



Monitoring the Impact of COVID-19 in Myanmar

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

Isabel Lambrecht, Catherine Ragasa, Kristi Mahrt, Zin Wai Aung, and Michael Wang

Key findings

- About 56 percent of households experienced income loss. This loss stemmed from different livelihood sources: farming, nonfarm enterprises, wage employment, and remittances.
- Landless households were more severely affected by the crisis, largely due to lost farm and nonfarm employment and to negative impacts on rural enterprises. Households with land were also negatively affected through lower crop prices, lower crop demand, and difficulties accessing inputs for crop production.
- A quarter of all households reduced food expenditures to cope with income loss. About one in five households borrowed from friends or informal lenders, and one in six sold assets, such as gold and jewelry, land, or cows and pigs.

Recommended actions

- Health and nutrition-related information are at least partly effective and reach large parts of the population. Hence, these information campaigns should be continued and can include new messages as required.
- Continue building momentum generated from the COVID-19 Economic Recovery Plan, support official and safe access to loans, and protect households from harmful loan arrangements.
- Geographical balance and inclusion of vulnerable households in interventions can still be improved. Where possible, cash transfers should explicitly target women producers and entrepreneurs.

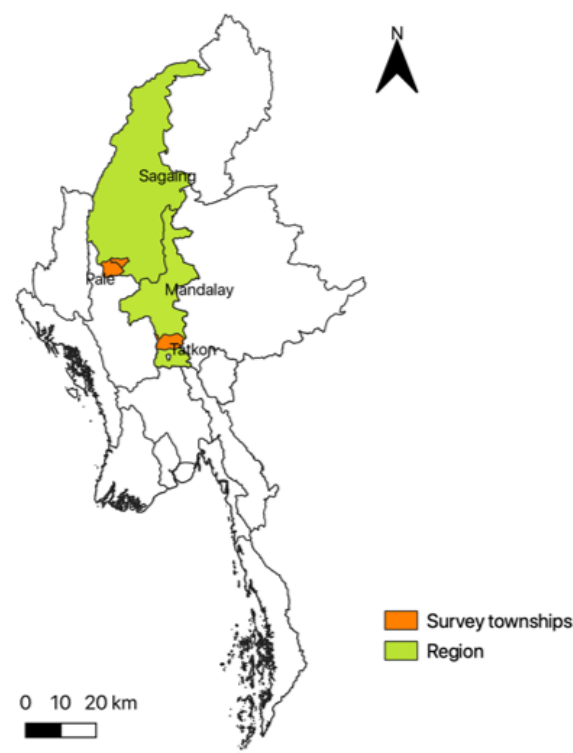
Introduction

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

phone survey data.¹ The first round of the phone survey was conducted between 10 and 21 June 2020 and inquired about the effects of COVID-19 on agricultural production and other livelihood sources from February to May 2020. In total, 1,070 male and female respondents from 605 households in 30 communities were interviewed. The sample for the phone survey covers all non-irrigation households and all women-adult-only households (WHH)², as these categories of households were few in the baseline survey, and a randomly selected subsample of the dual-adult irrigation households covered in the baseline.

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 focus pilot sites of the Myanmar Agricultural Development Support Project (ADSP). These study sites provide a good setting to assess the impact of COVID-19 on irrigated and non-irrigated agricultural production as well as on the varied livelihood strategies of farming (landed) and non-farm (landless) households in rural communities.

Figure 1. Survey areas in Myanmar



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

Effects of COVID-19 on crop production and marketing

Impacts experienced between February and May 2020

Two-thirds of the households surveyed grew crops between February and May 2020. The most commonly grown crops were sesame, grown by 73 percent of households that grew crops, chickpea (19 percent), and green gram (16 percent). Whereas farmers planted sesame and green gram only in May and April, they planted chickpea earlier. Nearly all farmers had harvested their chickpea at the time of the survey.

