cepa centre for poverty analysis

ACTED

World Vision

RAPID FOOD SECURITY ASSESSMENT

JULY 2022

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I. Acronyms

BMI	Body Mass Index
CBSL	Central Bank of Sri Lanka
CCPI	Colombo Consumer Price Index
CEPA	Center for Poverty Analysis
COVID-19	2019 Novel Coronavirus Disease
DCS	Department of Census and Statistics
DHS	Demographic and Health Survey
EIU	The Economist Intelligence Unit
FAO	Food and Agriculture Organization
FCS	Food Consumption Score
FIES	Food Insecurity Experience Scale
FFP	USAID's Office of Food for Peace
GFSI	Global Food Security Index
HIES	Household Income and Expenditure Survey
IMF	International Monetary Fund
KOICA	Korea International Cooperation Agency
LCSFS	Livelihood Coping Strategies Food Security
LKR	Sri Lankan Rupee
MT	Metric Tonnes
NCPI	National Consumer Price Index
ORF	Observer Research Foundation
PLW	Pregnant and lactating women
RCSI	Reduced Coping Strategies Index
UN	United Nations
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	U.S. Agency for International Development

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IV. Foreword

This document is a compilation of rapid food security assessment carried out in 8 provinces of Sri Lanka to understand the vulnerability of households to food insecurity resulting from the disruptions to global and national food supply chains.

Globally, the levels of hunger were alarmingly high in 2021 with close to 193 million people acutely food insecure and in need of urgent assistance across 53 countries/territories, as reported by the Global Report on Food Crises 2022. The outlook for global food acute food insecurity in 2022 deteriorated further relative to 2021 with the unfolding of war in Ukraine and the repercussions of the war on global food, energy and fertilizer prices.[1]

Record high food prices have resulted in a global crisis that drive millions more into extreme poverty, hunger and malnutrition. The war in Ukraine, supply chain disruptions, and the continued economic fallout of the COVID-19 pandemic have pushed food prices to all-time highs. Increase in food prices has a greater impact on people in low- and middle-income countries, as they spend a larger share of their earning on food than people in high-income countries.[2]

Domestic price inflation continues to rise around the world with 94% of low-income, 89% of lower-middle-income, 83% of upper-middle-income, and 70% of high-income countries experiencing high food price inflation (greater than 5%) while many countries experiencing double-digit inflation. In most countries, food price inflation exceeded overall inflation.[2]

Food security has been a major concern in Sri Lanka since the early decades of the 20th century as Sri Lanka has been a food deficit export-import economy since the 19th century. Both historical and cultural factors have created significant concerns for national food security. Though Sri Lanka achieved self-sufficiency in food in its ancient past and the country has been known as the "Granary of the East" during the reign of the ancient kings, at present Sri Lanka faces several concerns in food security.[3]

Being a food deficit country, the emerging global food situation of rising prices have created adverse impacts on national and household food security, as international prices have an important bearing on the country's capacity to import food. Trade balance deficit, decline in foreign reserves, high foreign debt, and weak macro-economic concerns, such as large fiscal deficits, high debt servicing costs and inadequate government revenue, have an important bearing on national availability of food and household food security.[3]

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[1] **Global Network against Food Crises 2022**, Global Report on Food Crises 2022, Joint Analysis for Better Decisions, Food Security Information Network (FSIN)

[2] **The World Bank 2022**, Food Security Update, July 5th 2022, https://www.worldbank.org/en/topic/agriculture/brief/food-security-update

[3] **Nimal Sanderathne, Sharmini de Alwis 2014**, National Household Food Security in Sri Lanka, A Publication of the Center for Poverty Analysis, August 2014

V. Executive Summary

Background:

i. Sri Lanka is experiencing its worst economic turmoil and food security is at risk:

With the onset of global COVID-19 pandemic, Sri Lanka's main foreign exchange earning channels: the remittances of unskilled migrant workers, apparel exports, primary agricultural exports and tourism are acutely impacted. With dwindling revenues, an unwise decision to defend the Sri Lankan Rupee by depleting the foreign currency reserve and simultaneously printing money to settle domestic debt, Sri Lanka defaulted on its debt payment in the first half of 2022 which paved the way for massive inflation. Since early 2022 Sri Lanka continues to experience, very high levels of inflation, unemployment, lack of sufficient fuel, electricity and an acute shortage of dollars (The conversation, 2022). The report identifies that 28.3% or 6.7 million people are not consuming acceptable diets as of July 2022. A recent WFP report from identifies that 28.3% or 6.7 million people are not consuming acceptable diets as of July 2022 and with costs of a nutritious increasing by 156%, a quarter of the population (more than 5 million individuals) are reducing the number of meals taken (World Food Programme, 2022)

ii. The situation is exacerbated by adhoc policy changes in the agricultural sector:

In April 2021, the Sri Lankan government imposed an abrupt ban on imported chemical fertilizer which was triggered by the foreign exchange crisis—the abrupt change to agricultural production worsened the food crisis. While the government lifted the policy in November 2021, the policy made irreversible and disastrous impacts on production. The last 2021/22 *Maha* paddy cultivation season, the major cropping season reports a nearly 20% reduction in paddy yield (WFP and Sri Lankan National Planning Department, 2022). Moreover, the reduced availability of fertilizer reduced local maize production which directly impacted on animal feed and livestock sector of the country. The prices of eggs and chicken has increased more than 200% year-on-year in July 2022.

In this context, conducting a rapid food security assessment is a time-effective way to understand the causes, dimensions, and characteristics of food insecure households to implement appropriate mitigation activities. Therefore, the main objectives of this study are to identify: (i) the most food insecure groups in surveyed areas, (ii) the causes and magnitude of the food insecurity situation, (iii) the location specific coping ability indicators for food security monitoring, and (iv) the appropriate mitigation interventions for alleviating the food insecurity problem.

Data and Methods:

i. The rapid food security assessment was carried out in June and July 2022 via face-to-face interviews that covered 4,104 households:

Trained enumerators gathered data using their mobile devices with KoboToolbox. The surveyed households were distributed over 46 Divisional Secretariats across 15 districts and 8 provinces. These households were selected using stratified random sampling method and three strata were used for sample selection: most vulnerable, vulnerable, and non-vulnerable households. Criteria such as

household income, livelihoods, presence of disabled members, and the number of dependents were used to determine household vulnerability status.

ii. The characteristics of the households in the sample are similar to national statistics:

77% of the households were located in the rural sector, three out of four households were either vulnerable or most vulnerable. 90% of the surveyed households were male-headed and had an average of four members. About a quarter of the households had at least one dependent above 59 years old, and a third of them had children under five years old.

iii. Data was analyzed using descriptive statistics:

This includes mean values and cross-tabulations, enabling the interpretation of data in a simpler and more meaningful way. Results were disaggregated based on socio-economic and geographic characteristics where applicable.

iv. It should be noted, however, that the data is not representative:

The non-random sample section and limited sample size do not allow us to make statistically valid inferences at the district level. The sufficiently large sample allows us to improve the confidence of the results but given the rapidly changing economic landscape, conclusions drawn here are time sensitive.

Key Findings:

i. Households experienced a decrease in income amidst soaring inflation:

About two-thirds of the respondents to the survey indicated that their household income declined year-on-year. Of the respondents who indicated a decline in household income, two-thirds of them reported a decline in household income exceeding 25%. Given the increase in inflation exceeding 60% during the same period and food prices nearly doubling year-on-year, this affects the food security of households (Bloomberg, 2022).

The reduction in household income was driven by several factors linked to the lack of foreign reserve and debt default that caused inflation. Among households reporting a decrease in income, half of them attributed this to unavailability of work--I.e., lack of opportunities to partake in economic activity amidst soaring food price inflation. Power cuts, unavailability of fuel for vehicles and machines and lack of agricultural inputs (primarily chemical fertilizer) were all reasons that respondents cited as reasons for the falling income. Despite emerging from the pandemic, the extended lock downs in past years and set back in the hospitality industry loom large in Sri Lanka where more than 60% of those earning an employment income were participating in the informal economy prior to the pandemic (ILO, 2018).

ii. Food security and access to diversified nutritious diets are deteriorating but currently households are still able to manage an acceptable level of dietary diversity:

Given the pressures of increasing food prices and lowering income, households spend a large proportion of their budget towards food. The sample of respondents for this study, on average, spent 82% of their budget on food, indicating that Sri Lankan households are on average food insecure based on the food insecurity thresholds outlined in Smith and Subandoro (2007). Spending such a large proportion of their budget on food makes households extremely vulnerable to fluctuations in food

prices which are rapidly increasing (Bloomberg, 2022). With skyrocketing prices, households are increasingly substituting high nutrient food including fish, meat, vegetable and dairy in favor of cereals according to recent survey data from WFP and FAO (Nikkei, 2022). The WFP and FAO study also indicates that about a quarter of the households are skipping a meal to cope with the crunch. All of these indicate deteriorating diversified diets among Sri Lankan households

However, the Food Consumption Score (FCS)[4] for respondents in the survey averaged 52.47, indicating that despite the circumstances, the average household was able to still meet their dietary diversity needs. Only 23% of the households in the survey were unable to meet their dietary diversity needs, but heterogeneities across geographical and income deciles are evident. The difference in FCS between the highest income decile and lowest income decile was 28.

iii. Households are increasingly borrowing money to meet their food needs:

Of the 38% of households in the sample that borrowed money in the one-month period prior to the survey, about half of them indicated that their borrowing was to meet basic food consumption needs. Of those who borrowed money, 65% of the respondents relied on informal sources of credit (friends or family, credit from store owners etc.). This large informal system of credit is the only source of access to credit for most families due to a lack of collateral and a cautious banking system that is entangled in Sri Lanka's debt crisis (business-standard, 2022).

Increasing food prices coupled with increasing debt that may affect debt sustainability. As a result, food security can further decline.

iv. Agricultural yields are dwindling amid a shortage of chemical and organic fertilizer:

Within the first six months of the chemical fertilizer ban coming into effect, national rice production dropped by 20% and forced Sri Lanka to import rice from abroad to meet the local demand (Vox, 2022). Two-thirds of the respondent households in the sample who engaged in farming reported difficulties in accessing chemical fertilizer and organic fertilizer, and two-thirds of the households also reported experiencing a drop in yield. 11% of the households also reported difficulties in operating their farming machinery—due to disruptions to fuel and electricity availability accruing to the economic situation.

v. Households are using migration and sale of assets to cope with the crisis:

More than 90% of the households indicated that at least one of their household members migrated within or outside the country in the six months prior to the survey. Also, significantly, about half of the households reported a desire to emigrate abroad in the six months post the survey period—a desire largely attributable to the deteriorating situation in the country as discussed in the previous sections.

[4] The Food Consumption Score (FCS) is a composite score measured according to dietary diversity, food frequency, and the relative nutritional importance of different food groups. When calculating the FCS, the consumption frequencies were aggregated and multiplied by the standardized food group weight. According to the weighted scores, three categories were defined as: poor (0-21), borderline (21.5-35), or acceptable (35.5).

4 in 10 households reported engaging in stress coping strategies—selling household assets, purchasing food on credit etc. to cope with the dire economic situation. On the other extreme end, 13% of households who are vulnerable and are on the margin reported employing emergency coping strategies—selling productive assets, scaling back education and healthcare expenditure and in some extreme cases withdrawing children from the education system entirely.

High transportation costs and expensive healthcare discouraged people from accessing health services. Two-thirds of the households cited high cost of healthcare services, difficulty in securing transport and cost of transport as major challenges of accessing healthcare.

vi. Households are more interested in-home gardening than backyard animal rearing and require support for their agricultural activities.

About 72% of households were willing to engage in home gardening, while over two thirds of the households stated that they had enough water and enough space for home gardening. Interestingly, 69% of households had not engaged in farming activities earlier. There is a strong association between the water availability and the households' willingness to participate in home gardening. Given that water is available for home gardening, about 88% households are willing to participate in home gardening.

The share of households who were willing to engage in backyard animal rearing is lower than the households preferring to involve in home gardening as only 51% of households stated that they have willingness to backyard animal rearing. Only half of the surveyed households had enough space for backyard animal rearing and 54% of households had enough water for backyard animal rearing.

A significant proportion of households (between a third and two-thirds) noted that they need assistance in accessing inputs for agricultural and livestock activities: seed, fertilizer, pesticide, restocking animals, among others. The need for assistance in the agricultural and livestock sectors is inevitable given the harm caused to these sectors over the last year due to the above-mentioned reasons.

Key Recommendations:

The findings above indicate that the recent economic turmoil unfolding from late 2021 is affecting food security for a large section of the Sri Lankan populous. While most households have an acceptable FCS, indicating that households are still able to achieve dietary diversity—targeted intervention is necessary immediately to avoid long-term adverse repercussions for households. Therefore, the study makes several key recommendations:

Support households to meet their basic needs through cash distribution, general food distribution or vouchers. 86% of respondents have received no formal assistance yet. With skyrocketing prices (with inflation in food prices above 90%) and loss of income due to loss of livelihood, agricultural yield, or reduced hours households (two-thirds of the sample reported decline in income), along with the pressures of increasing food prices and lowering household income, households spend a large proportion of their budget towards food. Supporting households to meet their basic needs through multipurpose cash distributions, food distributions or voucher programs is recommended to help enhance the long-term survival of households as some have taken on drastic measures to cope up with the dire situation.

Provide nutrition education programs to vulnerable groups

Vulnerable households are increasingly substituting high nutrient food in favor of cereals. All of these indicate deteriorating diversified diets among Sri Lankan households and the need for support to meet basic dietary needs, that are targeted towards the vulnerable populations in Sri Lanka—especially those in the lowest income deciles, and the urban poor. As distribution of support to meet basic needs is provided to communities, this could be paired with basic nutrition information/education sessions to inform households how to make best use of the resources they are provided with

Prioritize support for Urban and Estate communities.

Across the assessment, Urban and Estate communities report significantly lower scores than Rural areas. The food consumption score in Estate areas lower than the Urban communities, and the frequency and severity of using coping strategies by households in urban sector is also higher, as they use coping strategies such as restricting consumption by adults in order for small children to eat and borrowing food or relying on help from friends or relatives. The households in rural sector used less severe coping strategies such as relying on less preferred or less expensive food, limiting portion size during meal time and reducing the number of meals eaten in a day. Support should be prioritized for Urban and Estate communities.

Support agricultural interventions such as home gardening, provision of inputs, and alternative sustainable farming strategies:

71% of the households that were engaged in the agricultural sector in this study were engaged in home gardening. Further, 72% of the households expressed an interest to take part in home gardening activities (despite 69% of them not having engaged in any farming activities earlier). There was high correlation between desire to engage in home gardening and availability of sufficient space and water for the activity.

There is opportunity for expansion and scale up of Natural, Organic and low-cost fertilizer and pesticide farming techniques, especially among home gardens, and low-income households. Addressing the agricultural issues needs long-term sustainable agricultural policies developed by the state that strike a balance between chemical fertilizer and organic farming methods. This involves enabling better access to organic fertilizer and more balanced portfolio of organic methods. Therefore, there is opportunity to use this crisis as a catalyst towards alternative farming methods.

More than 60% of the households surveyed reported difficulties in accessing seeds, fertilizer, pesticides etc. Short term interventions should target these needs in rural areas. Given the access to markets and use of machinery is restricted due to the ongoing fuel crisis in the country, local community-based intervention programmes may help alleviate some of the setbacks the sector has faced in the short-term. This includes distribution of agricultural inputs, seeds, tools and fertilizers through local farmer societies and community-based organizations prioritizing input provision for efficient farmers.

1. Background

The macroeconomic situation in Sri Lanka is highly volatile, and the combination of several deteriorating factors has led to a significant economic downturn, hyperinflation, and job losses, leaving already vulnerable communities even more marginalized. In July 2022 Sri Lanka's inflation reached 61%, while year-over-year food inflation increased to 91% from 11% 12 months ago. Sri Lanka's GDP has declined from $87.9Bn in 2018 to $80Bn in 2020. The significant economic decline is driven by both COVID-19 impacts in the three main sectors of the economy (tourism, textiles, and tea); as well as poor fiscal management, alongside increased foreign debt. At present, Sri Lanka faces unsustainable debt ($50Bn) and significant challenges repaying foreign debts.

The economic outlook is highly uncertain due to these fiscal imbalances, which has resulted in a significant lack of foreign reserves and a volatile currency. Foreign exchange reserves were an estimated $2.31 billion in February 2022 but by March this had dropped to $1.93 billion; and by April, reportedly less than $50Mn. Sri Lanka has suspended all payments on foreign loans (which total over $50bn with an estimated $8.6 billion due this year). Alongside this, after keeping the exchange rate broadly fixed around 201 LKR/US$ for seven months, the decision of the Central Bank to allow dollars to float freely in the market on 9th March 2022 has led to the Sri Lankan rupee deprecating by 50%. $1USD currently buys 350 LKR, with informal rates of 450LKR per $1 USD. The Financial Times listed Sri Lanka's rupee as the world's worst-performing currency.

The lack of foreign reserves has led to the Central Bank and Government imposing import restrictions on basic essential items such as medicines, food items and fuel. Importers struggle to obtain Letters of Credit (LOC) to import fuel, milk powder, gas and other essential goods. The lack of fuel has also caused island-wide power outages, as the fuel needed to power electricity plants is not available. Daily power cuts reached 13hrs on March 31st. At present, power cuts are around 3-5 hours per day, due to fuel received under an Indian LOC, but there is no plan in place to face the need for fuel once the existing fuel stocks are over. Currently, fuel is rationed for domestic consumption.

