



Monitoring the Impact of COVID-19 in Myanmar

Agricultural production and rural livelihoods in two irrigation schemes – October 2020 survey round

Isabel Lambrecht, Catherine Ragasa, Kristi Mahrt, Zin Wai Aung, Hnin Ei Win, A Myint Zu, and Michael Wang

The persistent and worsening effects of the COVID-19 crisis on rural household incomes are alarming. The onset of the second wave of infections and mitigation measures in Myanmar is continuing to depress household incomes.

Key findings

- Almost three-quarters of the households surveyed reported lower household income than usual in August and September.
- In addition to a drought and lack of irrigation water limiting crop production in August and September, 22 percent of farmers experienced difficulties accessing inputs and 28 percent invested less than usual in their farm due to financial constraints.
- A quarter of farmers experienced difficulties selling their produce, which is lower than the share that reported having such difficulties in previous months. However, farmers anticipate further difficulties hampering sales in coming months, mainly due to expected restrictions on mobility.
- Landless households have been the most adversely affected by the crisis, largely due to lost nonfarm employment, lower remittances, and further negative impacts on rural enterprises.
- To cope with reduced incomes, 61 percent of households reported having reduced food expenditures, 36 percent sold assets, and 37 percent took loans.
- Households maintained the diversity of their diets but reduced the amount of meat and fish consumed. More households reported meat and fish to be less available than in previous rounds.
- Government transfer programs reached 99 percent of households in the study area, mostly in the form of income assistance.

Recommended actions

- Assistance to rural households should be continued to soften the impact of reduced income during the COVID-19 crisis and prevent households from jeopardizing future food security and health by depleting savings and assets, acquiring debt, and reducing food expenditures.
- Supporting rural non-farm businesses and employment will be key to building resilience in household livelihoods and to achieving a faster overall economic recovery.

Introduction

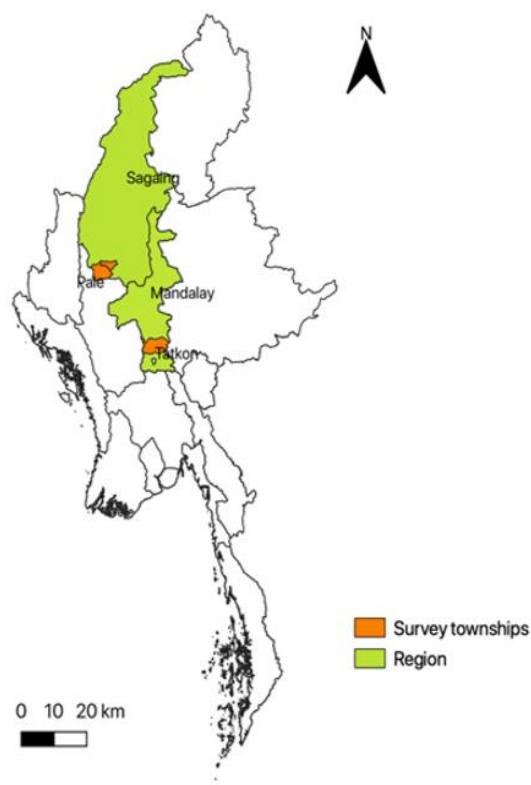
This policy note provides evidence of the immediate impacts of the COVID-19 crisis on farming communities in Myanmar's Central Dry Zone using baseline data from January 2020 and follow-up telephone survey data.¹ The communities surveyed lie in the catchment areas of two irrigation sites in Myanmar's Central Dry Zone: the Sinthe irrigation site in Tatkon township in Nay Pyi Taw Region and the North Yamar irrigation site in Pale and Yinmarbin townships in Sagaing Region (Figure 1). They are the focus pilot sites of the Myanmar Agricultural Development Support Project (ADSP). These study sites provide good settings in which to assess the impact of COVID-19 on irrigated and non-irrigated agricultural production as well as the varied livelihood strategies of farm (landed) and nonfarm (landless) households in rural communities.

The first round of the telephone survey was conducted with 606 households in June 2020 and inquired about the effects of COVID-19 on agricultural production and other livelihood sources from February to May 2020.² This first round survey period captures the first wave of COVID-19 cases in Myanmar and the COVID-19 measures implemented for three weeks in April to contain the spread of the disease.