Few farmers in our sample had altered their planting times or the cropping area planted due to COVID-19. However, about 16 percent of the farmers surveyed experienced additional difficulties in purchasing inputs (Table 1). This was highest among sesame growers, with 20 percent experiencing difficulties. In particular, farmers of all three crops experienced difficulties in accessing farm machinery services (41 percent); pesticides, herbicides, or fungicides (50 percent); and inorganic

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 Thirteen percent of all baseline survey respondents did not provide telephone numbers, even though almost all reported owning at least one cell phone during the baseline survey. Of those with telephone numbers, 76 percent were successfully interviewed. 23 percent did not have working telephone numbers or did not answer within seven call attempts. One percent did not give consent for the interview. Women-adult-only households were 12 percent less likely to provide telephone numbers than dual-adult households, and the poor (measured in terms of dwelling deprivation) were 9 percent less likely than the nonpoor to provide telephone numbers. We adjusted the results with inverse probability weights to account for the under sampling of the poor and women-adult-only households in the phone survey. Among those with telephone numbers (sampling for the phone survey), we did not observe any distinct differences in household characteristics recorded in the baseline survey between those interviewed successfully in the phone survey and those with nonworking telephone numbers.

fertilizer (46 percent). For all crops grown, about a quarter of farmers experienced difficulties in finding labor and 21 percent of these farmers (5 percent of all farmers) reported that labor was more expensive than usual for all crops. On average, these farmers reported wages were about 20 percent higher than what they would usually expect at this time of the year.

Table 1. COVID-19 effects on crop production, February to May 2020

| Experienced effect due to COVID-19 | Percent of farmers reporting |
|---|------------------------------|
| Difficulty in purchasing inputs | 16 |
| <i>If any difficulties, for which inputs:</i> | |
| Pesticides, herbicides, fungicides | 50 |
| Inorganic fertilizer | 46 |
| Farm machinery services | 41 |
| Improved seed | 12 |
| Finding labor | |
| No difficulty | 77 |
| Difficulty finding male labor | 16 |
| Difficulty finding female labor | 15 |
| Wages compared to normal | |
| Same as normal | 78 |
| Higher than normal | 21 |
| Lower than normal | 1 |
| Observations | 545 |

Source: IFPRI/MSR phone survey (June 2020).

Nearly two-thirds of farmers who harvested between February and May 2020 experienced difficulties selling their harvest, particularly for green gram (85 percent) and chickpea (68 percent) (Table 2). More than half of these farmers (60 percent) reported receiving lower prices and many reported suffering from poor demand or lack of buyers, market closure, movement restrictions, and lack of transportation to markets. Thirteen percent of farmers also used a different marketing channel, with 8 percent more farmers selling produce through transportation services this year rather than through in-person visits to markets.

Table 2. Experienced and anticipated challenges in selling crop harvest, February to May 2020, percent of farmers producing crops

| | Experienced challenges | Anticipated challenges |
|--|------------------------|------------------------|
| Any difficulties in selling your harvest due to COVID-19? | 65 | 34 |
| <i>If yes, which difficulties:</i> | | |
| Lower prices | 60 | 73 |
| Poor demand; few or no buyers | 31 | 41 |
| Markets closure | 30 | 7 |
| Movement restrictions | 28 | 17 |
| No means of transportation to markets | 21 | 22 |
| Changed marketing channel or method compared to last year? | 13 | n/a |
| Observations | 126 | 418 |