In addition, a snap agrochemical imports ban on fertilizer for agriculture between May and November 2021 has reduced agricultural production significantly. Farmers, both individual and commercial, were not prepared, nor trained or compensated for the rapid change in policy at the start of the main farming season. This has left crop production significantly reduced, with FAO reporting that the harvest in June 2022 expected to be 40% less than previous years. This has in turn increased the prices of available food items in markets, impacting the ability of households to cover basic living expenses, leading to a deterioration of welfare and more food insecurity.

The combination of hyperinflation, severe shortages of essential items and ongoing power cuts have severely affected the daily lives of vulnerable people who rely on daily wages as an income. Power cuts have also heavily impacted the manufacturing industries and service sectors, with many multi-nationals choosing to move businesses to India and China, resulting in further job losses.

Marginalized communities across the island are impacted by weakened purchasing power, income reductions, food shortages, and political instability. However, communities in rural agricultural areas in Sri Lanka's Northern province are most at risk because they are the least developed (lowest rates of GDP per capita). This includes Kilinochchi, Mannar and Mullaithivu districts that are severely affected

by annual cycles of drought followed by flooding. During 2019, close to a million (935,098) individuals living in the dry zone were affected by drought, while the same areas receive above average rainfall during the monsoon periods, causing severe flooding and inundation, destruction to homes and loss of livelihoods.

Communities in these districts, already have reduced resilience after cyclical drought and flooding events, which prevent families from making progress, sustaining income gains, and climbing out of multi-dimensional poverty. Reliance on agriculture, fishing and farming based industries (up to 75% of household livelihoods), exacerbates the impacts of the natural disasters on household food security, income, savings, and nutritional intake and a lack of social safety net for the poorest contributes to reliance on negative coping strategies.

Given the inability to rapidly diversify their income sources, households are already resorting to negative coping strategies such as such as reducing protein intake, skipping meals, and selling livestock. World Vision's assessment in December 2021 on the poorest areas of 16 districts, found that 72% of families have experienced an income drop in the last 6 months, and 66% have outstanding debts. 59% used seed stock they were saving for the next season, and 23% had sold livestock to cover basic needs. 40% have sold assets, and 38% have reduced the quantity and quality of their food intake, including for children under two years old. These negative coping strategies have harmful impacts such as declines in nutrition, declines in livelihoods, increased poverty and deprivation, and reduced resilience against future disasters. As a result, families exposed to the repeated natural disasters in Northern Province are becoming increasingly vulnerable over time.

1.1 Food Security

Ensuring food security is crucial for decreasing hunger and poverty in Sri Lanka to improve the general wellbeing of the population and productivity of the labor force and enhancing the nutrition status of children. The children are mostly affected by chronic food insecurity, leading to malnutrition with poor cognitive development resulting in lower educational outcomes that will hinder their economic opportunities when they grow as adults.[6]

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.[5] The widely accepted World Food Summit (1996) definition reinforces the multidimensional nature of food security consisting of food access, availability, food use and stability enabling policy responses to

[5] World Food Summit, 1996

focus on promotion and recovery of livelihoods, and the analysis of food insecurity as a social and political construct.[6]

Food insecurity leads to hunger in the short run, but continuous food insecurity results in malnutrition issues. The prevalence of underweight, stunting, wasting and micronutrient deficiencies, and even death in acute cases are the negative effects of food insecurity.[7] Child malnutrition has been a continuous issue in Sri Lanka. As Demographic and Health Survey (DHS)-2016 of the Department of Census and Statistics (DCS) states, stunting, wasting and underweight among children aged 5 years or below in Sri Lanka were 17.3 per cent, 15.1 per cent and 20.5 per cent, respectively,[6] whereas according to Demographic and Health Survey (DHS)-2006/07, prevalence of stunting, wasting and underweight among children aged 5 year or below was 18 per cent, 15 per cent and 21.6 per cent. As per 2017, Trigger of action, prevalence of stunting in Sri Lanka was moderate (15-29%), prevalence of wasting was severe (>= 10%) and underweight was severe (>= 20%). The increase in food insecurity is likely to further deteriorate above nutrition outcomes.

Sri Lanka was ranked 77th among 113 countries in the Global Food Security Index (GFSI) -2021 with an overall score of 54.1, which has continued to decline since 2019. The index considers the dimensions of food availability, affordability, quality, safety of foods and Natural Resources and Resilience. Sri Lanka had score of 46.3 for Natural Resource and Resilience, 50.6 for food availability, 52.1 for food quality and safety and 62.9 for food affordability.[8]

Until 2019 Sri Lanka did not measure food security in official statistics. In 2019, for the first time DCS measured food security in Household Income and Expenditure Survey (HIES) 2019 survey and found that 12% of Sri Lanka's population was moderately or severely food insecure in 2019.[9]

1.2 Poor Nutrition Outcomes

In Sri Lanka, even before COVID-19 became a global pandemic, malnutrition has been a public health concern. According to the 2016 Demographic and Health Survey, wasting (acute malnutrition) affects 15% of children below the age of five. 10% of school children aged 6-12 years suffer from anemia. Another study conducted by the Medical Research Institute, UNICEF, WFP and the Ministry of Health in 2017 shows that 40% of children aged 6 – 12 years were too thin (wasting), while 22% of adolescents aged 10 – 18 years were iron deficient with girls displaying an iron deficiency three times higher than boys of the same age.[11]

The nutrition situation has worsened in Sri Lanka with the high cost of nutritious foods, disruptions to supply chains and discontinuation of government nutrition support programmes. With the rise in food

[6] Food and Agricultural Organization 2006, Policy Brief, June 2006, Issue 2, Food Security

[7] Central Banka of Sri Lanka, Annual Report 2020, Sri Lanka's Food Security in the Context of the COVID-19 Pandemic

8 The Economist Intelligence Unit (EIU) 2021, The Global Food Security Index 2021 is a dynamic quantitative and qualitative benchmarking model, constructed from 59 unique indicators, that measure the drivers of food security in developing and developed countries

9 Department of Census and Statistics, 2022

prices, diverse food groups are becoming unaffordable to most low-income families in Sri Lanka. The vulnerability of Pregnant and lactating women (PLW) has particularly increased, as they are unable to purchase the required nutritious food. During pregnancy, low nutritious diets without key nutrients like iodine, iron, folate, calcium and zinc is likely to cause anemia, pre-eclampsia, hemorrhage and death in mothers with further potential of leading to stillbirth, low birth weight, wasting and developmental delays for children.

Escalation of food prices also impacted the national schools' meals programme as several districts reported programme suspensions due to a lack of funding. With a two-thirds reduction of the national budget allocation for the national school meal programme in 2022, it is likely that more than half of the schools enrolled in the national programme will be affeted.[29] Low-nutrition diets among children under five places Sri Lanka among the ten worst low- and middle-income countries in the world. Sri Lanka had the prevalence of stunting at 17.3 per cent, of wasting at 15 per cent and the prevalence of underweight at 20.5 per cent for children under 5 prior to COVID-19. With the rise of the monthly costs of a nutritious diet per household by 156% by April 2022, at least 56,000 children under 5 are estimated to be suffering from severe acute malnutrition. Malnutrition is likely to have worsened as the national nutrition programme has been scaled down due to reduced funding from the state in light of fiscal prudence resulting from the default and soaring food ingredient prices. Free school meals that benefitted a quarter of all school children in Sri Lanka has been stopped in some parts of the country while some schools are relying on donor agency support to keep the children fed. Thriposha, a fortified food supplement that was provided to pregnant and breastfeeding mother was halted in November 2021 and was only resumed in the third quarter of 2022 (Nikkei, 2022; Save the Children, 2022).

Female-headed households are comparatively more vulnerable to food insecurity in the current context as they are impacted by loss of income and food insecurity. Women are reducing the quantity or quality of their meals to ensure that other household members are fed, and it will further worsen nutrition levels among women and adolescent girls. Discontinuation of Thriposha blended supplementation programme will have a negative nutritional impact on pregnant, nursing mothers and under 5 children as well.[29]

Health officials are particularly concerned about the impact that inflation and the high cost of nutritious foods will have on the nutritious meals consumed, especially by pregnant and nursing mothers. The cooking and vehicle fuel crisis, on the other hand, has increased the burden for women, especially in urban slum, while women and girls, who are responsible for care work in the households are experiencing stress and mental health impact.[29]

Box 1: Impact on targeted Nutrition-related Social Security Programs

According to the statistics of the year 2017, 1,105,605 students of 7871 schools have benefited from the school meal programme, while 112,088 students of 414 schools have

benefited from the programme of providing fresh milk.[10] With school closures enforced as a measure to curb the spread of the pandemic, nearly 1.1 million school children were unable to receive their daily meals in school. These free meals are a lifeline to many families, greatly helping to mitigate hunger and malnutrition.[11] The World Food Programme has extended its support to continue the emergency school meals programme from June to September 2022 to ensure about one million children receive a nutritious meal daily (WFP, 2022).

The government Ministry of Health allocated nearly LKR 2,500 million[12] for Thriposha programme that benefited more than 900,000[13] pregnant mothers, lactating mothers, and undernourished children in 2016. Thriposha, a "triple nutrient" state manufactured supplementary food product that is provided free of charge children below 5 years of age who are underweight or with a slow rate of weight gain and pregnant and lactating women) through the public health system. Thripoha distribution, which was initiated in 1973 with 135,000 beneficiaries continued annually with the gradual increase of beneficiaries.

The production of Thriposha was halted since April 2021 due to lack of foreign currency reserve to import high quality maize and non-availability of locally produced quality maize that meet the minimum health and nutrition standards. According to Sri Lanka Thriposha Ltd officials, the cost per packet is to increase due to the current recession. The total maize used for the daily production of thriposha is around 50 metric tonnes (MT) along with 25 MT of soya, and around 1.6 million packets are distributed around the country.[14]

The United Nations World Food Programme (WFP) and the Korea International Cooperation Agency (KOICA) are supporting the Government of Sri Lanka to resume Thriposha program with funding worth USD 600,000 (LKR 117 million) to procure maize for the production of Thriposha.[15]

1.3 Food Security and COVID-19 Pandemic

By 29 July 2022, there have been 572,239,451 confirmed cases of COVID-19, including 6,390,401 deaths, reported to WHO. As of 25 July 2022, a total of 12,248,795,623 vaccine doses have been administered.[16] The COVID-19 crisis is impacting children, families, and communities around the world.

10 Ministry of Education 2017, Manual on School Nutrition Programme
11 UNICEF Sri Lanka 2021, Nutrition crisis looms as more than 39 billion in school meals missed since start of pandemic
12 Ministry of Health, Nutrition & Indigenous Medicine, 2016, Selection of Thriposha beneficiaries and distribution of Thriposha
13 National Supplementary programme Thriposha, 2017
14 Dinitha Rathnayake 2021, The Sunday Morning, Thriposha Programme to be resumed
15 World Food Programme, 2021, Government of Sri Lanka welcomes funding from WFP and Republic of Korea to help supply Thriposha
16 World Health Organization 2022, WHO Coronavirus (COVID-19) Dashboard, July 29, 2022

The pandemic has caused global disruption through both direct and indirect impacts on people's health, wellbeing, and livelihoods.

According to the key findings of COVID-19 After Shocks: Deadly Waves, 61 per cent want their governments to invest more, not less, to help stop the spread of COVID-19 overseas, 80 per cent of people surveyed in major donor countries believe their country won't be able to return to normal life until COVID-19 is under control everywhere in the world. If COVID-19 deaths mirror the 1918 influenza pandemic, more than 1.56 million people globally may die after a second wave, with potentially millions more dying from secondary health impacts caused by the pandemic.[17]

Following the unprecedented COVID-19 pandemic, the preventive measures such as lockdowns and mobility restrictions taken globally and locally, made a negative impact on economic activities of the country disrupting supply chains and livelihoods of people, and food security. In Sri Lanka, half a million came below the poverty line inching the poverty rate towards 12%. With lack of or limited unemployment protection and social protection benefits, inequality has widened due to the poorer populous being disproportionately disadvantaged. With reduced social mobility (with widening disparities in education and healthcare, for example (discussed further below)), inequality is expected to further rise (World Bank, 2021).

The crisis surrounding food insecurity occurred due to the COVID-19, while the policy changes like chemical fertilizer ban, restriction on import commodities, global supply chain disruptions and Sri Lanka's currency crisis which led to food and non-food inflation, LP gas and fuel shortages aggravated the crisis.[7]

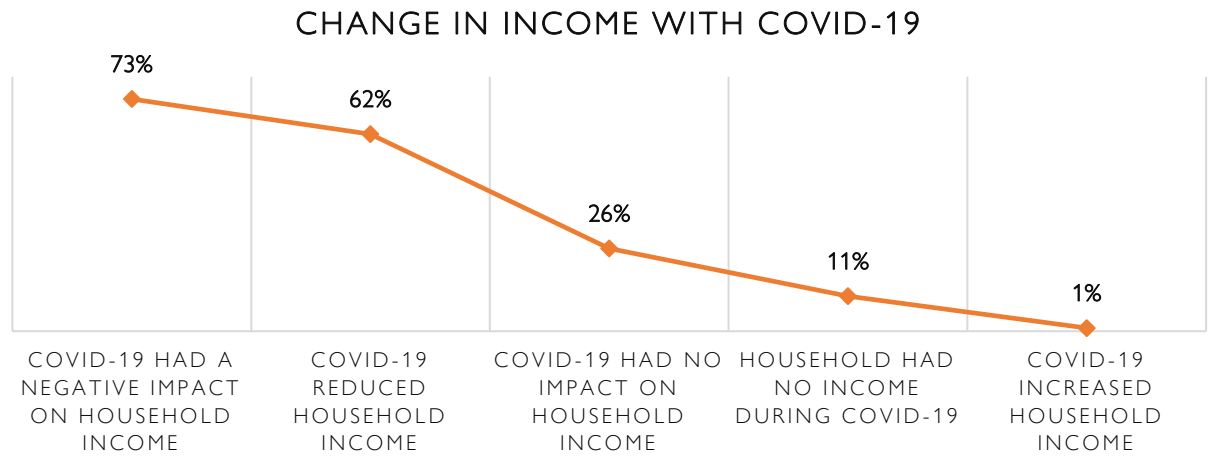

Figure 1 Change in income with COVID-19

Source: Food Security Crisis Sri Lanka 2022, United Nations Office for the Coordination of Humanitarian Affairs

The risks to food security aggravated for vulnerable groups of the population that were already facing food insecurity during the COVID-19 Pandemic. The most vulnerable groups, who faced the risk of food insecurity during the pandemic are:

[17] World Vision 2020, COVID-19 Aftershocks, Deadly Waves

- Individuals, who have limited or irregular income
- Individuals, who have limited emergency reserves of food and savings
- People with poor health, such as those with malnutrition issues and chronic diseases
- The people who were living in remote areas with less access to a variety of supplies and markets
- Certain groups of urban population who are entirely dependent on markets for their food needs
- People who have limited social networks, People with limited or no transportation facilities
- The elderly and the homeless or displaced people

The pandemic induced worker layoffs and the reduction in working hours in most affected sectors such as tourism, food and beverages, caregiving, and transport, reduced income of fulltime and part time employees and thereby increasing the economic vulnerability of individuals in these sectors.[7] A study by World Vision (2022) using data from 2021 indicates that about 23% of the households engaged in agriculture also experienced drop in production—affecting their food security.

Similarly, the impact of the fuel shortages on fishing communities is severe; small scale fisherman, who operate daily, have reduced their fishing to a few days a week. As these communities do not have alternate livelihoods and other income opportunities, their vulnerability to food insecurity has increased.[20]

The poultry industry has also been severely affected by the economic situation since poultry feed is very scarce. The limited supply of poultry feed is mainly linked to Soybean producers facing many challenges related to inputs, fuel, fertilizer, and labor costs, import restrictions and supply chain disruptions of maize. Large poultry producers are selling their birds to cope. Limited availability of animal feed has resulted in escalating costs of dairy, meat, eggs, and chicken. Due to the limited supply causing higher prices, people are reducing the consumption of meat and eggs.[29]

Box 2: Impact of Ban on Chemical Fertilizers, Agrochemicals and Reduction in Agricultural Outputs:

Sri Lanka announced a ban on the import of agrochemicals in April 2021. The move was meant to save Sri Lanka around $300 – $400 million in foreign exchange annually. After several months of upheaval instigated by an acute food crisis, on 24 November 2021, Sri Lanka announced the complete withdrawal of the agrochemical import ban.[18] The lack of organic fertilizer productive capacity, coupled with the absence of a formalized plan to import

[18] Lia Via Campesina, International Peasant's Movement 2022, Lessons from Sri Lanka's Agrochemical ban fiasco

organic fertilizers in lieu of chemical fertilizers, had an adverse impact on productivity and production in 2021/22 Maha season raising severe concerns on food insecurity of the nation[19].

