner countries: Myanmar, Papua New Guinea, and the Philippines. It is also about the future response should this type of event happen in the future. Any large shock can have diverse livelihood effects, depending on people's reaction: denial or adaptation.

The results reveal resilience and vulnerability among neighbours in the Indo-Pacific are very interconnected. Most countries, if not all, were unprepared. Communities and economies were shut down. Post-pandemic life will be different for many communities and individuals. Recommendations to inform ACIAR strategic discussions for research development activities have common ground across Australia's partner countries.

5.3.1 List of recommendations

R1 Examine the feasibility of cash assistance schemes during a crisis response

Prioritise the study of informal workers in the food and agriculture sector and how cash assistance schemes could mitigate food insecurity.

R2 Undertake a review of financial loan schemes available to small income farmers in a post COVID-19 recovery

Prioritise understanding how informal workers in the food and agriculture sector could access low-interest loan schemes to stop them turning to high-risk, high-interest loans.

R3 Lead an Annual Women's Agriculture Finance Forum that seeks to support understanding of financial security for women in agriculture ventures across the Indo-Pacific

Examine how cash assistance schemes and low-interest loan schemes could identify and target women farmers or vendors as beneficiaries.

R4 Revise and develop best practice material to support disaster communications in rural areas amona

Through a collaborative in-country review of public and private sectors, examine how to produce communications about support and assistance during emergencies that does not rely solely on digital communications.

R5 Examine how One Health–focused communications, through radio, web, and social media platforms can get information out in a more timely and accurate manner

Review how to adapt public health communication messaging for farming and market sectors during a disaster to address concerns about:

- animal or produce contamination
- · human health.

R6 Introduce an annual women in agriculture digital economy showcase

Connected to the finance forum (proposed above), support and invest in the digital economy for the food and agricultural sector, especially via mobile phones to facilitate better:

- financial services (for example financial, health, farming and trading)
- · access to information.

R7 Examine the feasibility of an ACIAR gender One Health research network group to inform training and development

Develop regional gender-responsive public health training and communication campaigns that focus on 'grassroots' empowerment in communities across partner countries.

R8 Develop ACIAR training partnerships that develop skilled in-country facilitators

Develop and run gender inclusive small business training in rural and remote communities. Focus on adaptation, recovery, and resilience.

R9 Examine how regional research and training through online platforms can connect stakeholders in rural and remote areas

Have women-led discussions to build and enhance the voice of civil society organisations to assist in food and agriculture activities for women and communities.

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Appendix

UNDP Global Gender Response Tracker, 2020–2021

Country	All Measures	Gender sensitive	Unpaid care	Violence against women	Women's economic security
Myanmar	22	14		6	8*
Papua New Guinea	4	1			1#
Philippines	366	6		1	5~

- Three measures of specific relevance to the women interviewed in this project: 1 May 2020: agriculture input e-voucher worth MMK120,000 for 300,000 farmers (those with less than 2 acres of land) especially 'women led households with returning migrants, households of ethnic minority, and households led by persons who are older than 45 of farmers'; June-September 2020: a cash for work scheme to provide jobs for unemployed and impoverished; and 11 December 2020: Emergency Food Rations to vulnerable households and at-risks
- Two measures of specific relevance to the women interviewed in this project: 1 April 2020: USD38 million spend on nationwide food security activities, including distribution of food rations during April to December 2020. Main recipients: those affected by income and job losses, especially in urban areas 'where they have fewer means to grow their own food'; 1 September 2020: the government announced USD57.3 million stimulus for small businesses struggling during the pandemic available in the form of loans from Bank South Pacific and National Development Bank. The interest rate will be low and repayment terms will extend 15 to 20 years. The money would be available to sectors including agriculture, ventures for youth, woman-alone businesses.
- 14 May 2020: Department of Agriculture distributed PHP5,000 cash subsidy to 600,000 rice farmers. The Financial Subsidy to Rice Farmers to assist small rice farmers, who plant 1 ha or less, located in 24 provinces not covered under the Rice Farmers Financial Assistance program. 21 October 2020: Livelihood assistance grants for families whose livelihood dipped due to the quarantine measures amid the health crisis. Qualified beneficiaries of the livelihood assistance grants will receive financial assistance not exceeding PHP15,000. Livelihood assistance grants prioritised households with low-income families in the informal sector, including 'house helpers' (domestic workers), or whose small business had been affected by the pandemic. 18 September 2020: The Department of Agriculture allocated PHP400 million under the Bayanihan to Recover As One Act or 'Bayanihan 2' to further expand the Duterte administration's urban agriculture program and attain family household food security. Distribute the edible Landscaping starter kit (packet of assorted vegetable seeds, a 'how to plant' brochure, and sample designs for a pocket garden, container garden, and community garden. 11 December 2020: Under Bayanihan 2, subsidies and allowances to 60,000 qualified students in public and private elementary, secondary and tertiary education whose families were facing financial difficulties due to COVID-19. Also provided access to free, healthy meals to undernourished children. Food provisions distributed by the Disaster Response Management Group. 21 February 2021: Extended the credit guarantee lines to September 2021 and made them available to more types of businesses including micro, small and mediumsized enterprises, manufacturing, housing, agriculture, and other areas of the economy to support businesses during the COVID-19 pandemic. 14 May 2021: The Department of Agriculture gave assistance to 800,000 farmers through the PHP24 billion budget for the sector under the Bayanihan to Recover as One Act, or the Bayanihan 2. PHP4 billion set aside for other sectors, namely fisheries, upland agriculture, coconut and sugarcane industries. To qualify, farmers needed to be registered in the Registry System for Basic Sectors in Agriculture.

Source: United Nations (2022)