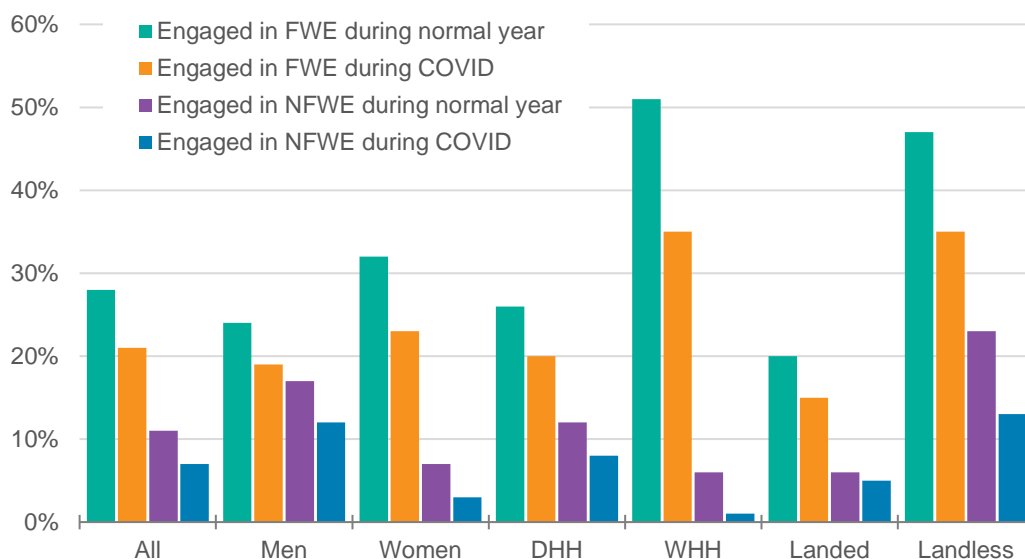
Source: IFPRI/MSR phone survey (June 2020).

More than a third of farmers anticipate they will have difficulties in selling their crops in coming months. Almost three-quarters worry about lower prices, and 41 percent worry that they will not be able to find buyers for their produce. While there are fewer concerns over market closures, there are continued concerns about movement restrictions and limited options for transportation to markets.

Effects of COVID-19 on nonfarm businesses, employment, and migration

Aside from farming, both landed and landless households rely on other sources of income, including wage or salary employment, nonfarm enterprises, and remittances. Thirty-two percent of women and 24 percent of men usually engage in farm wage labor (Figure 2). This share is twice as high among respondents in women-adult-only households as compared to those in dual-adult households. Moreover, the share is also more than twice as high in landless households as compared to landed households.

Figure 2. Engagement in farm wage employment and nonfarm wage employment



Source: IFPRI/MSR phone survey (June 2020).

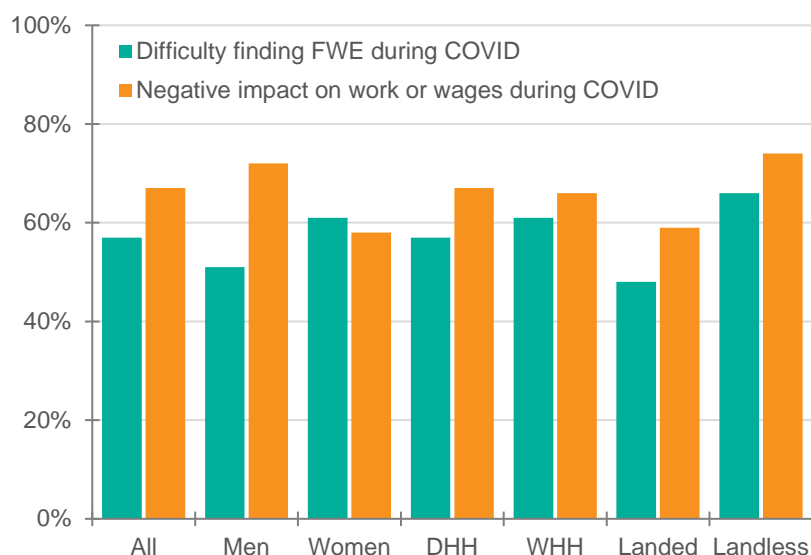
Note: FWE = farm wage employment. NFWE = nonfarm wage employment. DHH = dual-adult household. WHH = women-adult-only household.

Of those usually employed in farm wage labor, 61 percent of women and 51 percent of men had difficulty finding work during the recent crisis because of less work being available than usual, lower pay, or temporary movement restrictions. A third of both men and women who would usually engage in farm wage labor did not do so during the crisis, largely due to few employers hiring. For women, additional reasons for no longer engaging in farm wage labor were household chores and childcare. The discrepancy between farmers experiencing challenges finding labour and laborers experiencing difficulties finding work may indicate significant frictions in the labor market as a result of the COVID-19 crisis.