Even though the ban was lifted in November 2021, there was an estimated 40-50% reduction in paddy production and 65-70% of loss in maize production.[20] The decline in production is expected to continue up to the next Yala season at a value of over $550 million.[20] The normal expectation for paddy harvest is around 4 metric tonnes per hectare. The prediction for the Maha season has dropped to around 3 metric tonnes per hectare, which is 30% of reduction.[29]

As the cost of production has almost doubled, only a small percentage of farmers cultivated paddy in their lands in Yala season. It is estimated that only 128,652 out of 524,778 hectares has been cultivated for the upcoming season, which is 24% of the usually work lands. The current yield is not sufficient to cover domestic requirements. As the prices of most commodities have increased significantly since the end of 2021, the families have started to turn to negative coping strategies like consuming less preferred or less expensive foods daily and limiting the portion sizes of meals.[20] Rice imports in Sri Lanka, which is usually self-sufficient in its staple crop, leaped from 15,770 metric tons in 2020 to 147,091 metric tons in 2021, and more than 90% was imported in the last two months of the year.[21]

According to the United Nations, global fertilizer rates have increased by more than half in the past year, a spillover effect of the Ukraine crisis, since Russia and Belarus are the world's second- and third-biggest producers of potash, a key fertilizer ingredient — and due to Sri Lanka's depleted coffers. The price of urea, a low-cost nitrogen fertilizer favored by local farmers, has increased by a factor of 25. The farmers who bought 50 or 100 kilos of fertilizer now buy 5 or 10 kilos after hearing the price.[21]

Sri Lanka is now counting on the swift arrival of a 65,000 Metric Tonne fertilizer consignment from India worth about $25 million for the current Yala *paddy and maize season as part of $3.5 billion worth credit lines for imports, loan deferments, and currency swaps offered by India.*

1.4 Food and non-food inflation

[19] United States Department of Agriculture 2021, Foreign Agricultural Service, Sri Lanka Restricts and Bans the Import of Fertilizers and Agrochemicals

[20] United Nations Office for the Coordination of Humanitarian Affairs (OCHA) 2022, Humanitarian Needs and Priorities Food Security Crisis Sri Lanka, 9th June 2022

[21] Thayalini Indrakularasa 2022, Global Press Journal Know Your World, Food Crisis Looms as Rice Production Nosedives

Food items have become unaffordable for the vulnerable segments of population in Sri Lanka. Negative coping mechanisms have subsequently threatened the loss of livelihoods.[20]

The overall rate of inflation as measured by Colombo Consumer Price Index on year-on-year basis was 60.8% in July 2022 and was 54.6% in June 2022. The year-on-year inflation of good groups increased to 90.9% in July 2022 from 80.1% in June 2022. The year-on-year inflation of Non-Food Group increased to 46.5% in July 2022 from 42.4% in June 2022.[22]

Prices of all local rice varieties have increased by about 80-100% year-on-year as of May 2022. The price of eggs has increased by about 60-69% year-on-year, although in April, the prices of Eggs slightly decreased due to improving supply. Lentils now cost three times more than in May 2021, and sugar is twice the price from the same period. Average food expenditure of household is at LKR 34,286.53 according to May National Consumer Price Index (NCPI) food inflation rate.[23]

Household Expenditure on Food

The proportion of income a household spends on food is an indicator of its vulnerability to food insecurity as households are extremely vulnerable if their expenditure on food is high with the potential to place them in a position where the household could not obtain its food requirement.[3]

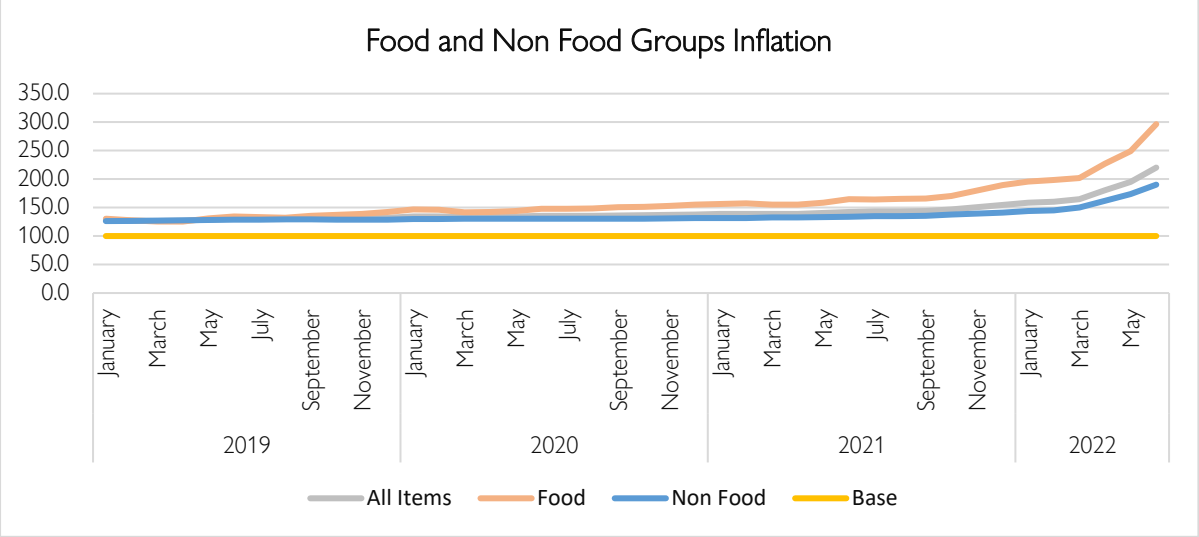

Figure 2 Food and Non-Food Groups Inflation from 2019 to June 2022

Source: CCPI (Base: 2013=100), DCS, June 2022

According to a 2018 analysis by WFP, food accounted for nearly 50% of household expenditure of estate sector families with non-estate sector accounting for 30 to 35%.[24] As per the findings of Joint

22 **Department of Census and Statistics 2022**, Colombo Consumer Price Index (CCPI) June 30, 2022, Ministry of Finance, Economic, Stability and National Policies

23 **World Food Programme May 2022**, Market Monitor Sri Lanka – May 2022

[24] World Food Programme. 2018. Fill the Nutrient Gap: Sri Lanka Summary Report.

Food Security Assessment carried out by WFP and Department of National Planning in April 2022, household expenditure on food in urban and rural areas has sharply risen to around 78%.

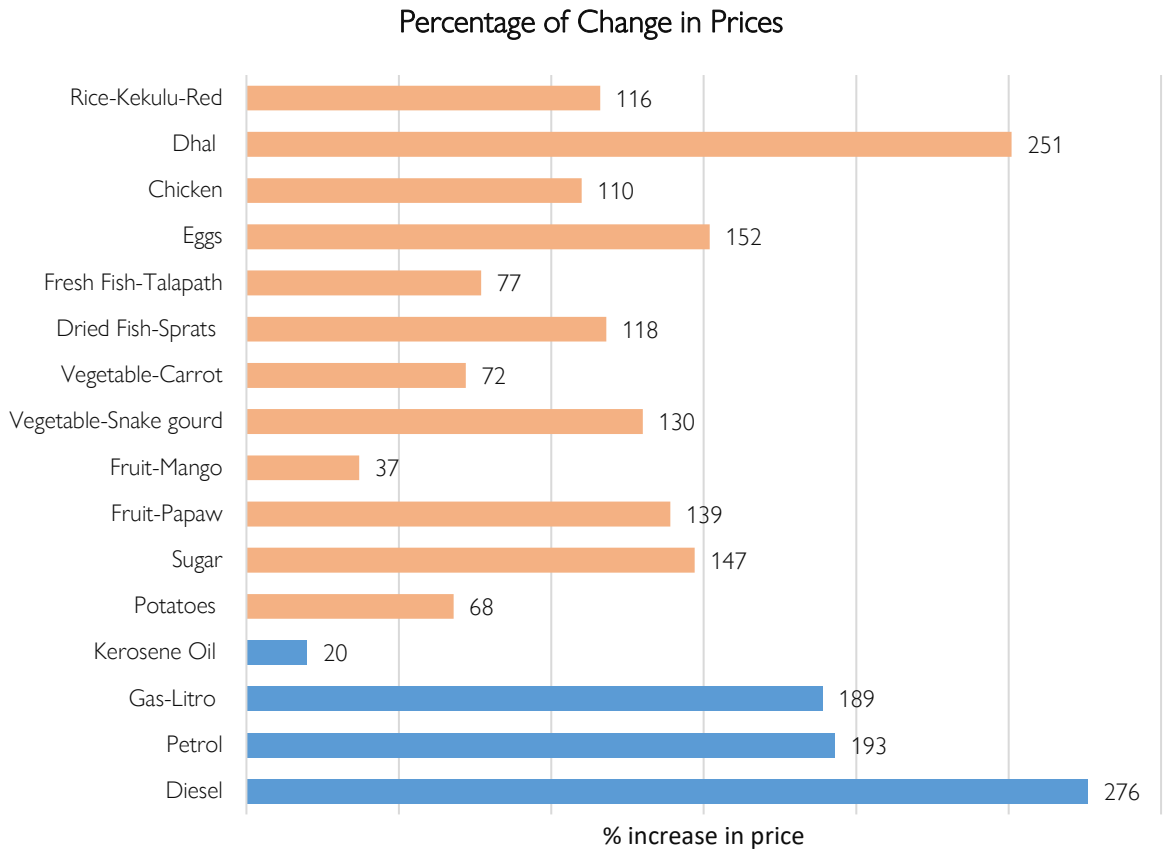

Figure 3 Percentage of Change in prices

Source: CCPI, DCS, June 2022 and Weekly Food Commodities Bulletin, HARTI, June 2021 and June 2022

The percentage of increase in price from June 2021 to June 2022 as illustrated in the Figure 3 is more than 100% for 8 food varieties and 3 non-food items (see Appendices AA-5 and AA-6 for more detailed data). The highest price increase was reported for Diesel at 276%. As a non-oil producing country, Sri Lanka has experienced sharp increases in fuel prices due to three factors: devaluation of the LKR, increase in prices in the global market due to the ongoing Russia-Ukraine conflict, and state reduction of subsidies attached to fuel. The only exception to this trend is the price of kerosene oil—which, however, masks another adverse story. Due to a lack of crude oil, the only refinery in the country that was producing kerosene oil was shut since early this year, and production only resuming on the 20th of August, and prices shooting up by 290% on the 21st of August 2022. So while Kerosene oil prices had only increased by 20% until July 2022, they masked the shortage of the oil and unavailability in the market—a big setback for poorer and rural households who rely on the oil for cooking, lighting and operation of machinery (economynext, 2022).

The highest price increase among food items was reported for Dhal (lentil) which rose in price by 251%. The sharp increase in lentil prices is a reflection of its prominence in Sri Lankan diet as a staple and the oxymoronic situation of it being largely an imported staple. Other food crops like banana and papaya are also experiencing large price increases in the local markets. Hence, consumption of vegetables and fruits is reducing and households are changing food consumption patterns by reducing

the number of food commodities, reducing the quantity, purchasing more often and increasingly buying on credit. Changing household consumer behaviors brought on by high food inflation and reduced purchasing power, indicates deteriorating household food access.[29]

Table 1 Increase in prices of Rice Varieties from April to May 2022

COMMODITY	Average Price in SLR in 4th Week of April[25] 2022	Average Price in SLR in 4th Week of May[26] 2022	Percentage of Increase
Samba 1	231.43	236.11	2.02%
Samba 2	219.41	224.44	2.29%
Keeri Samba	262.33	268.75	2.45%
Nadu 1	217.07	223.44	2.93%
Nadu 2	204.58	214.18	4.69%
Raw (Red)	216.21	225.29	4.20%
Raw (White)	215.47	224.06	3.99%
Samba-imported	191.74	217.5	13.43%
Nadu-imported	188.75	213.82	13.28%
Raw (White)-imported	181.35	196.38	8.29%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

The prices of all varieties of rice increased from April to May 2022 with imported rice reporting 8% to 13% of increase in price. The prices of local varieties of rice such as Samba, Nadhu, Raw (White) and Raw (Red) increased by 2% and 5%. As the wholesalers have a shortage of the supply of rice with difficulties in meeting consumer demand, it now takes more days to fulfill orders.[23]

Table 2 Increase in prices of Dried Chilies, Onions & Potato from April to May 2022

COMMODITY	Average Price in SLR in 4th Week of April[37]	Average Price in SLR in 4th Week of May[38]	Percentage of Increase
Dried Chilies-imported	1567.67	1866.67	19.07%
Onion-imported	358.06	397.78	11.09%
Big Onion-imported	212.78	212.43	-0.16%
Potato Nuwara Eliya	310.83	340.61	9.58%
Potato-imported	198.55	234.85	18.28%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

The average price of imported dried chilies increased by 19% from April to May 2022, while the price of imported onion rose by 11% within the same period. The average price for big onion slightly decreased with 0.16% of reduction. The price of Nuwara Eliya potato rose to LKR 340 per Kg in May 2022 with 9.58% of increase in price. The price of imported potato reported 18% of increase. Compared with the same period last year, current prices of Nuwara Eliya and other imported potato varieties have increased by 59%.[23]

Table 3 Increase in prices of Vegetables from April to May 2022

Vegetable	Average Price in SLR in 4th Week of April[37]	Average Price in SLR in 4th Week of May[38]	Percentage of Increase
Leeks	182.96	258.46	41.27%
Raddish	177.31	277.08	56.27%
Tomato	246	851.41	246.10%
Ladies Fingers	205.93	306.15	48.67%
Capsicum	491.54	783.33	59.36%
Bitter Gourd	322.22	574.78	78.38%
Snake Gourd	257.39	400.91	55.76%
Carrot	200	397.6	98.80%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

The prices of vegetables rose steeply from April to May 2022. The prices of most upcountry vegetables increased with the highest price increase for carrots at 98%, while the price of low country vegetables also increased with the highest price increase reporting from tomato, at 246%. All other varieties of vegetables such as Leeks, Raddish, Ladies Fingers, Capsicum, Bitter Gourd and Snake Gourd reported 41% to 78% increase in prices from April to May 2022.

Table 4 Increase in prices of Eggs & Meat from April to May 2022

COMMODITY	Average Price in SLR in 4th Week of April[37]	Average Price in SLR in 4th Week of May[38]	Percentage of Increase
Brown Eggs	25.36	36.88	45.43%
White Eggs	24.25	35.11	44.78%
Beef without bones	1700	1680	-1.18%
Chicken (Broiler)	970	1030	6.19%
Chicken (Curry)	842.86	887.14	5.25%
Mutton	2266.67	2314.29	2.10%
Pork	962.5	975	1.30%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

Prices for brown and white eggs reported 45% of increase, while the price of chicken increased by 6% from April to May 2022. The prices of other meat varieties such as Chicken (Curry), Mutton and Pork increased from 1% to 5%. Meat and milk powder costs vary across the country, making it impossible for dealers to estimate the price in one week's time.

Table 5 Diet Costs in April 2022

Diet name	Average Daily cost (LKR) per household	Average Monthly cost (LKR) per household
Energy only diet	298	9,073
Macronutrient diet	454	13,812
Nutritious Diet	1,165	35,423
Staple adjusted nutritious diet	1,596	44,560

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

In fact, an illustration of this is the Cost of the Diet[27]. In April 2022, the average monthly cost of a nutritious diet per household[28] was LKR 35,423, whereas the average cost of a nutritious diet per household in 2018 was LKR 13,798, which is a 157% rise in the cost of a nutritious diet.[29]

The staple adjusted nutritious diet is the lowest-cost nutritious diet consisting of typical local staple foods, which exclude culturally inappropriate food. According to 2022 April market retail prices, the value of staple adjusted nutritious diet is LKR 44,560, which is 25% higher than a nutritious diet.[29]

1.5 Coping Mechanisms

The economic crisis has led to negative coping mechanisms. The number of households that borrowed money increased from 40% in August 2021 to 68% in April 2022. Households have also started to withdraw from savings with an increase in saving withdrawal from 21% to 29% in the same period. Pawning and the selling of belongings are the other negative coping mechanisms leading to the loss of sustenance and livelihoods.[20]

In April 2022, according to UNICEF's national survey, 70% of households have reduced their food consumption, largely due to the rising cost of food. 73% of households reported their income curtailed or reduced, while, about 86 per cent, of households are adopting at least one coping mechanism. The households relying on unskilled casual labor, fishing or assistance from friends and relatives, and those

[27] Using price data collected from markets or from secondary sources, the software calculates the amount, combination and cost of local foods that are needed to provide individuals or households with their average needs for energy and their recommended intakes of protein, fat and micronutrients

[28] Based on household composition: Child (either sex) 12-23 months, Child (either sex) 6-7 years, Female 15-16 years, Man, 30-59y, 50 kg, moderately active, Woman, 30-59y, 45 kg, moderately active (1 x Lactation, 7-12 months)

with no home gardens or livestock have a higher risk of food insecurity according to the rapid food security assessment conducted by WFP and the Department of National Planning.[6]

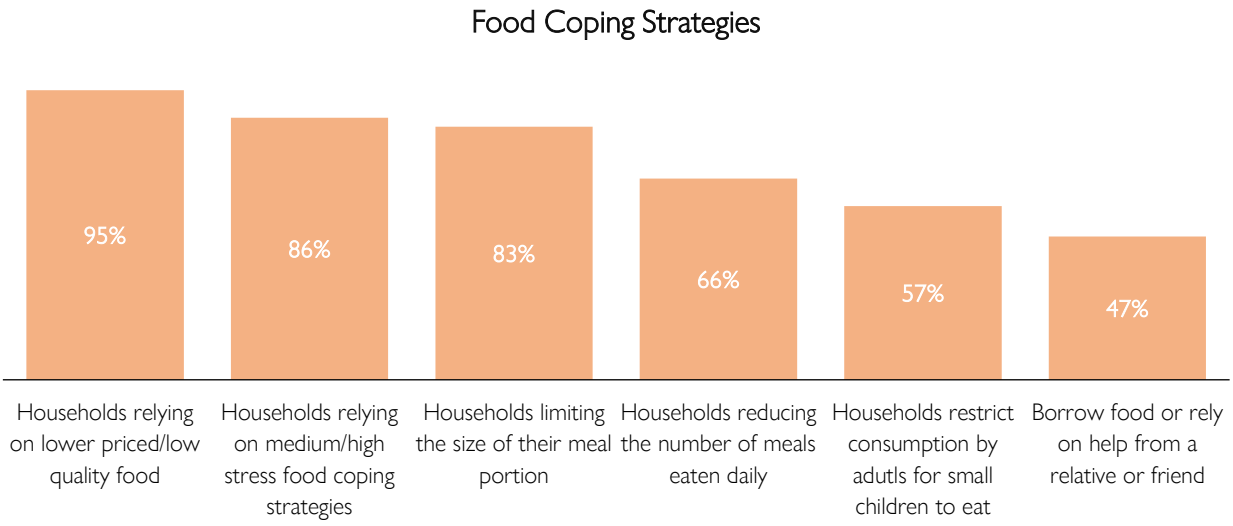

Figure 4 Food Coping Strategies

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

According to the survey with 110 poorest households in 17 districts conducted by WFP and NPS in April 2022, 95% of households are eating lower priced or low-quality foods on a daily basis to mitigate food shortages, while 83% of households are limiting the portion sizes of meals at least four times per week. Rural households with home gardens and cultivating commercial crops maintain adequate levels of food consumption and dietary diversity than urban and estate sector households.[29]

Over 30% of households in urban and rural areas are applying emergency coping strategies by withdrawing children from school, migrating to other areas in search of employment and selling houses or land. These households have used higher severity of coping strategies for long-term recovery.

