



Monitoring the Agri-food System in Myanmar

The rising costs of healthy diets – December 2021 survey round

Key findings

- Between December 2020 and December 2021, the cost of an average healthy diet increased by about 20 percent at the national level and increased slightly more in urban areas (22 percent) than in rural areas (19 percent).
- Healthy diets are more expensive than diets commonly consumed in Myanmar. It is estimated that the average common diet costs approximately two-thirds of the cost of a diet consistent with healthy diets recommended in food-based dietary guidelines.
- The cost of a healthy diet is highest in the Hills and Mountains agro-ecological region and lowest in the Dry Zone. The fastest rise of the cost of healthy diets was seen in the Coastal areas, where the cost increased by nearly 30 percent in 2021.
- Between September 2021 and December 2021, we observed a 21 percent increase in the price of vegetables.
- Between December 2020 and December 2021, inflation in micronutrient-rich food groups ranged from about 15 percent (vegetables, fruits, and animal source foods) to 24 percent (pulses). However, there is considerable variation between regions.
- The high and increasing cost of a healthy diet over the last year is worrisome, especially given the declining incomes seen in Myanmar. The rise in cost does not bode well for nutritional outcomes in the country this year.

Recommended actions

- It is important that vendors and their suppliers are allowed to continue to trade and that the smooth functioning of the food trading sector is prioritized during this difficult period. There should be few or no restrictions on national and international food transport flows and access to banking services for vendors should be maintained.
- Expanding social safety net interventions and integrating nutritional considerations—through larger allowances—to allow vulnerable and poorer households to afford nutritious but more expensive foods in their food basket should be explored.
- As pulses are widely produced domestically and are the cheapest source of protein in the country, promoting their expanded consumption should be considered.

Introduction

This Research Note presents the results from ten rounds of a telephone survey with food vendors conducted in rural and urban zones throughout Myanmar and focuses on the results from the latest round completed in December 2021. The purpose of the survey is to provide data and insights on Myanmar's food markets to interested stakeholders to foster better understanding of the effects of shocks related to COVID-19 and the ongoing political crisis. In particular, the note explores changes in food prices and their impact on the cost of common and healthy diets.

Data and descriptive statistics

We conducted ten rounds of food vendor phone surveys between June/July 2020 and December 2021. The areas in which the surveyed food vendors operate are shown in Table 1. In the most recent round, 187 food vendors were interviewed. Food vendors in urban areas make up 15 percent of the sample, with the remaining 85 percent in rural areas. The vendors selected for the survey sample were those that are well informed on food markets overall; they deal regularly with food traders such as suppliers and wholesalers, are highly numerate, and are knowledgeable about food prices. Table 1 shows the basic characteristics of the food vendors in our sample. More than half of the vendors are women, their average age is 42 years, and almost all vendors operate out of their own general stores.

Table 1: Profile of food vendors in the December 2021 survey sample, by location

	Hills	Dry Zone	Delta	Coastal	Total
Female (%)	63	53	58	43	57
Age (years)	40	43	43	48	42
General store owner (%)	98	93	87	100	93
Observations	51	74	55	7	187

Source: Food Vendor Survey–December 2021.

Note: Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan); Dry Zone (Mandalay, Magwe, Nay Pyi Taw, Sagaing); Delta (Ayeyarwady, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi).

The survey was designed to collect information on foods from a diversity of food groups. Specifically, we use vendor-reported current prices of the cheapest commonly consumed varieties of rice, potatoes, pulses, bananas, dark green leafy vegetables, chicken, pork, fresh and dried fish, and oil.

Average common and healthy diet food baskets

In this analysis, we estimate the evolving cost of two food baskets: 1) average reported quantities of foods representative of those included in the in the vendor survey consumed by households surveyed in the 2015 Myanmar Poverty and Living Conditions Survey (MPLCS); and 2) quantities of foods associated with a recommended healthy diet. Presenting dietary costs based on reported common consumption patterns alongside the cost of a healthy diet allows us to compare changes in costs that households face with a common consumption pattern compared to the cost of acquiring a recommended healthy diet. We evaluate the cost of these two diets using ten types of food with the aim of tracking changes in healthy diet costs, rather than providing a nuanced estimate of costs faced by households of varying compositions.