A smaller percentage of men and women, 17 percent and 7 percent, respectively, were usually engaged in nonfarm wage employment (Figure 2). Of that share, 72 percent of men and 58 percent of women experienced a negative impact on nonfarm work and wages during the crisis (Figure 3). Moreover, 36 percent and 65 percent of men and women, respectively, who normally work in nonfarm wage employment did not engage in any nonfarm wage employment during this period.

About 60 percent of nonfarm businesses were affected by COVID-19. However, no difference was observed between female- and male-led nonfarm businesses. Half of these businesses reported having no work at all, while the other half reported facing less demand during the COVID-19 disruptions between February and May 2020.

Figure 3. Impact of COVID-19 on finding farm wage employment and nonfarm work and wages



Source: IFPRI/MSR phone survey (June 2020).

Note: FWE = farm wage employment. DHH = dual-adult household. WHH = women-adult-only household.

Compared to the January 2020 survey sample, our June phone survey sample included 328 returning migrants or new adult additions. The remittances received by 38 percent of households were affected by COVID-19. Remittances from both household and non-household members (cash and in-kind) received during the period from February to May averaged MMK 790,000 (USD 550). For comparison, remittances reported received from non-household members in the baseline survey of January 2020 averaged MMK 980,000 (USD 680) over a four-month period, excluding any in-kind remittances not captured in the baseline survey. Clearly, households suffered significant reductions in income due to the loss of or reduction in remittances. Landless households previously received more remittances than landed households but suffered greater reductions in remittances due to COVID-19.

Effects of COVID-19 on income loss and coping mechanisms

Responses to questions regarding household income changes and coping mechanisms show COVID-19's dramatic impact on rural households in the first four months of the COVID-19 crisis. Fifty-seven percent of households experienced income loss (Table 3). A larger share of landless households than landed households were affected by income loss. The main coping mechanisms used to manage these reductions in income included using savings; reducing food expenditures; borrowing, mainly from friends and informal lenders; and selling assets, mainly gold and jewelry (Figure 4).

We observed some differences in coping mechanisms used: more landless households than landed or irrigation households reduced food expenditure; more landed households sold key agricultural assets such as cows and pigs or agricultural parcels and implements; and more landless households sold gold or jewelry. We also encountered one household that sold seeds stored for the next season and one household that sold paddy originally stored for home-consumption. Borrowing from sources other than the Myanmar Agricultural Development Bank was uncommon in the study sites before COVID-19 and seems to have increased with COVID-19.

Table 3. Income losses due to COVID-19 and coping strategies employed, percent of households reporting