The second round of the telephone survey was conducted with 543 households in August 2020 and captured the effects of COVID-19 in June and July. The period covered in the second telephone survey round coincides with the onset of the monsoon and the main planting period for paddy rice in our study area. It also coincides with a period in which Myanmar had few reported COVID-19 cases and during which the Myanmar government relaxed lockdown measures.

A third round was conducted with 503 households in October 2020 and captured the effects of COVID-19 in August and September.³ The months covered in the third telephone survey coincide with the onset of a second and much larger wave of confirmed COVID-19 cases which started mid-August. Travel restrictions and COVID-19 prevention measures were renewed throughout the country in September, including stringent stay-at-home measures put into effect in Yangon.

Figure 1. Survey catchment areas



Source: IFPRI/World Bank/MSR (2020).

¹ Ragasa, C., K. Mahrt, Z.W. Aung, I. Lambrecht, and J. Scott. 2020. *Gender, crop diversification, and nutrition in irrigation catchment areas in the Central Dry Zones in Myanmar: Implications for agricultural development support*. IFPRI Discussion Paper 01947. Washington, DC: International Food Policy Research Institute.

² The results of the first telephone survey round are presented in:

Lambrecht, I., C. Ragasa, K. Mahrt, Z.W. Aung, and M. Wang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Agricultural production and rural livelihoods in two irrigation schemes - June 2020 survey round*. [Myanmar SSP Policy Note 20](#). Yangon: International Food Policy Research Institute;

The results of the second telephone survey round are presented in:

Lambrecht, I., C. Ragasa, K. Mahrt, Z.W. Aung, and M. Wang. 2020. *Monitoring the Impact of COVID-19 in Myanmar: Agricultural production and rural livelihoods in two irrigation schemes - August 2020 survey round*. [Myanmar SSP Policy Note 33](#). Yangon: International Food Policy Research Institute

³ The total attrition from the baseline round to the first phone survey round was 39 percent, mainly due to telephone numbers that were not working. The attrition from phone survey round 1 to round 2 was 10 percent. The attrition from phone survey round 1 to 3 was 17 percent. We addressed attrition by running attrition regressions by survey rounds and applying inverse probability weighting. The intuition behind this procedure is that it gives more weight to households who have similar initial characteristics to households that subsequently dropped out than to households with characteristics that make them more likely to remain in the panel.

Crop production and marketing in August and September 2020

Sixty-five percent of the households in our study cultivated crops in August and September 2020. The most commonly grown crop was paddy, which was grown by 95 percent of farm households, followed by sesame (12 percent) and groundnut (5 percent). Paddy was mostly sown during June and July, but 28 percent of paddy farmers sowed their paddy in August or September. Additionally, some farmers planted sesame and groundnut prior to August, though most sesame and groundnut farmers planted during August and September (66 percent and 76 percent, respectively). Seventy percent of farmers in our sample reported drought and shortages of irrigation water as major challenges to crop production in August and September. This is a much higher share of farmers than the 46 percent that reported these challenges in June and July.

Twenty-two percent of farmers also experienced additional difficulties purchasing inputs due to COVID-19 measures, which is a significant increase both from June and July (13 percent) and from the first wave of COVID-19 between February and May (16 percent) (Table 1). Those experiencing difficulties mainly noted challenges in accessing farm machinery services and inorganic fertilizer. Twenty-eight percent of farmers reported to have invested less in agricultural inputs than usual due to financial constraints in August and September, which is much more than the 16 percent reporting so in June and July.

Table 1. COVID-19 effects on obtaining crop inputs and farm labor over the three survey rounds

Experienced effect	Feb-May 2020, % of farmers	June-July 2020, % of farmers	Aug-Sept 2020, % of farmers
Difficulty in purchasing inputs	16	13	22
If any difficulties, for which inputs:			
Pesticides, herbicides, fungicides	51	21	43
Inorganic fertilizer	40	45	55
Farm machinery services	43	58	45
Improved seed	14	9	5
Investing in agricultural inputs			
A lot less than usual because of finance constraints		8	7
Less than usual because of finance constraints		8	21
Finding labor			
Difficulty finding male labor	18	15	17
Difficulty finding female labor	17	13	16
Higher wage for farm labor than normal	23	28	24
Observations	387	447	423

Source: IFPRI/MSR telephone survey (June, August, and October 2020).