Food inflation is calculated by comparing the cost of a basket of foods in a base period to the cost of that same basket in subsequent periods, where the basket is derived from average food consumption reported in the national household survey. We estimate an analogous measure of

recommended healthy food inflation, where the basket is realigned to be consistent with food group quantities recommended in food based dietary guidelines.¹

Table 2 shows national average per capita daily quantities consumed, by each of the six food groups and area of analysis. It is to be noted that average common diet quantities are not representative of all foods consumed by households, but of types of foods collected in the vendor survey.²

In the absence of food-based dietary guidelines for the general population in Myanmar, guidelines from Bangladesh provide parameters for the recommended healthy diet, modified for ten types of foods collected in the vendor survey (Table 2). Both baskets are scaled to meet the average per capita energy requirement of individuals living in households surveyed in the MPLCS—2167 calories. For both the average and healthy diets, food group costs equal mean food group prices multiplied by dietary quantities.

Table 2: Daily per person food basket quantities (edible grams)

	Average per capita daily household MPLCS diet							Recommended Healthy Diet
	National	Urban	Rural	Hills	Dry	Delta	Coastal	
Starchy staples	394	300	430	389	372	398	454	360
Pulses	22	20	22	19	32	19	6	45
Animal source foods	75	81	72	54	55	92	96	160
Vegetables	173	170	174	158	195	163	172	450
Fruits	59	73	54	50	60	65	49	200
Oils	31	30	31	23	40	30	20	30

Source: Bangladesh Food Based Dietary Guidelines, 2015 MPLCS, and authors' calculations

Note: Average diet quantities are presented in food group equivalent quantities.³ The healthy diet guidelines adhere to average number of servings in the Bangladesh food base dietary guidelines. The absence of dairy products in the vendor survey is accommodated by increasing the average number of servings of the meat/fish/egg food group. The vendor survey collects prices for multiple items within the starchy staple and animal source food groups. For these food groups, the average diet food group costs equal the sum of the item level costs; the healthy diet food group costs equal the average quantity weighed cost of each item using weights based on average MPLCS consumption.

Table 2 illustrates important differences in the common average household consumption relative to the recommended healthy diet.⁴ Households over-consume starchy staples (rice and tubers), consume appropriate quantities of oils, and under-consume animal source foods (meat and fish), vegetables, fruits, and pulses.

Overall, the average diet reported by households surveyed in the 2015 MPLCS costs approximately two-thirds of the cost of a diet consistent with recommended healthy diet guidelines (971 MMK and 1,413 MMK in December 2021, respectively) (Figure 1). This cost margin is lower in urban areas (23 percent) compared to rural areas (34 percent). The costs of a healthy diet are highest in the Hills and Mountains agro-ecological region.

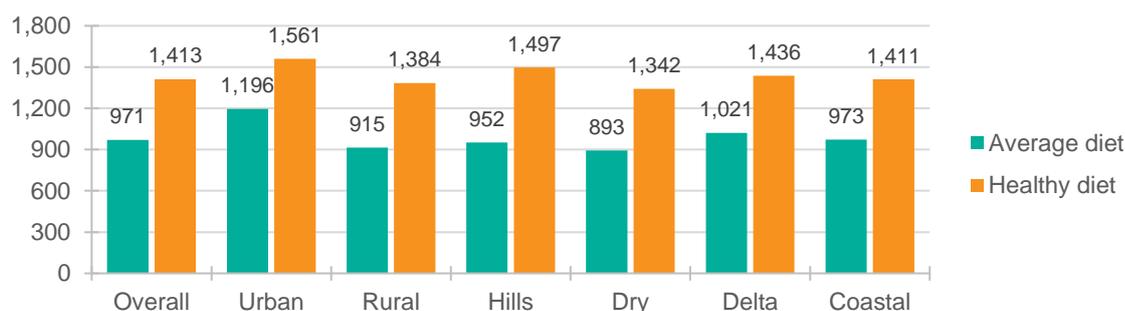
¹ The estimate of the cost of the healthy diet and changes in food prices are based on the food preferences cost of a healthy diet (CoRD-FP) and Nutritional Price Index presented in the Food and Agricultural Organization's The State of Food Security and Nutrition in the World 2020. Herforth, A., Y. Bai, A. Venkat, K. Mahrt, A. Ebel & W.A. Masters. 2020. Cost and affordability of healthy diets across and within countries. Background paper for the State of Food Security and Nutrition in the World 2020. Rome: FAO.

² Caution in interpretation is therefore warranted and better estimates could have been done if a more elaborate set of prices were available. However, such data are currently not available.