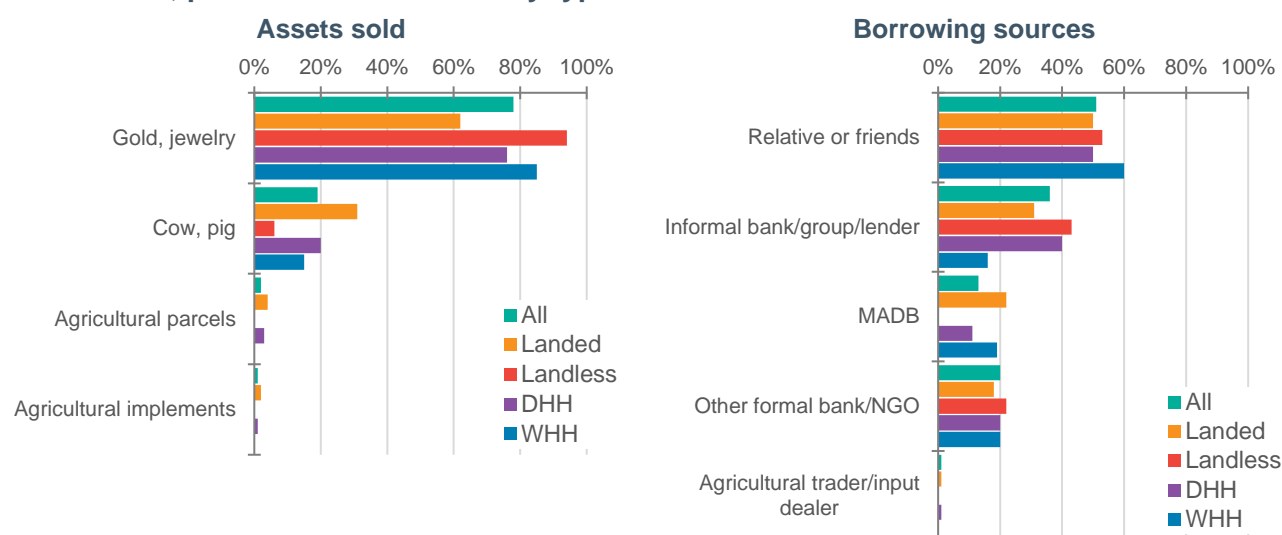
| | All | Landed | Landless | | DHH | WHH | |
|---|-----|--------|----------|-----|-----|-----|-----|
| Decrease in total household income due to COVID-19 crisis | 57 | 50 | 72 | *** | 58 | 50 | ns |
| Coping strategies employed | | | | | | | |
| Used savings to deal with income reduction | 79 | 81 | 77 | ns | 80 | 71 | ns |
| Sold assets to cope with income reduction | 38 | 32 | 47 | ns | 36 | 49 | ns |
| Borrowed to cope with income reduction | 40 | 38 | 42 | ns | 37 | 56 | * |
| Reduce food expenditures to cope with income reduction | 53 | 51 | 59 | ns | 54 | 47 | ns |
| Cash or in-kind transfers received related to the COVID-19 crisis | | | | | | | |
| Received and accepted transfer from government | 33 | 19 | 64 | *** | 29 | 60 | *** |
| Received, but did not accept transfer from government | 5 | 6 | 2 | ns | 5 | 2 | ns |
| Received and accepted transfer from an NGO or from private individuals | 6 | 5 | 7 | ns | 5 | 12 | * |
| Received, but did not accept transfer from an NGO or from private individuals | 1 | 1 | 0 | * | 0 | 2 | ns |
| Observations | 605 | 523 | 82 | | 536 | 69 | |

Source: IFPRI/MSR phone survey (June 2020).

Note: DHH = Dual-adult household. WHH = women-adult-only household.

Proportion comparisons shown between Landed and Landless and between DHH and WHH, respectively. *** 1%, ** 5%, * 10% levels of significance. ns=not significant.

Figure 4. Coping with income reduction due to COVID-19 – assets sold and borrowing sources, percent of households by type



Source: IFPRI/MSR phone survey (June 2020).

Note: DHH = Dual-adult household. WHH = women-adult-only household. MADB = Myanmar Agricultural Development Bank.

For sale of assets, statistically significant difference are seen between Landed and Landless households for gold and jewelry and for cows and pigs at the 1% level of significance. For borrowing sources, statistically significant difference are seen between DHH and WHH for informal bank/group/lender at the 5% level of significance.

More than a third of the households surveyed received a cash or in-kind transfer from the government between February and May 2020 to mitigate the negative economic impacts of COVID-19 (Table 3). A smaller share received transfers from an NGO or from private individuals. These transfers were more often given to landless and women-adult-only households, which are typically more vulnerable in times of shocks or crises. This is an early indication of the government targeting those who may have greater need within the study communities. However, we also find that households in some locations were less likely to receive transfers and men in the household were more often than women to be the recipients of transfers.

Effects of COVID-19 on nutrition

The frequency and quantity of meat and fish consumed by the survey households fell during the COVID-19 crisis, but strong evidence of increased vegetable consumption emerged both from the phone survey and from the community interviews. Nearly 40 percent of households ate meat less often than usual or ate smaller quantities of meat than usual. More than three quarters of respondents stated that reduced income was the reason for their reduced meat consumption. Others reported higher prices or the lack of availability of meat. Moreover, about 30 percent of households ate fish less frequently or ate smaller quantities than usual. Like meat, this was due primarily to reduced income, but also to higher fish prices or limited availability of fish.