1.6 Need for a rapid food security assessment

In this context, conducting a rapid food security assessment is a time-effective way to understand the causes, dimensions, and characteristics of food insecure households to implement appropriate mitigation activities. Therefore, the main objectives of this study are to identify: (i) the most food insecure groups in surveyed areas, (ii) the causes and magnitude of the food insecurity situation, (iii) the location specific coping ability indicators for food security monitoring, and (iv) the appropriate mitigation interventions for alleviating the food insecurity problem.

[29] **Department of National Planning and WFP, April 2022**, Sri Lanka Joint Rapid Food Security Assessment

2. Data and Methodology

2.1 Data Collection Method

An island wise household survey was undertaken in all provinces (except for the Sabaragamuwa Province) by World Vision, ACTED and CEPA to assess the vulnerability of households. Enumerator teams were deployed for field data collection in person using mobile devices with Kobo Tool Box from 18th June to 3rd July 2022.

2.2 Sampling

The households were selected randomly from 46 Divisional Secretariat Divisions across 15 districts and 8 provinces. Data was collected by World Vision and ACTED using World Vision's vulnerability categorization (most vulnerable, vulnerable and non-vulnerable) forming a purposive sample. The households selected from each province and district is outlined in the Table 6. Proportion of households selected from each district varied based on the percentage of vulnerable population ~~of~~ present in each district.

Table 6 Sample size and location

Province/District	Sum of No. of Households	Percentage (%)
Central Province	756	18
Kandy	100	2
Matale	309	8
Nuwara Eliya	347	8
Eastern Province	1247	31
Ampara	401	10
Batticaloa	519	13
Trincomalee	327	8
North Central Province	91	2
Polonnaruwa	91	2
North Western Province	374	9
Kurunegala	78	2
Puttalam	296	7
Northern Province	448	11
Jaffna	233	6
Killinochchi	215	5
Southern Province	142	3
Galle	142	3

Uva Province	880	22
Badulla	483	12
Moneragala	397	10
Western Province	166	4
Gampaha	166	4
Grand Total	**4104**	**100**

2.3 Limitations

The survey dataset had limitations in its representation. The non-random sample section and limited sample size do not allow us to make statistically valid inferences at the district level. Although the sample is not a representative of the national population, the data analysis was performed for a considerably large sample size, along with the descriptive analysis, which enhances the understanding on the vulnerability of households to food insecurity in the current context.

2.4 Descriptive statistics

Overall, 4,126 households were surveyed from the 8 provinces. After data cleaning, 4,104 households were used for the analysis. 22 observations were dropped due to errors and lack of consent.

A significant number of households surveyed were located in the rural sector (77 percent) followed by urban (14 percent) and estate sectors (9 percent). Overall, 90 percent of the surveyed households were male-headed households. The average size of the household was four members. Looking at the age distribution of household members, 95 percent of households had adults between 18 years to 59 years old. Nearly 25 percent of surveyed households had at least one dependent above 59 years old, 33 percent of families had children under five years old. Further, 2 percent of households had pregnant or lactating women. Three out of four households belonged to either the vulnerable or most vulnerable household category. Table 7 presents the summary of the households' socio-economic and demographic composition.

About 9% of the heads of household in the sample did not complete even primary schooling, while 31% completed only primary schooling and most heads of household, 46% of them, completed secondary schooling. In terms of Ethnic composition, 47% of the households were Sinhalese, 37% were ethnically Sri Lankan Tamils, while 11% were Sri Lankan Moors. Ethnically Indian Tamils represented 6% of the sample, while other Ethnicities accounted for less than 1% overall. In terms of vulnerability stratification, 35% of the households in the sample were from the most-vulnerable classification, while 41% and 24% of the households were from the vulnerable and non-vulnerable classification, respectively (Table 7).

Table 7 Households' socio-economic and demographic composition

Description	No. of Households	Share (%)
Sector	**4104**	**100**
Urban	575	14
Rural	3160	77
Estate	369	9
Gender of the head of household	**4012**	**100**
Female	426	10
Male	3676	90
Education of Head of Household	**4085**	**100**
No education	382	9
Completed primary education	1263	31
Completed secondary education	1897	46
Completed university degree	101	3
Completed tertiary education (e.g. diploma, certificate)	375	9
Completed vocational training	44	1
Other	23	1
Ethnicity of Head of Household	**4103**	**100**
Sinhalese	1910	47
Sri Lankan Tamil	1509	36
Indian Tamil	226	6
Sri Lankan Moor	440	10
Other	18	1
Household Vulnerability Status	**4102**	**100**
Most vulnerable	1456	35
Vulnerable	1672	41
Non-vulnerable	974	24
Household Demographic Composition	**4101**	**100**
Households with children under 5 years	1,365	33
Households with children under 18 years	3010	73
Households with elderly (adults above 59 years old)	1,019s	25
Households with pregnant and lactating women	79	2

2.5 Methods

The study used descriptive statistics in data analysis primarily. Descriptive statistics, including mean values and cross-tabulations, enabling to interpret data in a simpler and meaningful manner. In addition, results were disaggregated (where possible) based on socio-economic and geographic characteristics.

The survey dataset had limitations in its representation. The non-random sample section and limited sample size do not allow us to make statistically valid inferences at the district level. Although the sample is not a representative of the national population, the data analysis was performed for a considerably large sample size, along with the descriptive analysis, which enhances the understanding on the vulnerability of households to food insecurity in the current context.

The following food security and coping strategies indices were used for data analysis as per the specifications highlighted in each index. More information about each index is attached with the Annex.

- Food Insecurity Experience Scale (FIES) – FIES is a metric of severity of food insecurity at the household or individual level that relies on people's direct yes/no responses to eight brief questions regarding their access to adequate food and their self-reported food-related behaviors and experiences associated with increasing difficulties in accessing food due to resource constraints.
- Food Consumption Score (FCS) – FCS is a composite score measured according to dietary diversity, food frequency, and the relative nutritional importance of different food groups.
- Individual Dietary Diversity Score (IDDS) – IDDS is an individual dietary diversity scores reflect nutrient adequacy of individuals. The score consists of a simple count of food groups that an individual has consumed over the preceding 24 hours. Nine food groups are included in the score.
- Reduced Coping Strategies Index (RCSI) – RCSI is a proxy indicator of household food insecurity. It considers both the frequency and severity of five pre-selected coping strategies that the household used in the seven days prior to the survey.
- Livelihood Coping Strategies Food Security (LCSFS) – LCSFS is an indicator used to identify medium and longer-term coping capacity of households due to lack of food or lack of money to purchase food and their ability to face challenges in the future.

3. Findings

3.1 Households Income, Expenditure, Debts and Access to/ Markets

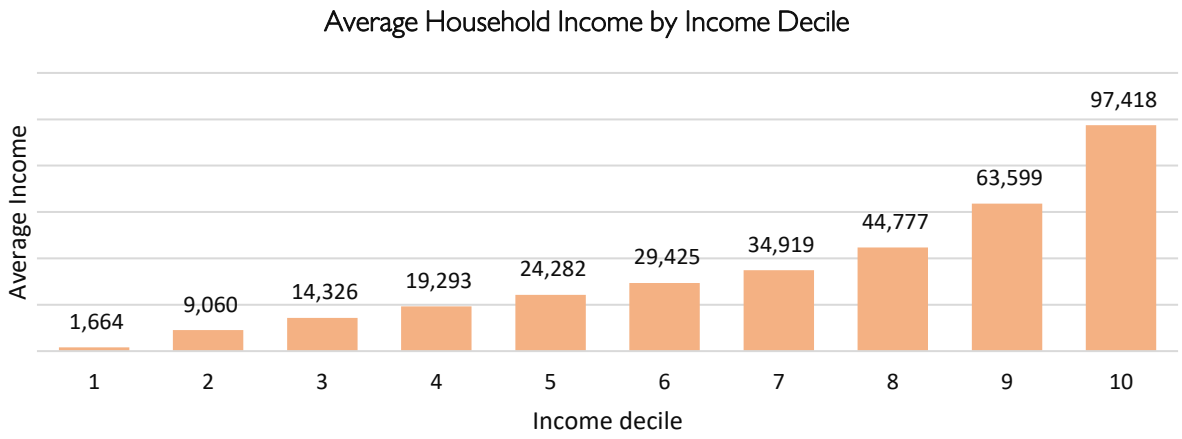

Figure 5 Average Household Income by Income Decile

The figure 5 describes the composition of average household income across deciles. Each decile contains 10% of the respective reference population. The richest 10% of the households receive average monthly income of LKR 97,418, which is more than the national average household monthly income of LKR 76,414. The poorest 30% of the households earn less than LKR 14,326 on average per month, which is lower than LKR 17,572, which is the first quintile of households or poorest 20% of households according to National Household Income & Expenditure Survey 2019. Given the rapid increase inflation since 2019, real incomes have fallen by close to 100% since 2019 (using the CCPI as a proxy and based on DCS statistics, so in 2019 terms, the LKR 14,326 would have an inflation adjusted value of approximately LKR 7,163—a fall of 59% in the mean income compared to the value in the HIES 2019.

Table 8 Decrease in household main income compared to previous year

Change observed in total income	Frequency	Percentage
Decreased over 25%	1787	43.54%
Stayed the same (0% change)	814	19.83%
Decreased slightly (Less than 25%)	807	19.66%
Increased slightly (Less than 25%)	386	9.41%
Do not know	100	2.44%
Refused to answer	95	2.31%
Increased over 25%	115	2.8%
Total	**4104**	**100%**

When the households were asked what kind of change they observed in their main household income source compared to previous year, most of the respondents (63%) stated that their income decreased,

while only 12% of the households mentioned their income increased compared to previous year. The major reasons for reduction of household income as indicated by households were unavailability of work (53%), fuel and electricity issues (47%), COVID-19 (38%) and lack of agricultural inputs (27%), which highlight that series of events starting from COVID-19, restrictions on importing chemical fertilizers, decline in foreign reserves and limitations to access fuel and electricity have led to the reduction in income of majority of surveyed households.

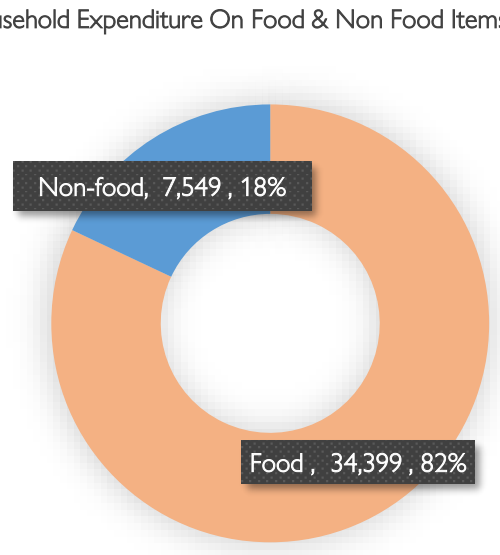

Figure 6 Household Expenditure on Food and Non-Food items in LKR

Given the pressures of increasing food prices and lowering income, households spend a large proportion of their budget towards food. The sample of respondents for this study, on average, spent 82% of their budget on food, indicating that Sri Lankan households are on average food insecure based on the food insecurity thresholds outlined in Smith and Subandoro (2007). Spending such a large proportion of their budget on food makes households extremely vulnerable to fluctuations in food prices which are rapidly increasing (Bloomberg, 2022). The average household in the survey spent 21% of the food budget on cereals (including rice, wheat and flour—all staples of the Sri Lankan diet) and another 21% on fish and meat, while they only devoted about 12% of their food budget on fruits and vegetables and about 16% on dairy, eggs, and pulses. With skyrocketing prices, households are increasingly substituting high nutrient food including fish, meat, vegetable and dairy in favor of cereals according to recent survey data from WFP and FAO (Nikkei, 2022). The WFP and FAO study also indicates that about a quarter of the households are skipping a meal to cope with the crunch. All of these indicate deteriorating diversified diets among Sri Lankan households.

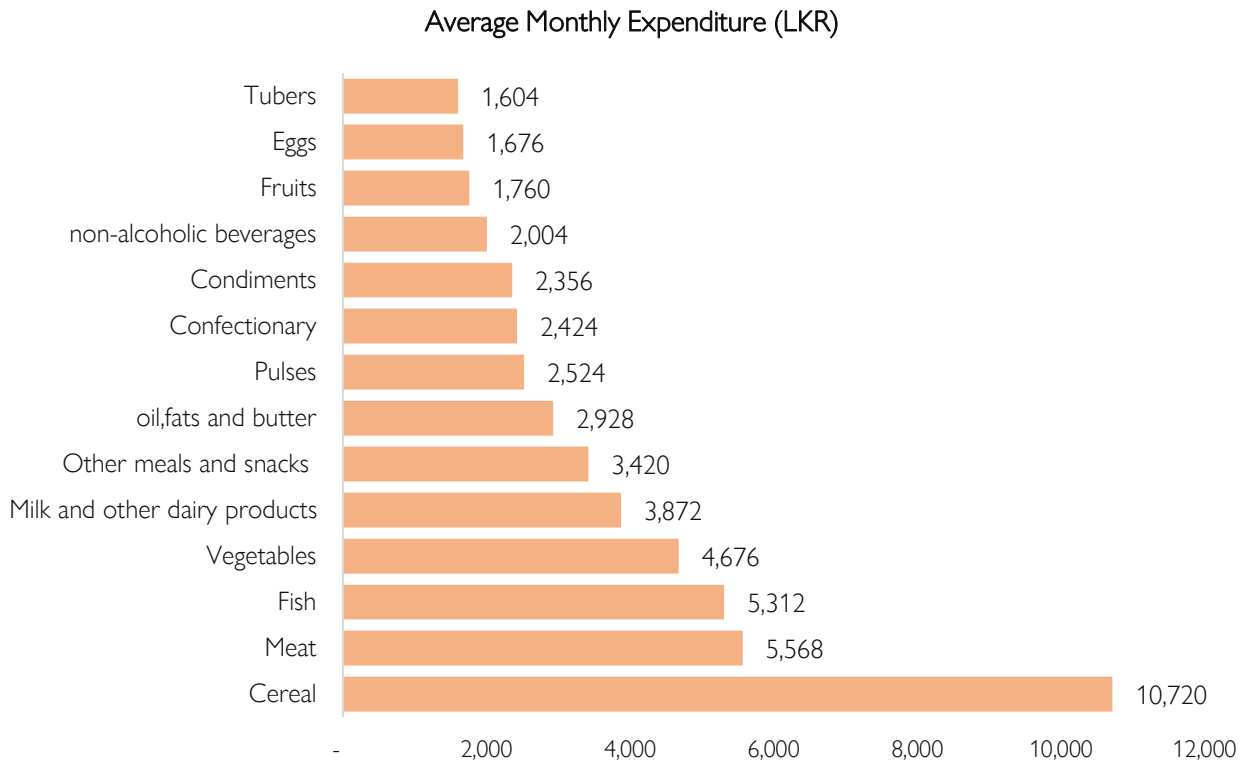

Figure 7 Average Household Expenditure on Food Items

Out of LKR 34,399 of the average household expenditure on food, 71% of payments for food expenses are made with cash, while 22% of food expenses are received in exchange of labour. Only 6% of monthly value of food is purchased with credit. Around 1% of monthly value of food comes from gifts or assistance.