³ See Herforth, A., Y. Bai, A. Venkat, K. Mahrt, A. Ebel & W.A. Masters. 2020. Cost and affordability of healthy diets across and within countries. Background paper for the State of Food Security and Nutrition in the World 2020. Rome: FAO, page 14.

⁴ Modified using the dietary guidelines from Bangladesh.

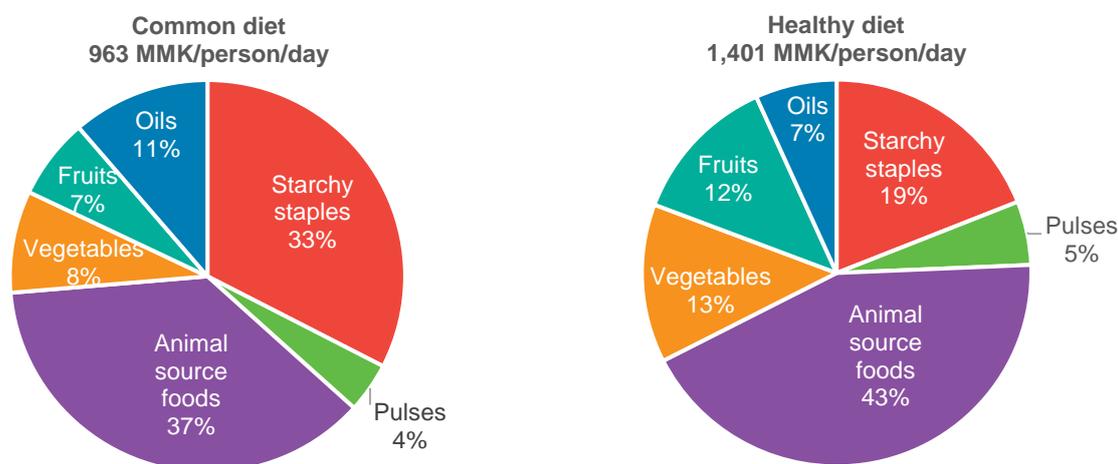
Figure 1: Average common and healthy diet costs in December 2021, by region (MMK/person/day)



Source: Food Vendor Survey–June/July 2020–December 2021.

Oils and starchy staples make up nearly half the cost of the average common diet—44 percent compared to 26 percent of the healthy diet. Thirty percent of the cost of the healthy diet can be attributed to fruits, vegetables, and pulses compared to a fifth of the average common diet (Figure 2).

Figure 2. Average and healthy diet costs and food group shares, December 2021



Source: Food Vendor Survey–Jun/Jul 2020–December 2021.

Changing diet costs

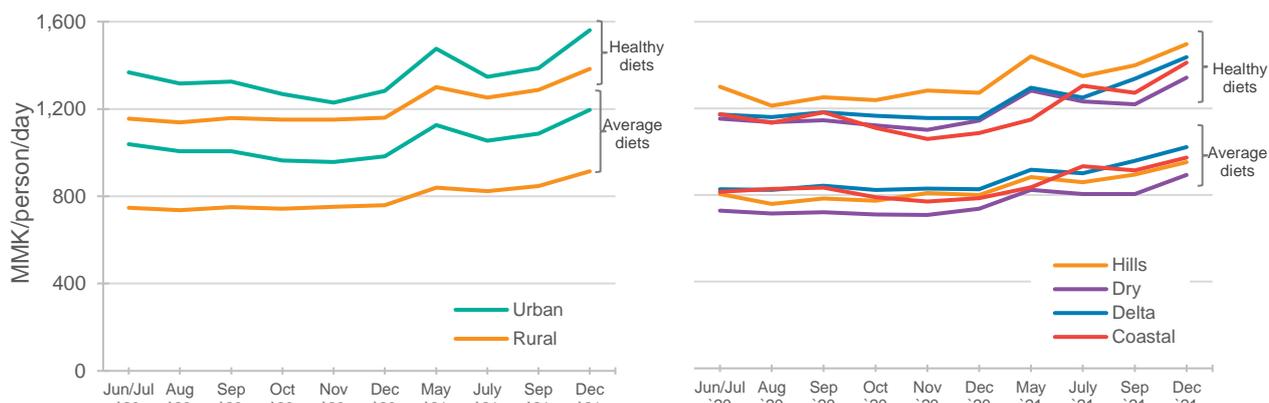
The costs of both the average diet and the healthy diet were relatively high in the first survey round (June/July 2020), followed by a period of gradual decline or stagnation. Costs spiked in May 2021, dipped, and then peaked in December 2021 (Table 3). These patterns are present in the costs of both diets in rural and urban areas and in most agro-ecological regions (Figure 3). Coastal areas (Rakhine and Tanintharyi) are the exception, where prices spiked in the July 2021 survey round rather than May 2021.