Throughout the three periods covered by the phone surveys, from February through September 2020, the share of farmers experiencing difficulties finding agricultural wage labor remained fairly stable, between 13 and 18 percent, and around a quarter of farmers mentioned that labor was more expensive than usual. While this may indicate a shortage of farm workers, farmers may have also faced financial restrictions in hiring workers – twenty-eight percent of paddy farmers said they hired fewer workers than they had wanted due to financial constraints during August and September.

Problems experienced in selling crops diminished for farmers between the February to May and the June and July periods, and further reduced in August and September. Though 24 percent of farmers indicated difficulties in selling their crops, this finding stands in contrast to the two-thirds of farmers who experienced difficulties in selling their crops between February and May 2020 when the first series of stringent COVID-19 measures were in place. Nevertheless, 42 percent of farmers continue to anticipate challenges in selling their harvest in coming months (Table 2). Additionally,

COVID-19 related challenges in coming months are expected to center less around low prices (40 percent of those anticipating any difficulties), and more around movement restrictions (71 percent) and lack of buyers (50 percent).

Table 2. Farmers experience fewer difficulties in selling their harvest

	Feb-May 2020, % of farmers	June-July 2020, % of farmers	Aug-Sept 2020, % of farmers
Did you experience any difficulties in selling your harvest?	68	33	24
If yes, which difficulties:			
Lower prices	63	85	66
Poor demand/no buyers	32	16	20
Markets closure	28	17	10
Movement restrictions	27	9	38
No means of transportation to markets	25	0	11
Observations	103	115	211
Do you anticipate any difficulties in selling your harvest in the following months?	36	47	42
If yes, which difficulties:			
Lower prices	75	55	40
Poor demand/no buyers	45	59	50
Markets closure	8	5	9
Movement restrictions	15	15	71
No means of transportation to markets	22	14	20
Observations	317	384	401

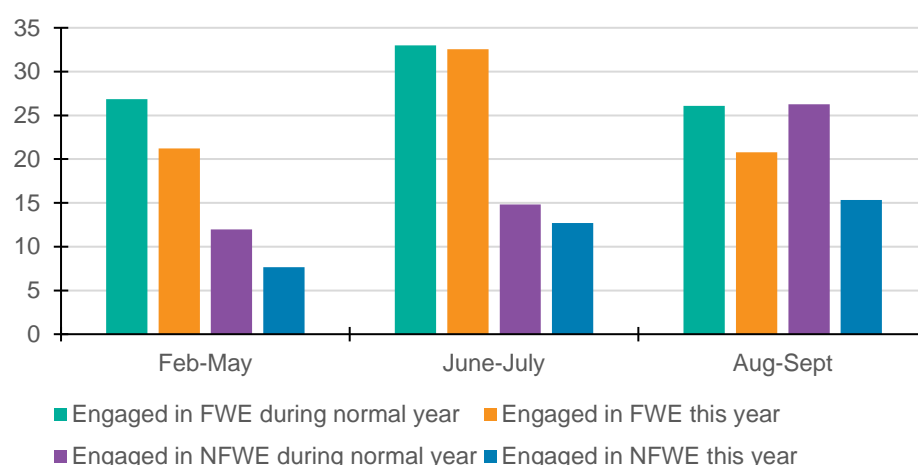
Source: IFPRI/MSR telephone survey (June, August, and October 2020).

Nonfarm business, employment, and migration

COVID-19 continued to impact agricultural wage employment in August and September, but to a lesser degree than non-agricultural wage labor and non-farm businesses. Twenty-six percent of our respondents said they normally engage in farm wage employment in this period, whereas only 21 percent of respondents were engaged this year (Figure 2). Fewer women (30 percent) reported difficulties finding farm wage employment than men (67 percent). This finding aligns with our observation that more women are normally engaged in farm wage employment (29 percent) than men (23 percent); more women also worked in farm wage employment during August and September this year (28 percent) than men (14 percent).

Respondents from landless household were more likely to report difficulties in finding farm wage employment (58 percent) compared to landed households (37 percent). Nevertheless, respondents from landless households were still able to obtain farm wage employment to a similar degree as in the past (23 percent normally as compared to 22 percent this year). Respondents from landed households, on the other hand, saw a much larger drop in farm wage employment.