Table 4. Effects of COVID-19 on nutrition

| | Percent of respondents |
|--|------------------------|
| Ate meat less often than normal | 40 |
| Ate smaller quantity of meat | 39 |
| Why did you eat a smaller quantity of meat or eat meat with less frequency? | |
| Reduced income | 78 |
| Not available | 15 |
| Higher price | 17 |
| Afraid of COVID | 11 |
| Other | 11 |
| Ate fish less often than normal | 29 |
| Ate a smaller quantity of fish | 28 |
| Why did you eat a smaller quantity of fish or eat fish with less frequency ? | |
| Reduced income | 69 |
| Not available | 10 |
| Higher price | 13 |
| Afraid of COVID | 10 |
| Other | 25 |
| Ate vegetables less than usual | 2 |
| Ate orange vegetables more than usual | 4 |
| Ate leafy green vegetables more than usual | 36 |
| Ate other vegetables more than usual | 14 |
| Diet diversity score for women (MDD-W) | 6.5 |
| Observations | 605 |

Source: IFPRI/MSR phone survey (June 2020).

Landless households were more likely to reduce the quantity of meat (47 percent) and fish (35 percent) they consumed, as compared to landed households (36 percent and 25 percent, respectively). Similarly, we find larger reductions in meat and fish consumption among women-adult-only households than in dual-adult households, although these differences are not statistically significant. Notably, 10 percent of those reducing meat or fish consumption also noted as their reasoning being afraid of COVID-19. Government messages warned against the risk of contracting the COVID-19 virus through consuming raw meat or fish. This may have deterred households in consuming fish or meat.

In contrast, respondents were harvesting and utilizing more vegetables available in their neighborhood, so vegetable consumption increased.

Overall, dietary diversity was relatively high (6.5) and significantly higher than the dietary diversity found in our baseline survey of January 2020 (4.9) (Table 4). No significant differences were observed in overall dietary diversity scores across household types. Most respondents consumed a greater diversity of foods, with noticeable increases in almost all food groups—especially vegetable,

fruits, nuts, beans, egg, and dairy. Similar patterns were seen for grains, meat, and fish, consumed by almost all households in the 24 hours prior to both survey rounds.

However, some skepticism on this improvement in dietary diversity compared to the baseline survey is warranted given the change in survey method from face-to-face to phone interviews. Nevertheless, the increase can partly be explained by seasonality – the period covered in our phone survey coincides with the mango season and post-harvest for pre-monsoon crops (e.g., chickpeas). Another explanation from the community interviews is that vegetable consumption increased because people have more time to harvest wild vegetables. Moreover, the crisis and having less money encourage resourcefulness and innovation. Finally, an additional explanation could be greater promotion and education regarding nutritious foods from TV, radio, Internet, and phone messaging. The community and household interviews show that almost all individuals, both women and men, have access to health or nutrition-related information.

Recommendations

- Our findings suggest that health and nutrition-related information are at least partly effective and reach large parts of the population. Hence, these information campaigns should be continued and can include new messages as required.
- During the COVID-19 crisis, households depended more on informal sources for borrowing, which may offer greater flexibility, but at the risk of exposing households to more exploitative loan schedules and interest rates. Government should continue building momentum generated in government's comprehensive COVID-19 Economic Recovery Plan and continue to support official and safe access to loans, while staying vigilant to protect households from harmful loan arrangements.
- Targeted interventions are already trying to reach more vulnerable households, such as landless or women-adult-only households. However, geographical balance and inclusion can still be improved. Where possible, transfers should explicitly be targeted to women producers and entrepreneurs. If women are not explicitly targeted for interventions, but, rather, are assumed to be reached, they are often missed. The recently completed 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 under women's control.³ Putting money in women's hands is also recommended as a good practice in many countries as it has been shown to generate a positive impact on women's empowerment, which is often strongly associated with positive outcomes on child nutrition, education, and household welfare.^{4,5}

³ 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.

⁴ Doss, C. 2013. "Intrahousehold Bargaining and Resource Allocation in Developing Countries." *The World Bank Research Observer*, 28 (1): 52-78.

⁵ 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 (IFPRI).

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. **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.

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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



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