Table 3: Cost of the average common and healthy diets across survey rounds (MMK/person/day)

	Jun/Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	May 2021	Jul 2021	Sep 2021	Dec 2021
Average Common Diet	806	788	800	788	795	804	896	872	897	971
Healthy Diet	1,200	1,168	1,188	1,171	1,165	1,181	1,330	1,267	1,302	1,413

Source: Food Vendor Survey–June/July 2020–December 2021.

Figure 3: Cost of the average common and healthy diets across survey rounds, by urban/rural areas and agro-ecological region (MMK/person/day)

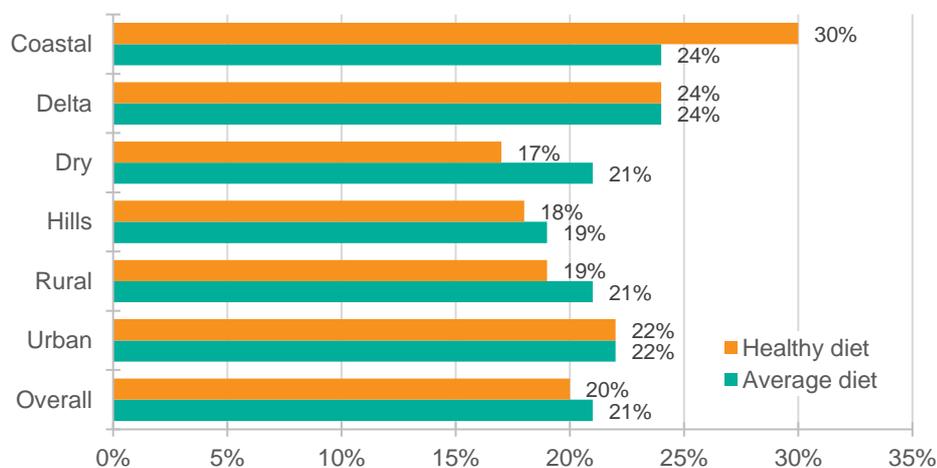


Source: Food vendor survey–June/July 2020–December 2021.

Note: Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan); Dry Zone (Mandalay, Magwe, Nay Pyi Taw, Sagaing); Delta (Ayeyarwady, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi).

Overall, costs of average common and healthy diets have risen at similar rates. Figures 4 and 5 show changes in the cost of diets in December 2021 compared to one year prior and compared to the previous survey (September 2021).

Figure 4: Percentage change in diet costs, December 2021 relative to December 2020



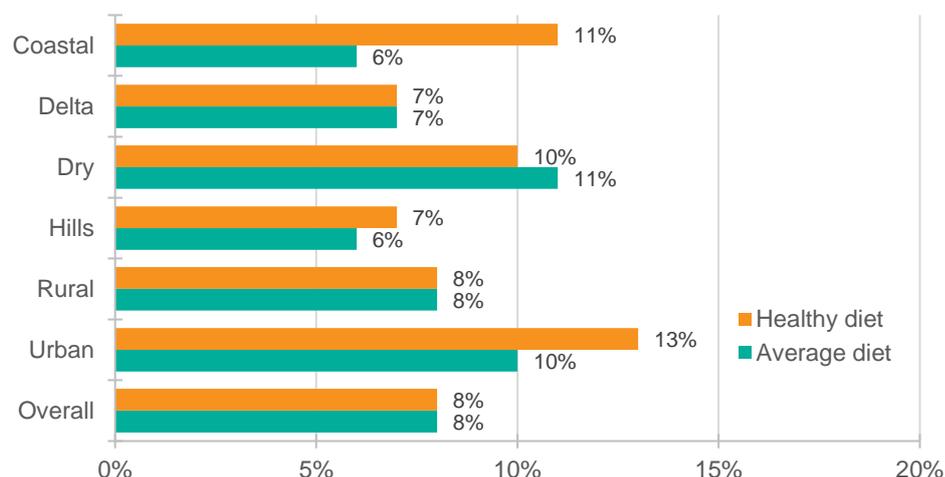
Source: Food vendor survey–December 2020, December 2021.