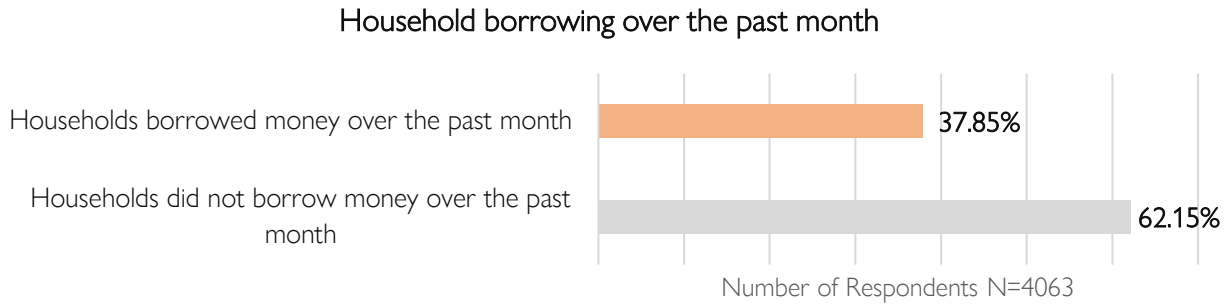

Figure 8 Households borrowing over the past month

Average household expenditure on non-food item is LKR 7,549. Of the total non-food expenditure, 98% of payments (LKR 7,375) are made from cash, while only 2% (LKR 175) is spent from credits. Of all the non-food items, the household monthly expenditure on education is the highest at 26%, which indicates that the households have given priority to education of their children out of all non-food

expenses. One fifth of monthly household expenditure is made on clothing and foot wear. The expenditure on transport, health and personal care and miscellaneous expenses is between 10% and 13%. While the expenditure on electricity and water, energy (cooking, heating, and lighting), alcohol and tobacco and Communication is below 10%.

Table 9 Primary reasons to borrow money over the past month

Primary reasons to borrow	Frequency	Percent
To buy food	743	47.81
Other (specify)	170	10.94
To pay school, education costs	106	6.82
To Pay other loans	100	6.44
To cover health expenses	96	6.18
To buy agricultural land, inputs or livestock	93	5.98
To invest in business	85	5.47
To buy non-food items (clothes, small furniture...)	63	4.05
To pay for durable goods (scooter, TV)	27	1.74
To rent/buy a flat/house	25	1.61
To rent an accommodation	22	1.42
To pay for ceremonies/social events	17	1.09
To pay ticket/cover travel for migration	7	0.45
Total	1554	100

Overall, 48% of the households stated their primary reason to borrow money over the past month was to buy food, which highlights that with the increase in food prices the households have found it difficult to manage their food expenses with their monthly household income. As the households have resorted to borrow money to purchase food, it increases their vulnerability compelling them to borrow more and making it difficult to overcome the vicious cycle of poverty. An additional fifth of the respondents indicating their borrowings went towards meeting education, healthcare and settling of other loans.

Table 10 Source of borrowing over the past month

Sources of borrowing	Frequency	Percentage
Relatives/friends (not remittances)	436	28.06%
Formal [Bank/Credit institution]	361	23.23%
Traders/shopkeepers	297	19.11%
Private money lender	106	6.82%
Micro-finance	88	5.66%
Pawning	75	4.83%

NGOs	51	3.28%
Cooperatives [farmer, etc.]	43	2.77%
Other	36	2.32%
Informal savings group [small groups]	28	1.8%
Employer	26	1.67%
Landlord	7	0.45%
Total	**1554**	**100%**

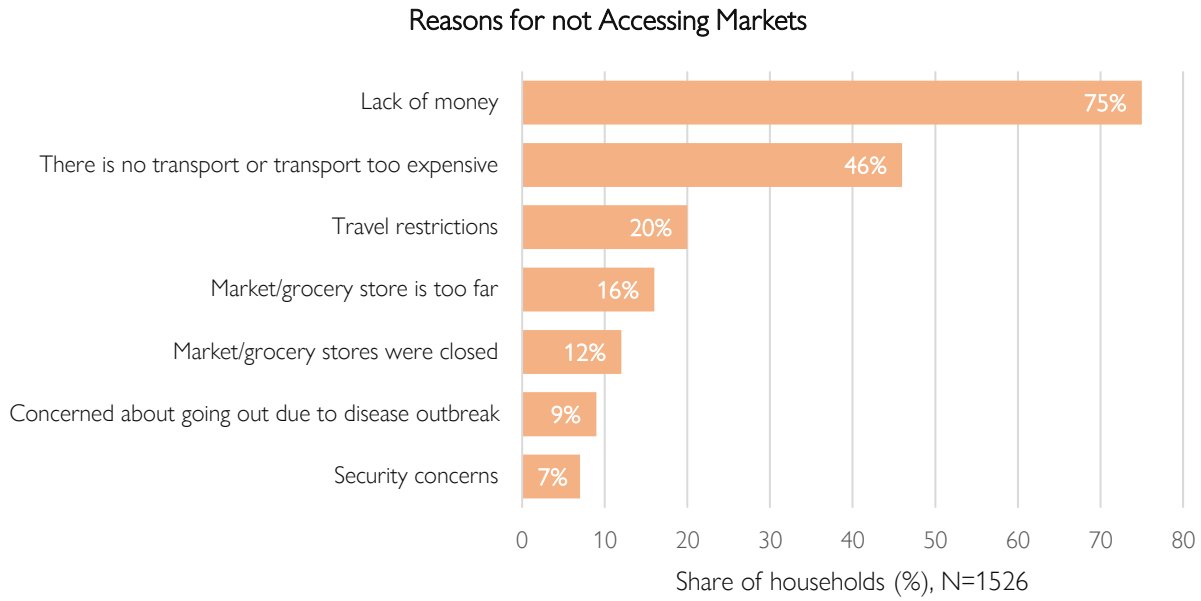

Figure 9 Reasons for accessing markets

Of those who borrowed money, 28% borrowed from friends or family, and an additional 19% took credit from store owners; overall, 65% of the respondents relied on informal sources of credit. This large informal system of credit is the only source of access to credit for most families due to a lack of collateral and a cautious banking system that is entangled in Sri Lanka's debt crisis (business-standard, 2022).

38% of total households surveyed could not access the market/grocery within past 14 days. 75% of households did not access markets due to lack of money, while 46% of households stated that there was no transport or transport was too expensive. Travel restrictions were highlighted by one fifth of the respondents as a factor restricting access to the markets. 16% of the households said that the market/ grocery store was too far.

3.2 Food Consumption Score (FCS)

The Food Consumption Score (FCS) is a composite score measured according to dietary diversity, food frequency, and the relative nutritional importance of different food groups. When calculating the FCS, the consumption frequencies were aggregated and multiplied by the standardized food group weight. According to the weighted scores, three categories of poor (0-21), borderline (21.5-35), or acceptable (35.5) were defined. Average food Consumption Score for the 4,104 surveyed households was 52.47.

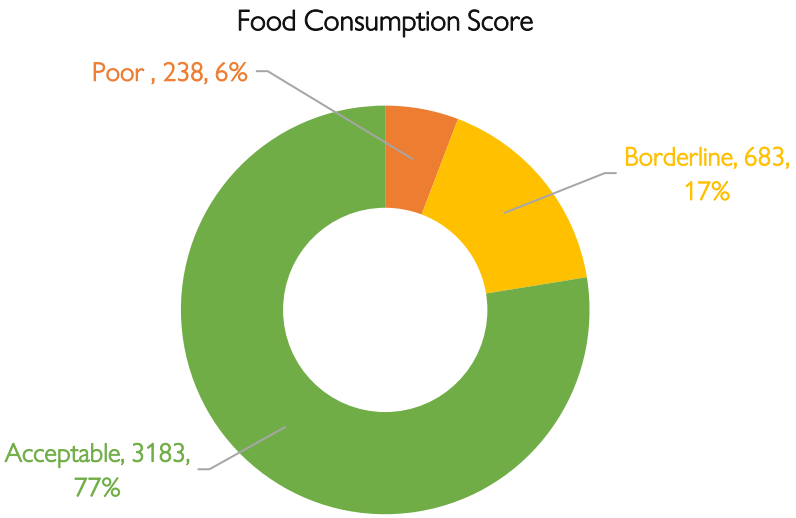

Figure 10 Food Consumption Score

More than three fourth of households (77%) were at an acceptable level of food consumption meeting their dietary diversity needs. Out of the 23% of the households, who were not acceptable level of food consumption, 17% of households were at borderline while 6% of households had poor consumption of food.

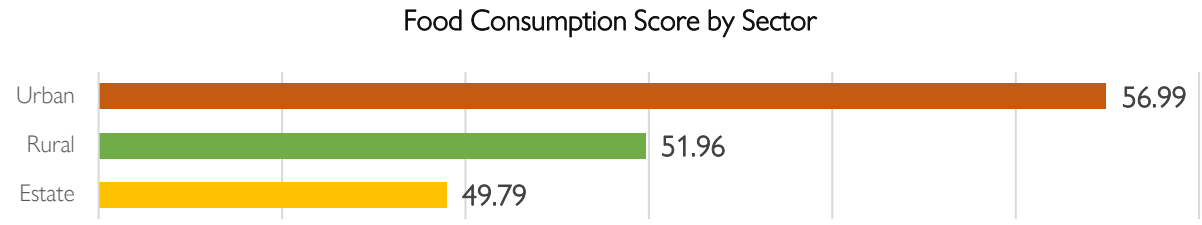

Figure 11 Food Consumption Score by Sector

Food Consumption Score (FCS) in the urban sector was 56.99, whereas the rural and estate sectors reported a lower food consumption score of 51.69 and 49.79 respectively but FCS in all sectors were at acceptable level.

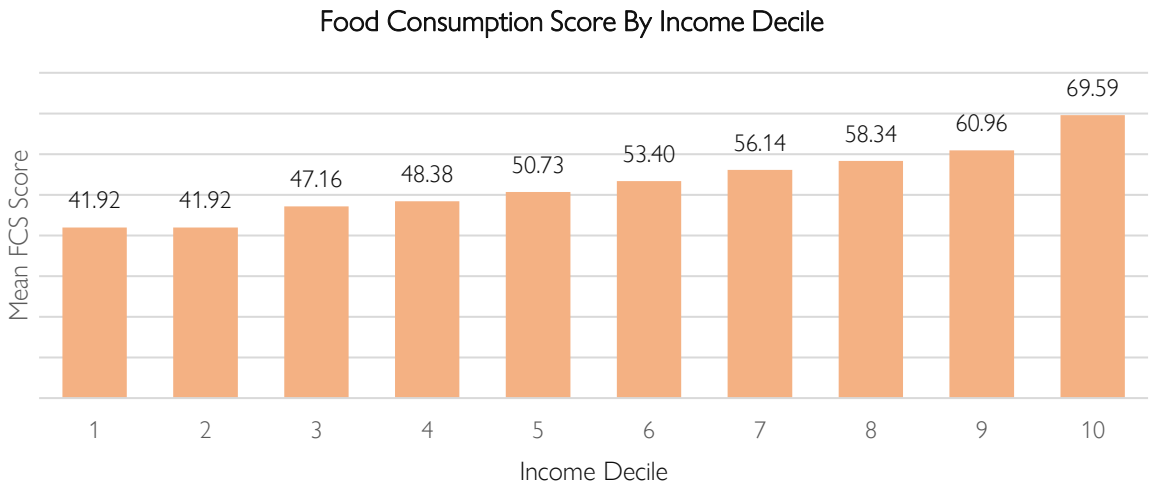

Figure 12 Food Consumption Score by Income Decile

The food cunsumption score ranged between 41 and 70 with the poorest 20% reporting an average FCS score of 41.92 and the richest 10% reporting an average FCS score of 69.59. The difference in FCS between the highest income decile and lowest income decile was 28. These differences in FCS by income decile point to a need for more targeted intervention. The most vulnerable and those in the lower income deciles in society need direct and specific intervientionto alleviate the dietary needs.

3.3 Individual Dietary Diversity Score (IDDS)

Individual dietary diversity scores reflect nutrient adequacy of individuals. The score consists of a simple count of food groups that an individual has consumed over the preceding 24 hours. 9 food groups are included in the score, which implies that the score range for the IDDS is between 0 and 9. As there is no established cut-off points in terms of number of food groups to indicate adequate or inadequate dietary diversity, the following three categories were defined for this assessment as poor (0-4), borderline (5-6), or acceptable (7-9) were defined.

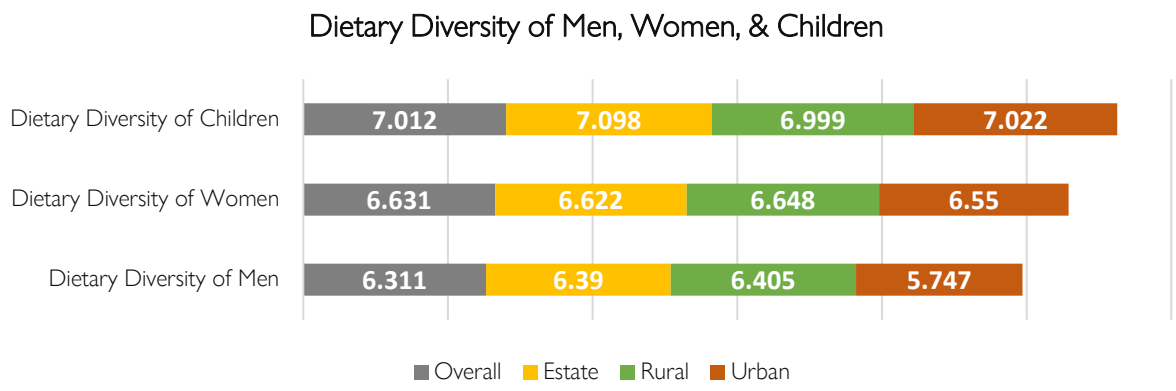

Figure 13 Dietary Diversity of Men, Women, & Children

Figure 13 illustrates the dietary diversity of children (six to 60months old), women and men in urban, rural and estate sectors. Dietary diversity of children is at acceptable level but closer to the borderline, whereas the dietary diversity of both women and men is at the borderline irrespective of the sector. Among households across all the three sectors, low-income households in the urban sector were most affected due to lack of access to nutritious food. The urban poor are the most vulnerable as they have little access to land and other resources and live in environments that are more susceptible to inflation. Interestingly, the dietary diversity of men is lower than that of women across all sectors—while this may seem surprising for a patriarchal society like Sri Lanka, the evidence in the literature is mixed. Similar to the findings here, Jayawardena et al. (2013) also find that men had a lower food diversity than women in Sri Lanka, but a recent report from IFPRI (2021) finds that men have higher lower food diversity scores.

Table 11Dietary diversity of household members by household income decile

Income Decile	Dietary Diversity of Men	Dietary Diversity of Women	Dietary Diversity of Children
1	5.14	5.43	6.05
2	5.65	5.91	6.63
3	5.64	6.12	6.41
4	5.90	6.18	6.85
5	5.79	6.19	6.69
6	6.40	6.82	6.80
7	6.78	7.13	7.67
8	7.15	7.37	7.82
9	7.16	7.41	7.30
10	7.78	7.98	8.14
Household Income Decile from 1 to 10 with Lowest 10% =1; Highest 10% = 10			

The dietary diversity of children, men and women in the highest 40% of the wealth group is at acceptable levels, whereas the dietary diversity of children, men and women in the lowest 60% of the wealth group is at the borderline. As per the findings, the dietary diversity of individuals should be determined by different characteristics of households such as household income, vulnerability of households and access to nutritious foods as the findings cannot generalized to a particular category of households or individuals. Specially, when providing humanitarian assistance, beneficiaries should be selected according to their vulnerability with more priority to given to women-headed households, households with Persons with Disability and the households with lower monthly per capita income as they face higher food security and nutritious diet risks.

3.4 Agricultural Production

Overall, 26% of households engaged in the agricultural sector: crop cultivation or livestock production alone or both crop and livestock production (including fish). In the rural sector, 30% of the households engaged in the agricultural production—with 70% of those engaged in agricultural production being involved with crops. 73% of households do not engage in either crop cultivation or livestock production for consumption or sale. In the estate sector, where most households are closer to the poverty line and are employees of the tea estates, close to 89% of the households did not engage themselves in agricultural production.

Table 12 Engagement of household in crop and livestock by sector

Description	Estate		Rural		Urban		Total	
	No. of households	Share (%)	No. of households	Share (%)	No. of households	Share (%)	No. of households	Share (%)
Crop production only	13	4	679	21	45	8	737	18
Livestock production only	4	1	158	5	32	6	194	5
Both crop and livestock production (including fishing	1	0	113	4	17	3	131	3
Not producing crops nor livestock for consumption or sale	330	89	2120	67	433	75	2883	70

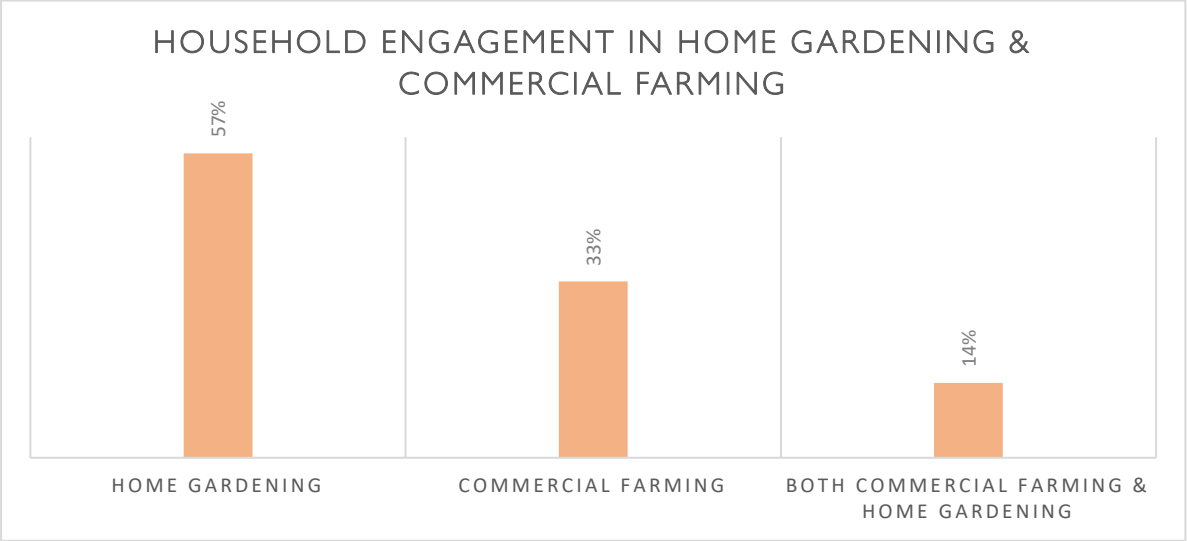

Figure 14 HH Engagement in home gardening and commercial farming

Out of 840 households, majority of households (57%) are involved in home gardening, whereas only 33% of households are engaged in commercial farming. 14% of households engage in both commercial farming and home gardening.