Figure 2. Wage employment rates dropped again in August-September, more so for nonfarm wage employment (NFWE) than for farm wage employment (FWE)



Source: IFPRI/MSR telephone surveys (June, August and October 2020).

Similar percentages of respondents reported normally being engaged in non-farm wage employment and in farm wage employment in August and September (26 percent). However, a much higher share of non-farm wage workers experienced difficulties (70 percent) in finding work this year; only 15 percent of respondents did non-farm wage work this year. This amounts to similar conditions as the non-farm labor market in the February to May period and a deterioration when compared with June and July. Again, female respondents were much more likely to retain employment this year than male respondents.

Compared to any of the previous survey periods, in August and September a considerably higher share of enterprises noted negative effects due to COVID-19 (Table 3). Over 73 percent of non-farm businesses reported facing adverse effects from the COVID-19 crisis. Only 53 percent reported facing adverse effects between February and May 2020 and 42 percent in June and July. No difference in experiencing difficulties was observed between woman- and man-led nonfarm businesses. The share of enterprises reporting negative effects due to COVID-19 in August and September highlights the sustained and renewed negative impacts of the pandemic on non-farm businesses and employment in rural settings.

Table 3. Businesses continue to be highly affected by COVID-19

	Feb-May 2020, % of enterprises	June-July 2020, % of businesses	Aug-Sept 2020, % of businesses
Is your business affected by COVID-19?	53	42	73
If yes, which difficulties:			
Forced closure	6	2	3
No work at all (No demand)	25	11	34
Less work than usual	26	25	39
More customers buy on credit	2	1	12
New business started this period	13	9	3
Observations	243	197	203

Source: IFPRI/MSR telephone surveys (June, August and October 2020).

Another important source of income to rural households in Myanmar is remittances from domestic and international migrants. Twenty-eight percent of all households mentioned that income from remittances was much lower than usual in August and September (defined as at least 20 percent

lower), whereas another 5 percent mentioned that remittance income was somewhat lower than usual (up to 20 percent lower).⁴

Income loss and coping mechanisms

COVID-19 increasingly affects household incomes. During August and September, 72 percent of households reported having lower income than usual. This is a notably higher share than in June-July (57 percent) and February-May (56 percent) (Table 4) and was driven by a large increase in the share of landed households experiencing income loss. Nonetheless, more landless than landed households were affected by income loss (79 versus 70 percent). Affected households mainly drew on savings (78 percent) and reduced food expenditure (61 percent) to cope with the loss of income. However, 36 percent of households with decreased income in August and September sold assets and 37 percent borrowed to cope with income loss.

Table 4. More households experience decreased total household income in August and September

	Feb-May 2020				June-July 2020				Aug-September 2020			
	All	Landed	Landless		All	Landed	Landless		All	Landed	Landless	
Decreased total household income due to COVID-19 crisis	56	49	72	***	57	53	71	**	72	70	79	*
<i>If yes, which coping mechanisms are used:</i>												
Used savings to deal with income reduction	78	77	80		70	70	70		78	82	69	
Sold assets to cope with income reduction	35	33	38		26	22	33		36	33	44	
Borrowed to cope with income reduction	41	37	47		35	36	33		37	41	30	
Reduced food expenditures to cope with income reduction	55	52	64	*	59	57	63		61	59	65	
Received and accepted transfer (cash or in-kind) from government related to COVID-19 crisis	36	24	61	***	85	84	88		97	97	98	
Received and accepted transfer (cash or in-kind) from NGO or private individuals related to COVID-19 crisis	8	7	9		2	2	3		1	1	2	
Observations	606	522	84		543	474	69		503	441	62	

Source: IFPRI/MSR telephone surveys (June, August, and October 2020).

Note: Asterisks show statistically significant differences in proportions of surveyed households reporting between 'Landed' and 'Landless' sub-samples; * p < 0.10, ** p < 0.05, *** p < 0.01.