Note: Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan); Dry Zone (Mandalay, Magwe, Nay Pyi Taw, Sagaing); Delta (Ayeyarwady, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi).

In the past year, the cost of average common and healthy diets increased by about 20 percent in rural areas and by 22 percent in urban areas. The cost of healthy diets in Coastal areas rose by nearly 30 percent in 2021.⁵ The cost of rural diets increased by about 8 percent between September 2021 and December 2021, whereas average urban diet costs increased by 10 percent and healthy diet costs increased by 13 percent—a significant jump over a three-month period. Similarly large increases are seen in the Dry Zone and in the healthy diets in Coastal areas.

⁵ Some caution is warranted though given the relatively low number of observations (7) in the Coastal areas.

Figure 5: Percentage change in diet costs, December 2021 relative to September 2021



Source: Food vendor survey—September 2021, December 2021.

Note: Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan); Dry Zone (Mandalay, Magwe, Nay Pyi Taw, Sagaing); Delta (Ayeyarwady, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi).

Changing food group costs

Though overall costs of average common diets and healthy diets have increased at similar rates in December 2021 relative to December 2020 and September 2021, the food groups driving rising costs differ between diets and between time periods. Table 4 shows average food group inflation over one-year and three-month periods.

Table 4: Percent increase in average food group prices in December 2021

		Starchy staples	Pulses	Animal source foods	Vegetables	Fruits	Oils
Dec 2020 – Dec 2021	Overall	16	24	16	16	15	95
	Urban	19	36	16	26	17	84
	Rural	15	22	16	14	15	97
	Hills	18	17	15	0	22	105
	Dry	16	22	14	22	3	87
	Delta	17	38	16	37	21	97
	Coastal	7	13	28	37	46	93
Sep 2021 – Dec 2021	Overall	7	0.4	4	21	7	25
	Urban	4	-5	10	35	25	14
	Rural	8	1	3	19	4	27
	Hills	4	-2	6	10	12	26
	Dry	12	-4	6	38	-1	24
	Delta	7	7	1	18	8	23
	Coastal	-1	14	-1	27	48	35

Source: Food vendor survey—September 2021, December 2021.

Note: The vendor survey collects prices for multiple items within the starchy staple and animal source food groups. For these food groups, inflation is based on average quantity weighed food group prices per edible gram using weights based on average MPLCS consumption.

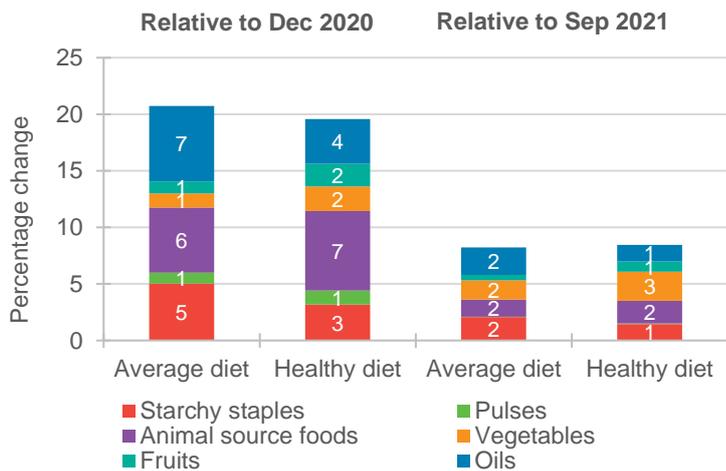
While potatoes comprise a relatively small share of starchy staple consumption (less than 2 percent), large increases in potato prices (86 percent relative to December 2020 and 64 percent relative to September 2021) drove up the average cost of starchy staples.

Between December 2020 and December 2021, oil price inflation was exceedingly high in every area (84-105 percent). Overall, inflation of all other food groups ranged between about 15-16 percent (starchy staples, animal source foods, vegetables, and fruits) and 24 percent (pulses). However, there was considerable variation between food groups at the regional level. For example, in the

Coastal areas, animal source foods, vegetable, and fruit group prices increased by 28, 37, and 46 percent, respectively. In the Hills and Mountains region, the vegetable group price did not change at all. In the last quarter of 2021 (September to December), the vegetable and oil food groups had the largest price increases in most areas (21 and 25 percent overall). Inflation in the fruit group was also high in urban and Coastal areas.