Table 13 Scale of farming by sector

Scale of farming (Yes)	Estate		Rural		Urban		Total	
	No. of households	%	No. of households	%	No. of households	%	No. of households	%
Commercial farming only	2	14	264	34	8	13	**274**	**33**
Home gardening only	12	86	419	55	45	75	**474**	**56**
Both Commercial and Home gardening	0	0	115	15	2	3	**117**	**14**

Among those who engaged in farming, home gardening was a lot more prevalent among those in the estate sector with 86% of the households engaged in farming doing it via home gardening. About half of the households in the rural areas, that are known for their agrarian lifestyle, engaged exclusively in home gardening while a third of the households exclusively engaged in commercial farming—a sixth of the households in the rural areas engaged in both.

Table 14 Engagement of households in crop and livestock production

Main crops cultivated over the past Maha season	No of Reponses	Percentage
Vegetables	331	39.93
Paddy	311	37.52
Other cereal crops (e.g. finger millet, Maize, Sorghum)	111	13.39
Legumes (e.g. cowpea, green gram)	83	10.01
Roots and tuber crops (e.g. cassava, sweet potato, yams)	75	9.05
Spices and condiments (e.g. onion, chili, cinnamon, turmeric, cloves, black pepper)	42	5.07
Other crops	42	5.07
Fruits	27	3.26
Nuts and oil crops (e.g. ground nut, sesame, mustard)	27	3.26

The Table 14 illustrates the details of 840 households, who have been involved in agricultural activities over the past month. Two fifth of households (40%) cultivate vegetables, while substantial proportion of households (36%) engage in paddy cultivation. The households, who rely on paddy cultivation face higher risk of food insecurity due to limited access to fertilizer as there is more potential for the reduction of their household income for the period from July to December 2022 if they do not access enough fertilizer for cultivation.

Between 14% and 9% of households cultivate legumes, other cereal crops and roots and tuber crops. Less than 6% of households cultivate spices, fruits, nuts, oil crops and other crops. Fruits and Vegetables are nutritionally important, while cultivating legumes, cereals and tuber will also support to enhance food security due to high quality of nutrition, easy storage, and availability of harvest throughout the year. With proper crop planning, it is possible to reduce excess fruit and vegetables and cultivate more legumes, cereals and tuber crops.

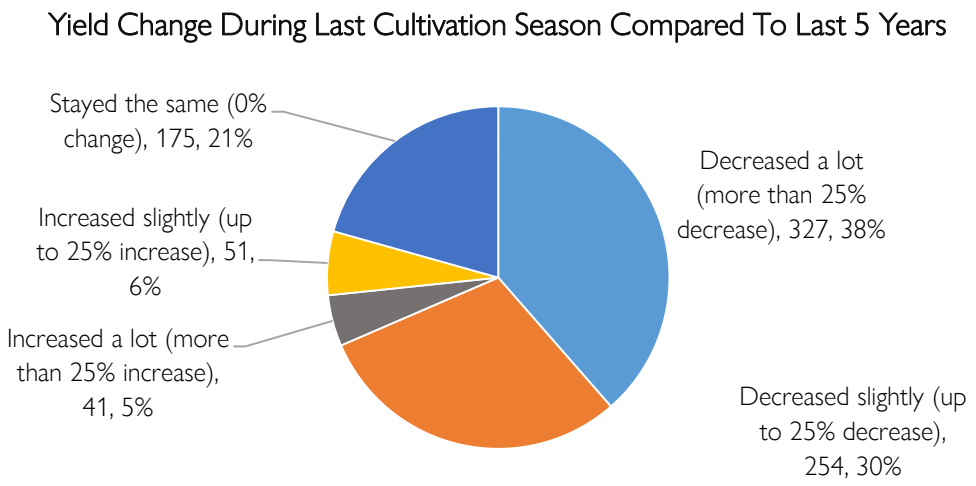

Figure 15 Yield Change during last cultivation season compared to last five years

Two thirds of the households reported decline in crop yield during last cultivation season with 38% of households stating that their crop yield decreased by more than 25%, while 30% of households mentioning that there was slight decrease in crop yield. 21% of the households observed that there was no any change in crop yield. Only 11% of households reported that there was an increase in crop yield.

According to the findings of this assessment, of the 767 households engaged in crop cultivation, 79% of the households reported that they faced difficulties during the Maha season. As the Table 15 illustrates, two thirds of households faced challenges during the last cultivation season due to the unavailability of chemical fertilizer in the market. Substantial proportion of households (56%) stated that the prices of chemical fertilizers were too high.

Table 15 Challenges faced during last Maha cultivation season

Description	Freq.	Percent
Access to chemical fertilizer – not available in the market	354	66.17
Access to chemical fertilizer- prices too high	303	56.64
Crop damage [e.g. by pests, animals or bandits] other than plant disease during growing season	135	25.23
Low quality of seeds	124	23.18
Access to organic fertilizer -not available in the market	121	22.62
Access to insecticides	111	20.75
Plant disease	109	20.37
Access to organic fertilizer- prices too high	88	16.45
Access to enough seeds-not available in the market	65	12.15
Access to enough seeds- prices too high	65	12.15
Access to fuel or electricity to power agricultural equipment	57	10.65
Access to machinery, tools or animals for ploughing	53	9.91
Not enough irrigation or rainfall water	45	8.41
Access to labour or manpower	36	6.73
Access to plot	30	5.61
Access to credit	13	2.43
Soil erosion	3	0.56

When the households were asked about the types of fertilizers used for last cultivation season, 17% of households stated they have applied only chemical fertilizer. With the unavailability chemical fertilizer in the market due to the then ban imposed by the government, the usage of chemical fertilizer has substantially declined, while the usage of organic fertilizer has considerably increased. Many of the farmers (47%) used organic fertilizer during the last Maha season. 22% of households have not used any fertilizer, facing the risk of reduction in crop yield without access to fertilizer

Apart from lack of access to chemical fertilizers, the households faced other challenges like crop damages due to pests, animals and plant diseases (25%), low quality of seeds (23%), lack of access to

organic fertilizers (22%), lack of access to insecticides (21%), plant diseases (20%) and lack of fuel or electricity to power agricultural equipment (11%).

Table 16 Main crops planning to be cultivated in coming Yala season

Main crop in Yala season	Frequency	Percentage
None	238	28.07%
Vegetables	237	27.95%
Paddy	158	18.63%
Other cereal crops (e.g. finger millet, Maize, Sorghum)	53	6.25%
Legumes (e.g. cowpea, green gram)	52	6.13%
Other	41	4.83%
Roots and tuber crops (e.g. cassava, sweet potato, yams)	23	2.71%
Spices and condiments (e.g. onion, chili, cinnamon, turmeric, cloves, black pepper)	23	2.71%
Nuts and oil crops (e.g. ground nut, sesame, mustard)	14	1.65%
Fruits	9	1.06%
Total	848	100%

When the households were asked about the major crop that they are planning to cultivate in the coming Yala season, 238 households (28%) stated that they would not cultivate any crops in the coming Yala season. This can be attributed to several factors—the primary of which is the opportunity cost of planting crops with high input costs. Farmers are facing unprecedently high costs of fertilizer, fuel for machines and labor cost. Given the crop prices are determined in the free market, and the risk of low prices or import competition, some farmers are taking a skeptical approach this Yala season. Overall, 75% of households stated that they didn't start to produce during Yala season due to the challenges.

Among the 72% of households who were planning to cultivate crops in the coming Yala season as illustrated in the table 16, higher percentage of households wanted to cultivate vegetables (28%), paddy (19%), cereal crops and legumes (13%). Less than 5% of households had plans for cultivating roots, tuber crops, spices, condiments, nuts, oil crops, fruits and other varieties of crops. This is typical of crop mix of agricultural output. However, the reduced availability of chemical and organic fertilizer is likely to affect farmers differently based on the sensitivity of the crop to fertilizer usage.

Table 17 Source of fertilizer

Responses	Percentage	Frequency
Purchased at market or agro-input shop -chemical fertilizer	41.60%	337
Purchased at market or agro-input shop -organic fertilizer	19.88%	161
Community/ farmer networks / etc.	19.51%	158
I do not normally apply any chemical or organic fertilizer	14.44%	117
Government suppliers/subsidy self-produced / Manure	14.07%	114

Free distribution	9.88%	80
Other	7.53%	61

With regards to access to fertilizer, majority of households (42%) purchased chemical fertilizer at market or agro-input shops, while one fifth of households (19.88%) purchased organic fertilizers at market or agro-input shops. Another 20% of households sourced their fertilizer from community and farmer networks. 14% of households stated they generally avoid the usage of chemical or organic fertilizer. 14% of households found fertilizer from government suppliers, used self-produced subsidy or manure. 10% of households received fertilizer from free distribution programmes.

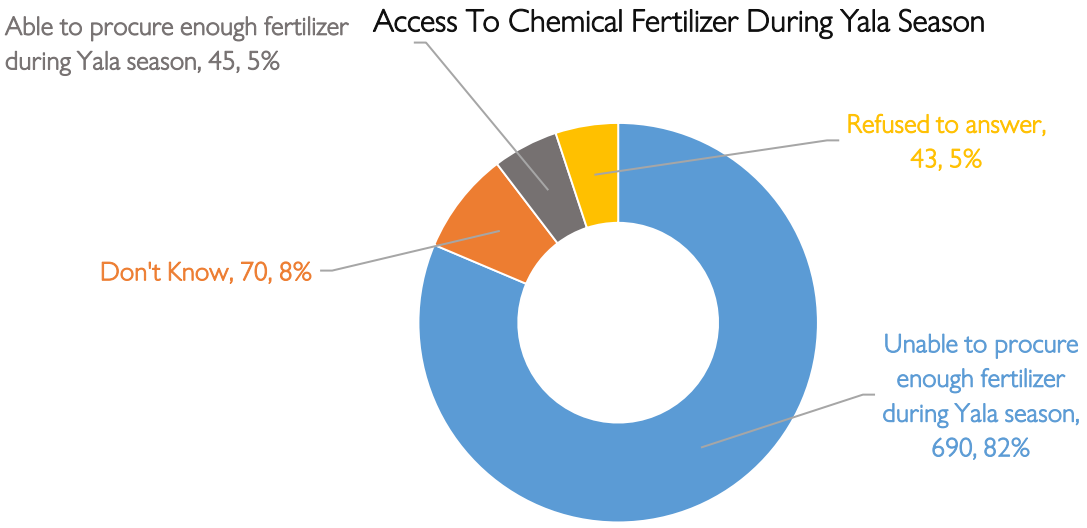

Figure 16 Access to Chemical Fertilizers during Yala Season

Overall, 82% of households were not able to procure enough fertilizer during the Yala season, while only 5% of households stated that they were able to source enough fertilizer required for their cultivation during Yala season.

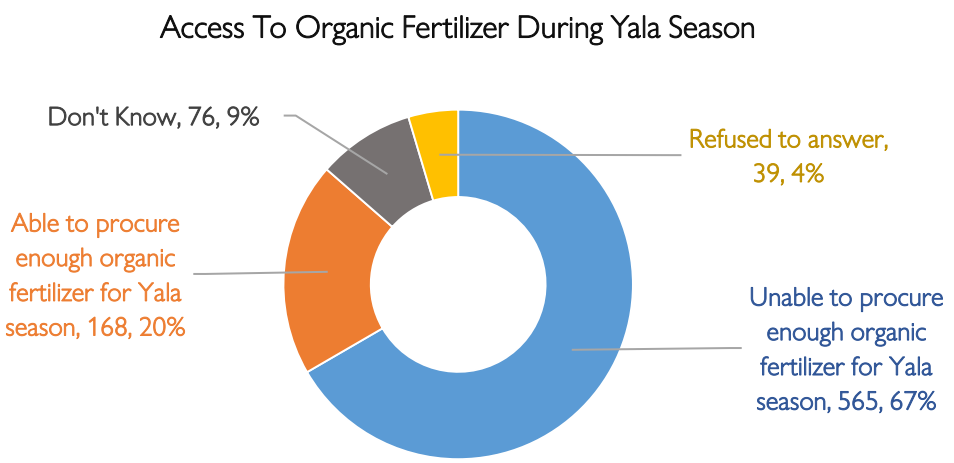

Figure 17 Access to Organic Fertilizer during Yala Season

In contrast to the access difficulties with chemical fertilizer, more households were able to procure organic fertilizers compared to previous years with 20% of the households stating that they have access to organic fertilizer during Yala season. However, over two third of farmers (67%) were still unable to source organic fertilizer during Yala season impeding their yield and income.

Table 18 Expected change in Yala harvest compared to last Yala season for the main crops

Expected Change	Frequency	Percentage
A lot less (more than 25% decrease)	291	34.32%
Don't Know	153	18.04%
Slightly less (up to 25% decrease)	142	16.75%
Same (0% change)	127	14.98%
A lot more (more than 25% increase)	58	6.84%
Slightly more (up to 25% increase)	43	5.07%
Refused to Answer	34	4.01%
Total	848	100%

More than half of the surveyed households (51%) expected that their harvest will change during Yala season compared to previous yala season, with 34% of households expecting loss of more than quarter of their harvest and 17% of households expecting reduction of less than quarter of their harvest. 15% of households expected the harvest to remain the same. Only 12% of households expected there will be an increase of their harvest compared to previous Yala season.

3.5 Home Gardening and Backyard Animal Rearing

Of the 4,104 households who responded to the survey, 72% of the households were willing to engage in home gardening, while over two thirds of the households stated that they had enough water and enough space for home gardening. Willingness to engage in home gardening and animal rearing was predictably higher in the rural sector. In urban areas where space is limited, willingness to rear animals in the backyards was lower.

Table 19 Willingness to engage in home gardening by sector (as a whole)

Description (Yes)	Estate		Rural		Urban		Total	
	No. of households	Share (%)	No. of households	Share (%)	No. of household	Share (%)	No. of households	Share (%)
Willingness to participate home gardening	241	65	2367	75	357	62	2965	72
Willingness to backyard animal rearing	202	55	1693	54	206	36	2101	51

Table 20 Willingness to participate in home gardening (given that water is available) by sector

Willingness to participate home gardening	Estate		Rural		Urban		Total	
	No. of households	Share (%)	No. of households	Share (%)	No. of households	Share (%)	No. of households	Share (%)
No	55	21	216	10	68	17	339	12
Yes	202	79	1908	90	323	83	2433	88
Total	257	100	2124	100	391	100	2772	100

There is a strong association between the water availability and the households' willingness to participate in home gardening. Given that water is available for home gardening, about 88% households are willing to participate in home gardening. Households' willingness to participate in home gardening are nearly the same across sectors.

3.6 Need Assistance

Table 21 Registration to receive Samurdhi benefits

Samurdhi benefits	Frequency	Percentage
Did not register to receive Samurdhi Benefits	2165	52.75%
Registered to receive Samurdhi Benefits	1830	44.59%
Refused to answer	66	1.61%
Don't Know	43	1.05%
Total	**4104**	**100%**

The Table 21 shows the details of registration to receive Samurdhi benefits, 45% of households in the sample had registered to receive Samurdhi benefits while 53% of them were not registered. The proportion of households receiving Samurdhi in the sample was higher than the national level of 33%, which by itself is higher than the official poverty rate in Sri Lanka—a reflection of the failure to establish and ensure targeted social security benefits reach those truly in need (IPS, 2021). The higher proportion of Samurdhi beneficiaries in the sample is due to purposive targeting of vulnerable groups (as discussed in Section 3, data was stratified by household vulnerability). Of the 1,830 households registered in Samurdhi programme, 78% of beneficiary households had received Samurdhi benefits during the last month with the average monthly benefit amounting to LKR 2,782.00 per household.