Government assistance to mitigate the negative impacts of the COVID-19 crisis intensified over time and reached nearly all households in August and September. This represents a steep increase compared to the 36 percent of households who reported having received a transfer from the government between February and May 2020. The transfer was almost always in the form of income assistance (99 percent) with the median value received being 40,000 MMK. Thirty-three percent of households also mentioned the electricity tariff reduction, whereas six percent received food assistance. There were hardly any transfers from an NGO or from private individuals (1 percent) in

⁴ Households who do not normally receive remittances and also did not receive remittances in the last two months are classified here as obtaining the same remittance income as usual.

August and September 2020. In 71 percent of households, a male household member was considered the recipient of the transfer.

Effects of COVID-19 on nutrition

In all three time periods, respondents reported reducing the frequency and quantity of meat and fish consumed compared with normal times, though they also reported increased vegetable consumption (Table 5). Whereas there were signs of recovery, with fewer households reporting lower fish or meat consumption in June and July as compared with the February to May period, this was followed by a decline in fish and meat consumption in August and September. Thirty-nine percent of households consumed meat less often and 27 percent ate smaller quantities. Thirty percent consumed fish less often and 23 percent ate smaller quantities.

Table 5. Similar reports of lower consumption of animal-sourced foods as in Feb-May

	Feb-May 2020	June-July 2020	Aug-Sept 2020
Meat – did you eat it less often than normal?	39	24	39
Did you eat a smaller quantity of meat?	37	24	27
<i>[For those that reported doing so] Why did you eat a smaller quantity of meat or eat meat with less frequency?</i>			
Reduced income	78	83	88
Not available	13	2	16
Higher price	16	19	6
Afraid of COVID	12	10	10
Other	11	12	3
Fish – did you eat it less often than normal?	29	18	30
Did you eat a smaller quantity of fish?	26	17	23
<i>[For those that reported doing so] Why did you eat a smaller quantity of fish or eat fish with less frequency?</i>			
Reduced income	67	65	81
Not available	12	14	22
Higher price	13	12	4
Afraid of COVID	10	7	8
Other	26	15	10
Vegetables – did you eat them less often than normal?	2	2	3
Orange vegetables – did you eat them more often than normal?	4	0	3
Leafy green vegetables – did you eat them more often than normal?	33	25	20
Other vegetables – did you eat them more often than normal?	14	9	6
Diet diversity score for women (MDD-W)	6.4	6.4	6.8
Observations	606	543	503

Source: IFPRI/MSR telephone survey (June, August, and October 2020).

The main reason reported for lower meat and fish consumption was reduced income. Other reasons reported included higher prices and fear of contracting COVID-19 when purchasing or eating meat. When asked about the reasons for their lower consumption levels in the February to May period, around 13 percent and 12 percent of respondents noted that meat and fish were not available, respectively. Fewer supply problems were reported in June and July, though we see a renewed reporting of lower availability of meat (16 percent) and fish (22 percent) among respondents with lower consumption in August and September.

In contrast, respondents were harvesting and utilizing more vegetables from their neighborhood, resulting in higher than usual vegetable consumption, though to a smaller extent in August and September compared with previous survey periods. In August and September, the overall dietary

diversity score for sample households continued to be relatively high (6.8) and significantly higher than the dietary diversity in our baseline survey in January 2020 (4.9). However, while we can confidently compare the dietary diversity scores from the three rounds of the telephone survey, some caution on interpreting our results as an improvement in dietary diversity compared to the baseline survey is warranted given the change in survey methods from face-to-face to telephone interviewing.

Ninety-seven percent of respondents received health-related messages in August and September. Seventy-five percent also received nutrition information, though surprisingly more men reported having received nutrition-related messages (81 percent) than did women (70 percent).

Recommended actions

The persistent effects of the COVID-19 crisis on rural household incomes are alarming. Though the Government of Myanmar has successfully reached households in the survey areas with livelihood support, the survey households have experienced large income reductions and are attempting to offset these reductions by depleting savings, selling major assets, borrowing, and reducing food expenditures. These responses may jeopardize future investment opportunities as well as the health and wellbeing of their members. It remains critical that the Government of Myanmar and its development partners continue to support households through the crisis and its immediate aftermath, as well as continue to seek ways to support livelihoods when the immediate disruptions of COVID-19 mitigation measures subside. Supporting rural non-farm businesses and employment will be key to a faster economic recovery.