Average common diet costs are dominated by staples, animal source foods, and oils, and these food groups drove increased diet costs over the past year (Figure 6). In contrast, healthy diets are dominated by animal source foods with remaining costs more equally distributed between other food groups. As a result, the impact of large increases in oil prices was dampened while fruit and vegetable price inflation had a greater influence on the cost of healthy diets. Similar patterns are observed between September and December 2021.

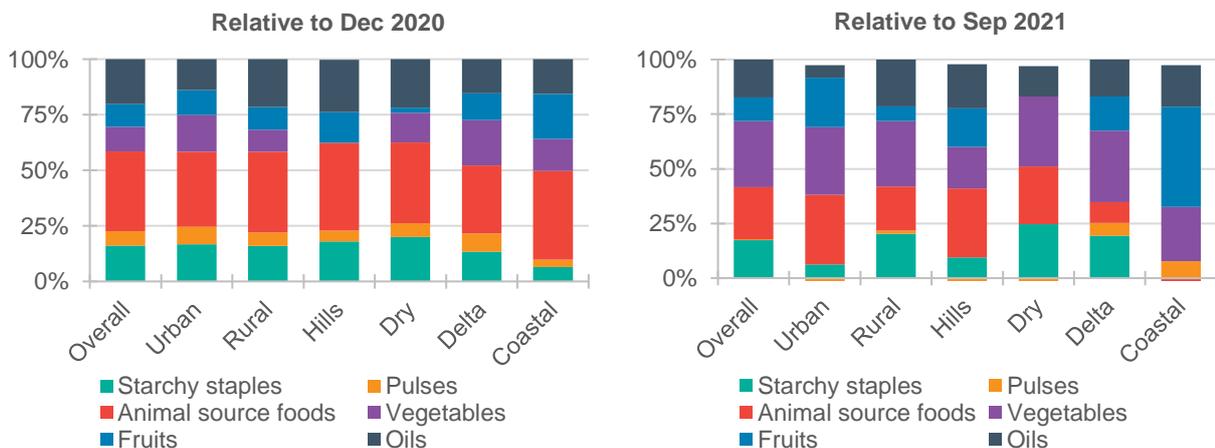
Figure 6: Percentage change in diet costs by food group, December 2021



Source: Food vendor survey–December 2020, September 2021, December 2021.

Focusing on healthy diets, food group contributions to rising diet costs are fairly consistent between regions (Figure 7). A notable exception is the Coastal areas, where rice prices were stagnant over the one-year period and where rice and dried fish prices decreased over the three-month period preceding December 2021.

Figure 7: Percentage share of increased healthy cost attributed to each food group, December 2021



Source: Food vendor survey–September 2021, December 2021.

Note: Hills and Mountains (Chin, Kachin, Kayah, Kayin, Shan); Dry Zone (Mandalay, Magwe, Nay Pyi Taw, Sagaing); Delta (Ayeyarwady, Bago, Mon, Yangon); Coastal (Rakhine, Tanintharyi).

Figure 7 highlights drivers of particularly large increases in healthy diet costs in Coastal areas (Figures 4 and 5). Animal source foods were the largest driver of this increase relative to the previous year, particularly increases in fresh fish prices, while large increases in fruit and vegetable prices had the biggest impact on costs in Coastal areas relative to three months prior.

ACKNOWLEDGMENTS

We would like to thank the Innovations for Poverty Action (IPA) Myanmar office, BC Finance, and Mandalay Yoma Solar Energy for their support with the survey. We also thank the staff of the Myanmar office of the World Food Programme (WFP) for constructive comments and suggestions.

This work was undertaken as part of the Feed the Future Myanmar Agricultural Policy Support Activity (MAPSA) led by the International Food Policy Research Institute (IFPRI) in partnership with Michigan State University (MSU). This study was made possible by the support of the American people through the United States Agency of International Development (USAID), under the terms of Award No. AID-482-IO-21-000x. Additional funding support for this study was provided by the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and the Livelihoods and Food Security Fund (LIFT). This publication has not gone through IFPRI's standard peer-review procedure. The opinions expressed here belong to the authors, and do not necessarily reflect the views of USAID, IFPRI, MSU, CGIAR, PIM, LIFT, IPA, BC Finance, Mandalay Yoma Solar Energy, WFP, or the United States Government

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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.

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