Table 22 Registration to receive other assistance from NGO, UN or Government

Assistance from NGO, UN or GOVT	Frequency	Percentage
Did not receive other assistance from NGO, UN or GOVT	3539	86%
Received other assistance from NGO, UN or GOVT	468	11%
Refused to answer	64	2%
Don't Know	33	1%
Total	**4104**	**100**

Of the 4,104 households, 11% of the beneficiaries received other assistance from NGO, UN or government programmes, these households were also recipients of *Samurdhi.*

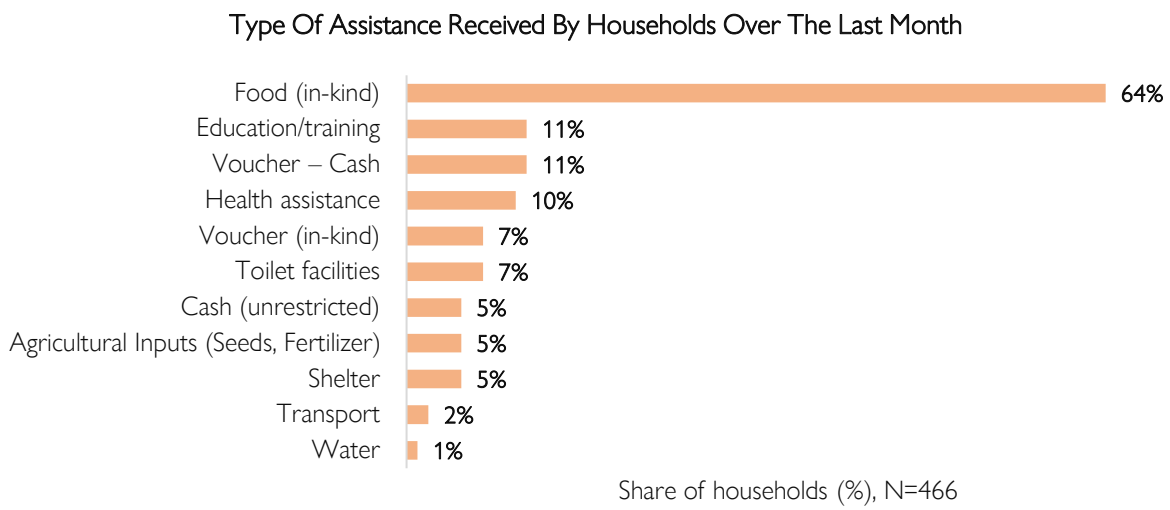

Figure 18 Type of Assistance received by households over the last month

As illustrated in Figure 18, when the households were asked what type of assistance they received over the last month, majority of the respondents (64%) stated that they received in-kind food assistance, while between 12% and 10% of households stated that they received education, training, cash vouchers and health assistance. In contrast, World Vision's (2022) rapid assessment for Sri Lanka (using data from 2021) indicates that less than 10% of the respondents reported receiving food related assistance—instead many of them received shelter related assistance. The change in needs and rapidly deteriorating food security is thus evident across the last year. Despite the economy reeling from lockdowns, the economic situation is dire—primarily due to inflation, which leaves access to nutrients in an extremely vulnerable state and has been the focus on several assistance programmes by the state and non-state actors.

Overall, 77% of the households stated that they preferred food and non-food assistance to meet their needs over the next 6 months, while 20% of households did not prefer food and non-food assistance.

Table 23 Self-reported type of assistance most appropriate for households

Description	Number of Respondents	Share (%)
Inputs for agriculture (seeds/fertilizer/pesticides/tools)	1916	61%
Inputs for livestock (animal feed/veterinary services/veterinary inputs/restocking animals	1318	42%
Access to irrigation water	727	23%
Access to land	358	11%
Support for processing product	303	10%
Support for transportation of animals or animal product [e.g. cold chains for milk]	281	9%
Access to tractors	184	6%
Marketing support	163	5%

Cash assistance	151	5%
Loans	151	5%
Storage equipment or facility [bags / containers / etc.]	144	5%
Technical support or extension services	85	3%
Land rehabilitation (in case of a disaster)	70	2%
Fisheries equipment or other support for fisheries	40	1%
Information on safety measures to carry out agricultural work in the context of the COVID-19 epidemic	15	0.50%
Total household responses = 3132		

The Table 23 illustrates the self-reported type of assistance most appropriate as deemed by the households surveyed. The need for agricultural related inputs was highest among the households surveyed, as majority of the households (61%) stated that they preferred assistance to access inputs for agriculture (including seeds, fertilizer—which is currently scarce, pesticides—which is also scarce in the market, and tools). 42% of households preferred assistance for inputs for their livestock and 23% of them preferred irrigation water. Less than 12% of households wanted access to productive assets like lands, tractors, storage equipment and fisheries equipment—an indication that most small holder agricultural producers are focusing on merely getting their existing operations keep running. The need for cash assistance and loans was highlighted by only 5% of households. Above findings shows that agricultural related livelihoods have been mostly affected during this economic crisis and the people's need for agricultural inputs was higher than productive assets and financial assistance.

As the table below indicates, nearly two third of the respondents (65%) stated that they received and paid cash in past with bank notes, while 23% of them mentioned they used bank accounts to receive money and make payments. Less than 12% of respondents used other means, remittance providers and mobile money. This is an important statistic to refer to when institutions think of disbursing assistance—as most vulnerable households still transact using cash and have access the formal banking system or electronic cash in a more limited fashion.

Table 24 Ways of receiving or pay cash in past

Details	Frequency	Percentage
Physical cash (bank notes)	2666	64.96%
Through a bank account	959	23.37%
Other	397	9.67%
Remittance provider (usually through a code)	58	1.41%
Mobile money	24	0.58%
Total	4104	100%

3.7 Happiness and wellbeing

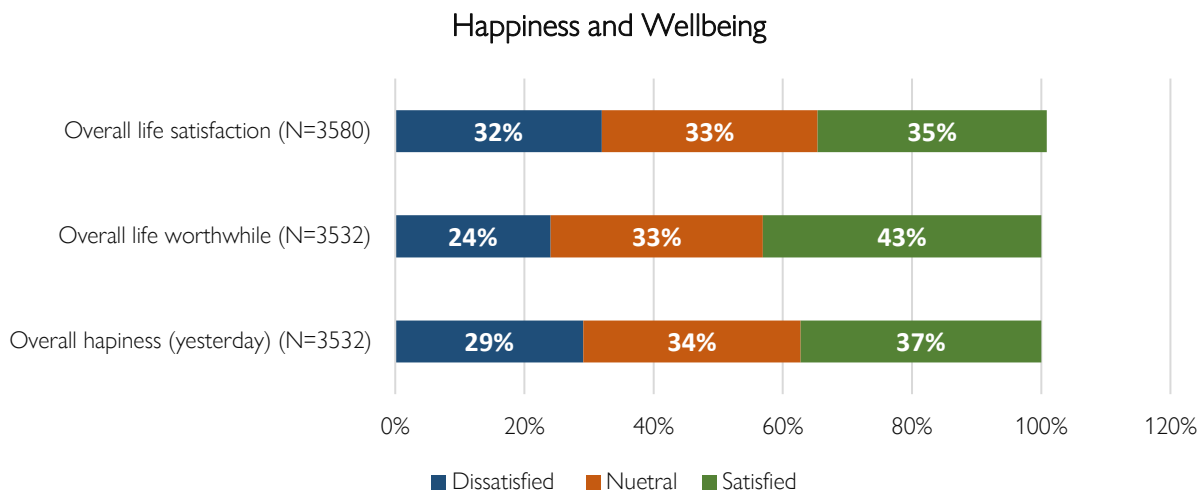

Figure 19 Happiness and Wellbeing

The respondents were asked to rate their level of wellbeing on a scale of 0 to 10, where 0 is "not at all" and 10 is "completely" to understand their perceptions on overall life satisfaction, overall worthwhileness of life and overall happiness. The score range was defined as dissatisfied (0-3), neutral (4-6) and satisfied (7-10). Between 35% and 43% of respondents expressed satisfaction while majority of respondents (between 57% and 65%) were either neutral or expressed dissatisfaction in terms of all three aspects: overall life satisfaction, overall worthwhileness of life and overall happiness. The averages for overall life satisfaction, overall life worthwhileness and overall happiness was 5.15, 5.8 and 5.74, respectively, which implied that wellbeing, on average, was neutral.

3.8 Coping Strategies

According to the responses of the 4,104 households in the sample, 7% of households applied high stress coping strategies such as migration during the past 6 months while another 5% of households had expectation to apply high coping strategies such as migration in the coming 6 months.

More than 90% of the households indicated that at least one of their household members migrated within or outside the country in the six months prior to the survey. Also, significantly, about half of the households reported a desire to emigrate abroad in the six months post the survey period (table 28)—a desire largely attributable to the deteriorating situation in the country as discussed in the previous sections.

As illustrated in the table 25, of the 278 households, who had migrated during the past 6 months, majority of households (47%) migrated outside the district, while 36% of the households migrated within the district. Only 10% of respondents migrated to another country.

Table 25 Migration experience during past 6 months

Migration Experience	Number	Percentage
Migrated outside the district	130	47%
Migrated within the district	101	36%
Migrated to another country	29	10%
Returned migrant outside the district	17	6%
Returned migrant within the district	13	5%
Returned migrant to another country	5	2%
Number of Respondents N=278		

Of the total 111 respondents, who are planning to migrate during the coming 6 months, 47% of them are expecting to migrate to another country. Another 47% of the respondents stated that they are planning to migrate within the country with 25% of them planning to migrate within the district and 22% of them planning to migrate outside the district. 16% of respondents have expectations on return migration with 9% of them planning to return home from another country, 4% of them return home within the district and 3% of them return home outside the district.

Table 26 Migration expectation during coming 6 months

Migration Expectation	Number	Percentage
Plan to migrate to another country	52	47%
Plan to migrate within the district	28	25%
Plan to migrate outside the district	24	22%
Plan to return home from another country	10	9%
Plan to return home within the district	4	4%
Plan to return home outside the district	3	3%
Number of Respondents N=111		

3.9 Reduced Coping Strategies Index (RCSI)

The Reduced Coping Strategies Index (RCSI) considers both the frequency and severity of five pre-selected coping strategies that the household used in the seven days prior to the survey. The RCSI raw scores are calculated by multiplying the frequency with which a behavior was used by the universal severity weight, then summing the weighted scores for each coping strategy. The maximum raw score for the RCSI is 56, i.e. a household that used all five strategies every day for the last 7 days would have a raw score of 56.

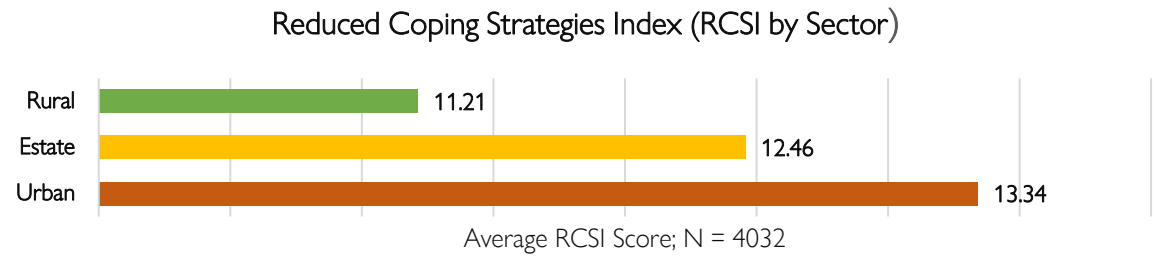

Figure 20 Reduced Coping Strategies Index by Sector

As the figure 20 shows, the frequency and severity of using coping strategies by households in urban sector is higher than estate and rural sectors as they use coping strategies such as restricting consumption by adults in order for small children to eat and borrowing food or relying on help from friends or relatives. The households in rural sector used less severe coping strategies such as relying on less preferred or less expensive food, limiting portion size during meal time and reducing the number of meals eaten in a day.

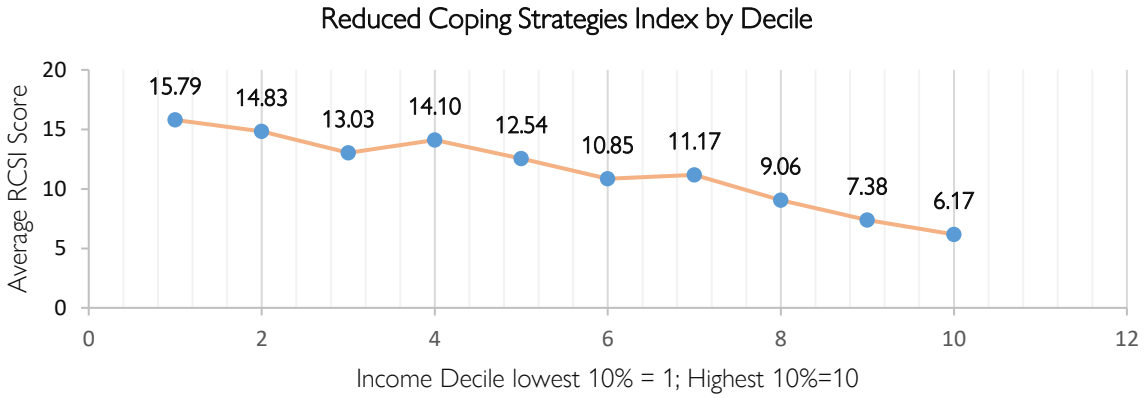

Figure 21 RCSI by Income Decile

Similarly, there is htereogeneity in RCSI score by income deciles. The lowest income deciles had higher RCSI scores—i.e. they used more coping strategies and/or more frequently. While this is somewhat expected, the increasing inequality across income is apparent in the above descriptive statistics.

3.10 Livelihood Coping Strategies-Food Security (LCS-FC)

The Livelihood Coping Strategies Food Security (LCS-FS) identifies medium and longer-term coping capacity of households due to lack of food or lack of money to purchase food and their ability to

face challenges in the future. To measure the indicator, 4 stress strategies, 3 crisis strategies and 3 emergency strategies that are most relevant for the context are used.

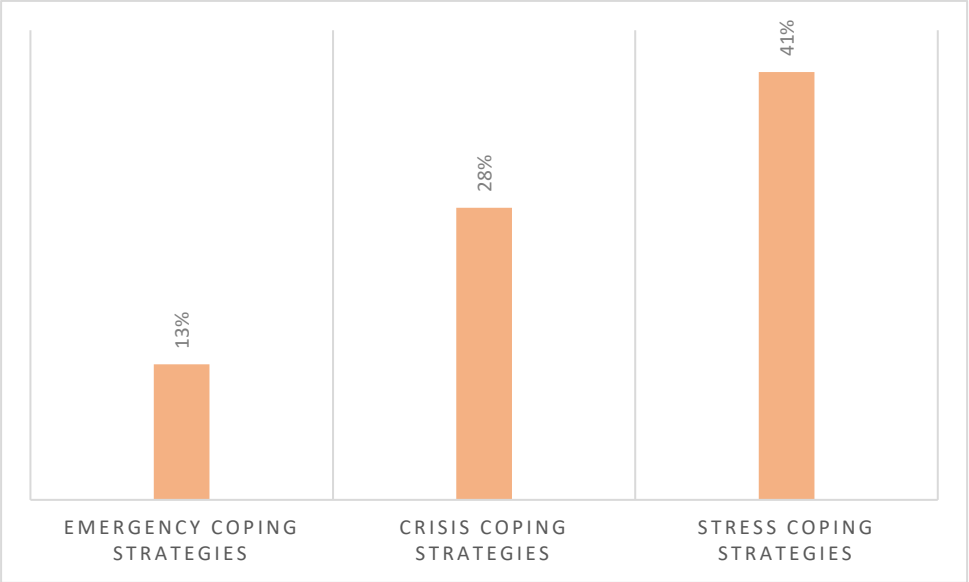

Figure 22 Coping strategies used by households

4 in 10 households reported engaging in stress coping strategies—selling household assets, purchasing food on credit etc. to cope with the dire economic situation. On the other extreme end, 13% of households who are vulnerable and are on the margin reported employing emergency coping strategies—selling productive assets, scaling back education and healthcare expenditure and in some extreme cases withdrawing children from the education system entirely. All of these indicate desperation and helplessness among the most vulnerable sections of society and indicate the need for targeted assistance. In the absence of adequate social safety nets, lack of assistance, could fast deteriorate the circumstances for thousands of households who are currently selling off assets in their household for survival.

4. Conclusion and Recommendations

The findings above indicate that the recent economic turmoil unfolding from late 2021 is affecting food security for a large section of the Sri Lankan populous. While most households have an acceptable FCS, indicating that households are still able to achieve dietary diversity—targeted intervention is necessary immediately to avoid long-term adverse repercussions for households. Households are achieving acceptable FCS by taking drastic measures: some households are increasing borrowing, some households are removing their children from schools, and some are selling productive assets—affecting their long-term income potential and social mobility.

Ad hoc agricultural policies, inability to seek raw material and feed are exacerbating the problem by reducing yields for agricultural farmers and poultry farmers. Targeted intervention is necessary in this regard, especially with regards to poultry and animal feed to provide Sri Lanka's smallholder agricultural producers—who are from some of the poorer sections of society—a lifeline in the short-term to ensure long-term sustainability of the sector and to reduce food vulnerability for the country as a whole. There is also a need to look at alternative agricultural practices to improve the safety net—including the use of organic fertilizers, home gardening—for which there is a lot of interest in Sri Lanka, based on findings from this survey.

The country is also facing serious access issues, whether with regards to markets, health, education, public services etc. Scarcity of fuel locally, and increased prices of fuel have made travel extremely inaccessible for large sections of the vulnerable populous of Sri Lanka. There is thus a need for community-based programmes to be developed to support rural and estate households in Sri Lanka. Programmes that focus on providing community-based market access for agricultural products, health, financial services etc. would alleviate some of the short-term pressures faced by the households amidst the economic crisis.