Nutrition messages have reached households and as such, households are striving towards consuming a balanced, diverse, and nutritious diet. However, more men are reached with these nutrition messages than women. Given that women play a central role in household nutrition through their responsibilities for cooking household meals, targeting women with these nutrition messages is key. The false perceptions about the spread of COVID-19 through meat or fish consumption as well as the reported reductions in availability of protein-rich foods, such as meat and fish, during periods of stringent mitigation measures are worrying. Future nutrition messages could try to debunk false myths about these foods.

Options for targeting cash transfers, particularly to female household members, women producers, and women entrepreneurs, should be explored. If women are not explicitly targeted for interventions, they are often missed. The past Maternal and Child Cash Transfer program in Myanmar has demonstrated that transferring money to women is a successful approach to increasing the share of the household budget that is under women's control.⁵ Putting money in women's hands is also strongly recommended as a best practice in many countries. It has been shown to generate a positive impact on women's empowerment, which is often associated with positive outcomes such as improved child nutrition, higher educational attainment, and increased household welfare.^{6,7}

⁵ Maffioli, E.M., E. Field, T.N. Zaw, F. Esu, and A. Fertig. 2019. "LEGACY Program Randomized Controlled Trial Endline Report." Save the Children UK and IPA (Innovations for Poverty Action).

⁶ Doss, C. 2013. "Intrahousehold Bargaining and Resource Allocation in Developing Countries." *World Bank Research Observer*, 28 (1): 52-78.

⁷ Hidrobo, M., N. Kumar, T. Palermo, A. Peterman, and S. Roy. 2020. *Gender-Sensitive Social Protection. A Critical Component of the COVID-19 Response in Low- and Middle-Income Countries*. IFPRI Issue Brief. Washington, DC: International Food Policy Research Institute.

ABOUT THE AUTHOR(S)

Isabel Lambrecht is a Research Fellow in the Development Strategy and Governance Division (DSGD) of the International Food Policy Research Institute (IFPRI), based in Yangon, Myanmar. **Catherine Ragasa** is a Senior Research Fellow in DSGD of IFPRI, based in Washington, DC. **Kristi Mahrt** is a Senior Research Analyst in DSGD of IFPRI, based in Colorado, USA. **Hnin Ei Win** and **A Myint Zu** are Research Analysts in DSGD of IFPRI, based in Yangon, Myanmar. **Zin Wai Aung** is a Research Consultant, based in Nay Pyi Taw, Myanmar. **Michael Wang** is a Leland International Hunger Fellow in DSGD of IFPRI, based in Yangon.

ACKNOWLEDGMENTS

This work was undertaken as part of the Myanmar Agricultural Policy Support Activity (MAPSA) led by the International Food Policy Research Institute in partnership with Michigan State University. Funding support for this study was provided by the CGIAR Research Program on Policies, Institutions, and Markets, the United States Agency of International Development, and the Livelihoods and Food Security Fund. Funding for the baseline study was provided by the Japanese SUN trust fund and by the CGIAR Research Program on Policies, Institutions, and Markets.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

1201 Eye St, NW | Washington, DC 20005 USA
T. +1-202-862-5600 | F. +1-202-862-5606
ifpri@cgiar.org
www.ifpri.org | www.ifpri.info

IFPRI-MYANMAR

No. 99-E6 U Aung Kein Lane
Than Lwin Road, Bahan Township
Yangon, Myanmar
IFPRI-Myanmar@cgiar.org
www.myanmar.ifpri.info



USAID
FROM THE AMERICAN PEOPLE



The Myanmar Strategy Support Program (Myanmar SSP) is led by the International Food Policy Research Institute (IFPRI) in partnership with Michigan State University (MSU). Funding support for Myanmar SSP is provided by the CGIAR Research Program on Policies, Institutions, and Markets; the Livelihoods and Food Security Fund (LIFT); and the United States Agency for International Development (USAID). This publication has been prepared as an output of Myanmar SSP. It has not been independently peer reviewed. Any opinions expressed here belong to the author(s) and do not necessarily reflect those of IFPRI, MSU, LIFT, USAID, or CGIAR.

© 2020, Copyright remains with the author(s). This publication is licensed for use under a Creative Commons Attribution 4.0 International License (CC BY 4.0). To view this license, visit <https://creativecommons.org/licenses/by/4.0>.

IFPRI is a CGIAR Research Center | A world free of hunger and malnutrition