Hence, the study makes several key recommendations:

Immediate interventions:

1. Support households to meet their basic needs through cash distribution, general food distribution or vouchers

With skyrocketing prices (with inflation in food prices above 90%) and loss of household income due to loss of livelihood, agricultural yield, or reduced hours households (two-thirds of the sample reported decline in income), along with the pressures of increasing food prices and lowering household income, households spend a large proportion of their budget towards food. The sample of respondents for this study, on average, spent 82% of their budget on food. A WFP and FAO study also indicates that about a quarter of the households are skipping a meal to cope with the crunch. With continued inflation, debt sustainability of households is concerning and puts food security at further risk.

Furthermore, some households are taking drastic measures such as selling household assets and purchasing food on credit, and some are employing more severe emergency coping strategies (13% of the households) including selling productive assets, scaling back education and healthcare expenditure and in some extreme cases withdrawing children from the education system entirely. Despite this, 86% of respondents have received no formal assistance yet.

Supporting households to meet their basic needs through multipurpose cash distributions, food distributions or voucher programmes is recommended to help enhance the survival of households. as some have taken on drastic measures to cope up with the dire situation. 38% of the survey respondents indicated having borrowed money in the one-month period prior to the survey—48% of that money went to buy food, and 20% went to pay off other loans or meet education and health needs. With continued inflation, debt sustainability of households is concerning and puts food security at further risk. Some households are taking more drastic measures such as selling household assets and purchasing food on credit (stress coping strategies, 40% of the households), and some are employing more severe emergency coping strategies (13% of the households) including selling productive assets, scaling back education and healthcare expenditure and in some extreme cases withdrawing children from the education system entirely.

The modality of support needs to take into consideration the market availability of commodities, the distance between vulnerable households and available markets and purchasing power of households, and will be different in each context in Sri Lanka. It should be noted that cash interventions need to consider that most vulnerable households still transact using cash and have access the formal banking system or electronic cash in a more limited fashion, and 65% of respondents stated that they received and paid cash in past with bank notes, while 23% of them mentioned they used bank accounts to receive money and make payments. Less than 12% of respondents used other means, remittance providers and mobile money.

Consider Food for Work interventions in communities that are struggling to secure stable employment. As an immediate solution to address severe food shortage among most marginalized people can be done by mobilizing food for work activities. Such activities should be the development of agricultural infrastructures which later contribute to boosting the agricultural production of respective areas. The priorities need to be identified by conducting smart community consultations.

2. Provide nutrition education programs to vulnerable groups

Vulnerable households are increasingly substituting high nutrient food including fish, meat, vegetable /and dairy in favor of cereals according to recent survey data from WFP and FAO (Nikkei, 2022). All of these indicate deteriorating diversified diets among Sri Lankan households and the need for support to meet basic dietary needs, that are targeted towards the vulnerable populations in Sri Lanka—especially those in the lowest income deciles, and the urban poor. As distribution of support to meet basic needs is provided to communities, this could be paired with basic nutrition information/education sessions to inform households how to make best use of the resources they are provided with. Rural and Estate sectors had the lowest food consumption scores. Men in Estate and Urban contexts had the lowest dietary diversity, and should be considered for targeting of educational interventions.

3. Supplementary feeding progammes for children and pregnant and lactating women are necessary to complement existing food intake provisions given the declining dietary diversity among the populous:

Providing targeted support feeding mechanisms (such as school mid-day meal programme and food and nutritional support for pregnant and lactating women), will help households to ensure they are food secure and are able to devote their resources towards long-term sustainability. Dietary diversity and RCSI scores indicate that at present, children are being prioritized for meals over their fathers, however, as income needs start to grip, it's unclear if this will continue. Families in the estate sector have the lowest scores for food consumption (49.79) and dietary diversity and should be targeted for supplementary feeding programs.

4. Prioritize support for Urban and Estate communities.

Across the assessment conducted, Urban and Estate communities report significantly lower scores than Rural areas. The food consumption score in Estate areas was 49.7, which is 7 points lower than the Urban communities. The frequency and severity of using coping strategies by households in urban sector is also higher (13.34) than estate (12.46) and rural sectors (11.21) as they use coping strategies such as restricting consumption by adults in order for small children to eat and borrowing food or relying on help from friends or relatives. The households in rural sector used less severe coping strategies such as relying on less preferred or less expensive food, limiting portion size during meal time and reducing the number of meals eaten in a day.

5. Support for home gardening and alternative farming strategies:

71% of the households that were engaged in the agricultural sector in this study were engaged in home gardening. Further, 72% of the households expressed an interest to take part in home gardening activities (despite 69% of them not having engaged in any farming activities earlier). There was high correlation between desire to engage in home gardening and availability of sufficient space and water for the activity.

While a large proportion of surveyed households are interested in engaging in home gardening activities, the capacity of home gardening to bridge a significant calorie deficiency is doubtful. However, well-planned home gardening to enhance micronutrient intake of the households is an impactful option. For example, a home garden with diverse collection of easy to grow leafy vegetables will increase household nutritional security in a cost-effective manner. Encouraging more home gardening activities and providing targeted community-based interventions, and support including advise on the types of nutritious crops to be grown can then increase household income and improve food security for those engaged in home gardening but also have positive spillover effect on the food security of those rest of the populous. For example, as part of a 29-month long project implemented by ACTED in Monaragala District, it was reported by farmers that as a result of a home gardening initiative introduced under the project, participating farmers could save up to 70% usual expenses on vegetables. Some women farmers in particular started to save the money and use for other expenses including children's education.

Low-income households in the urban sector were most impacted on nutrition indicators, due to lack of access to nutritious food. This is also compounded by their limited access to land and other resources. Home Gardens in this context need to adopt more modern and innovative techniques for cultivation like vertical farming and irrigation techniques.

The same level of enthusiasm was absent among the survey respondents for backyard animal rearing. About half the respondents indicated a willingness to rear animals in the backyard. A key concern for households was the lack of space and water to support a backyard animal rearing exercise. Further, exploration is needed to understand the reasons for lack of household interest in animal rearing as it still may be a good strategy to enhance nutritional security and promote sustainable farming practices at the household level.

6. There is a strong need for community-based interventions that support access to agricultural inputs:

The farming situation in the country needs serious attention with significant drop in productivity due to scarcity of inputs. In April 2021, the Sri Lankan government imposed an abrupt ban on imported chemical fertilizer which was triggered by the foreign exchange crisis. While the government lifted the policy in November 2021, there was irreversible and disastrous impacts on production (two-thirds of the households in this study reported a drop-in yield). The 2021/22 *Maha* paddy cultivation season, the last major cropping season reported a nearly 20% reduction in paddy yield (WFP and Sri Lankan National Planning Department, 2022) (WFP and Sri Lankan National Planning Department, 2022). The lack of fertilizer availability reduced local maize production which directly impacted on animal feed and livestock sector of the country. The prices of eggs and chicken has increased more than 200% in July 2022, compared to July last year.

More than 60% of the households surveyed reported difficulties in accessing seeds, fertilizer, pesticides etc. Short term interventions should target these needs in rural areas. Given the access to markets and use of machinery is restricted due to the ongoing fuel crisis in the country, local community-based intervention programmes may help alleviate some of the setbacks the sector has faced in the short-term. This includes distribution of agricultural inputs, seeds, tools and fertilizers through local farmer societies and community-based organizations prioritizing input provision for efficient farmers.

Recovery interventions:

7. Expand availability of nutritious food in the local markets

Communities are substituting high nutrient, protein and micro nutrient rich foods with cheaper foods (rice, cereals). The average household in the survey spent 21% of the food budget on cereals (including rice, wheat and flour—all staples of the Sri Lankan diet) and another 21% on fish and meat, while they only devoted about 12% of their food budget on fruits and vegetables and about 16% on dairy, eggs, and pulses. This is due to both inflation and availability. Most of the vulnerable households (73%) do not currently engage in crop cultivation or livestock production for consumption or sale, which presents an opportunity for development agencies to focus on agricultural production, increasing household income, and food security through availability and affordability.

Recovery interventions should look to target expansion of protein rich crops like wing beans, spinach, long beans for sale at local markets. Legume cultivation and other crop cultivation (finger millet, Maize, Sorghum etc.) are grown at very low frequency among the farmers surveyed, and because of this, they are imported. Promoting mushroom cultivation can also support household economic development and provide higher protein, and valued-added products. A World Vision, DFAT funded project expanded mushroom cultivation in Eastern Sri Lanka, increased HH income by 130%. The concentrated nature of mushroom production also makes it a popular choice for people with limited space and/or mobility. Promoting local production of these crops will increase availability of nutritious food in the local markets, and reduce the import costs, supporting to maintain foreign reserves.

8. Consider retraining farmers on alternatives to fertilizer and promoting sustainable agriculture practices

There is opportunity for expansion and scale up of Natural, Organic and low-cost fertilizer and pesticide farming techniques, especially among home gardens, and low-income households. Addressing the agricultural issues needs long-term sustainable agricultural policies developed by the state that strike a balance between chemical fertilizer and organic farming methods. This involves enabling better access to organic fertilizer and more balanced portfolio of organic methods. Therefore, there is opportunity to use this crisis as a catalyst towards alternative farming methods.

The two biggest barriers to Maha cultivation were availability and price of chemical fertilizer.; and the biggest barriers to upcoming Yala cultivation was fertilizer and high-input costs. With the unavailability chemical fertilizer in the market due to the then ban imposed by the government, the usage of chemical fertilizer has substantially declined, while the usage of organic fertilizer has considerably increased. Many of the farmers (47%) used organic fertilizer during the last Maha season. 22% of households have not used any fertilizer, facing the risk of reduction in crop yield without access to fertilizer. Community based organizations should see this as an opportunity to provide alternative methods to rural communities, and help farmers cultivate, in a climate-adaptive, eco-friendly manner. This can include providing trainings on conservation topics, such as water-resilient agriculture, resource-saving and efficient crop mixes/selections, organic farming, optimizing ecosystem services, improving climate resilience via technology use (equipment, methods) etc. AS an example, World Vision Lanka project in Batticaloa District has proven the success of introducing chemical free fertilizer Natural farming practices. The project introduced and trained farmers on Natural Farming, which uses holistic agro-ecological farming systems, such as mulching, soil protection techniques, natural pesticides and natural fertilizers using Indigenous Micro-Organisms, crop rotation and green manures/compost. During the final three years of the project saw a 65% increase in the annual production of key supply chain crops of Chilies, Cluster beans, Long beans, Eggplant, and Ladies fingers. The quantitative and qualitative improvements in products have increased the average value of natural products traded weekly from USD 6.3 (LKR 1,186) in the baseline to USD 32.5 (LKR 6,550) in the end-line. In turn, this has made significant improvement in the livelihood status i.e. 101% increase in average family income of producer families.

Whilst the shortage of chemical fertilizer is common issue, crop damage is also caused by pests, animal and diseases which can also be control by good agricultural practices, that include local/traditional pest and disease control mechanisms. Farmers can be trained on these traditional techniques to minimize

harvest losses. Low quality seeds also contribute to a reduced harvest, which can be overcome through connecting with, or developing local seed banks with traditional seed varieties. Natural Farming has a strong emphasis on the utilization of locally obtainable natural resources for agricultural inputs for sustainability and cost efficiency, and could be a good option to consider for longer term recovery approaches to Sri Lanka's current crisis.

9. Design value chain approaches to recovery programs:

In addition to traditional agriculture production, use of technology and value addition is essential to approach new markets. Community-level interventions such as food processing machinery, food preservation, packaging centers will be useful for farmers to earn additional income and approach new markets. 63% of family's household income decreased during this crisis (>25% - 43.54% & <25% - 19.66%). Supporting interventions need to plan focused interventions to targeted business development including new business development, and supporting the expansion of existing business to create additional and diverse income development opportunities. For example, as part of a 5-year long project led by ACTED in Central and Uva provinces, 317 MSMEs were provided with business development support. As a result of this, 50% of these MSMEs are continuously increasing their annual turnover despite the impacts of the global pandemic and the ongoing crisis. This support has also allowed them to generate employment opportunities in the communities – target MSMEs have recruited 500 new fulltime employees since start of the project and also retained a total of 680 fulltime employees at a time when most were forced to let go of employees during Covid-19 crisis. Another option is to promote local maize farming (with quality of seeds, farming inputs, and cash assistance) to increase the maize production, as maize is used as raw material for animal feeds. This can increase household income, but also lower food prices. Availability of adequate animal feed can control the price of animal products, especially meat and eggs.

10. Scale up financial literacy and household savings practices:

38% of households surveyed resorted to borrowing in the past month, and 48% of these stated their primary reason to borrow money was to buy food, which highlights that with the increase in food prices the households have found it difficult to manage their food expenses with their monthly household income. An additional fifth of the respondents indicating their borrowings went towards meeting education, healthcare and settling of other loans. Of those who borrowed money, 28% borrowed from friends or family, and an additional 19% took credit from store owners; overall, 65% of the respondents relied on informal sources of credit. This large informal system of credit is the only source of access to credit for most families due to a lack of collateral and a cautious banking system that is entangled in Sri Lanka's debt crisis (business-standard, 2022).

It is recommended to provide training to increase financial literacy among low income households, and provide education and support strategies for savings, to build financial resilience to future shocks. As the households have resorted to borrow money to purchase food, it increases their vulnerability compelling them to borrow more and making it difficult to overcome the vicious cycle of poverty. Savings for Transformation (S4T) groups (A type of Savings club practiced in WV programming), has a great potential to streamline to pool vulnerable communities' lending and borrowing potentials to a

common platform. S4T structures can be selected as social structures to inject funds and enhance borrowing capacities to address food security issues in more sustainable ways.

11. Ensure access to other public services such as health and education

With the significant increase in fuel prices and scaled down transport availability—access to healthcare, education and public services have also become a concern. A third of the respondents to the survey stated that they faced challenges in accessing health services due to unavailability of transport, high cost of transport, cost of healthcare etc.[30] Community based interventions, including mobile healthcare and public services may improve access to households and improve the quality of life of its members.

12. Provide targeted Mental Health and Psychosocial support programs

Households are experiencing considerable stress. 4 in 10 households reported engaging in stress coping strategies—selling household assets, purchasing food on credit etc. to cope with the dire economic situation; the Reduced Coping strategies index indicates a negative correlation between income and stress – showing that the lowest income HH are resorting to the highest number of coping strategies. When combined with the happiness and wellbeing scores, we can see the impact that the crisis is having on mental health. The majority of respondents (between 57% and 65%) were either neutral or expressed dissatisfaction in terms of all three aspects: overall life satisfaction, overall worthwhileness of life and overall happiness. Future interventions should consider mental health and psychological programs (MHPSS) for vulnerable and low income households to counter-act this.

Lack of access to food, fuel, curfews and reduced incomes frequently adds to the burden of unpaid care and domestic work among women and girls, worsening gender equality and limiting women's income generation, education, skill development opportunities outside of the home. Food insecurity, income decline and the rising costs of living are also forcing women, girls to turn to alternative, risky income sources to survive. This increases women's and girls' risk of gender-based violence (GBV). This can also exacerbate and lead to increased rates of domestic violence in addition to other forms of GBV, putting them at risk.

Humanitarian response must also include interventions to prevent, mitigate and respond to GBV violence against women and girls. The referral pathways and related government service providers need to be gender responsive and inclusive where there is a need to establish alternative referral pathways need to provide effective assistance for survivors. These referral and support mechanisms must be strengthened and communicated among communities. The referral pathways should take a multi-sectoral approach where health, psycho-social support, safety and security and legal/justice interventions, among others legal support, and protection is provided effectively for survivors in a holistic manner.

[30] The main findings related to the health component of the questionnaire have been omitted from the findings section to improve coherence and readability, but the main takeaway is: households have reduced their expenditure on health by at least 30% to support the channeling of 82% of expenditure to purchase food.

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Annex

Food Security and Livelihood Indexes

Food Insecurity Experience Scale (FIES)

The FIES is a metric of severity of food insecurity at the household or individual level that relies on people's direct yes/no responses to eight brief questions regarding their access to adequate food and their self-reported food-related behaviors and experiences associated with increasing difficulties in accessing food due to resource constraints. It is a statistical measurement scale to measure unobservable traits such as aptitude/intelligence, personality, and a broad range of social, psychological and health-related conditions. During the last 12 months, was there a time when, because of lack of money or other resources:

1. You were worried you would not have enough food to eat?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?[31]

Food Consumption Score (FCS)

The Food Consumption Score (FCS) is a composite score measured according to dietary diversity, food frequency, and the relative nutritional importance of different food groups. The Food Consumption Score (FCS) also is a proxy indicator for food intake. The respondents are asked to answer a questionnaire about the frequency of their households' consumption of nine food groups over the previous seven days. When calculating the FCS, the consumption frequencies are aggregated and multiplied by the standardized food group weight. According to the weighted scores of poor,

[31] FAO 2022, Voices of the Hungry, The Food Insecurity Experience Scale, https://www.fao.org/in-action/voices-of-the-hungry/fies/en/

borderline, or acceptable as indicated by World Food Programme's recommended cutoff points (or approved, country-specific cutoff points), households are classified into three groups. The nine standard food groups and weights used for calculating the FCS are indicated in the table below.[32]

Table 27 AA-1 Food Groups & Weights used for Food Consumption Score

Group	Weight	Food Items
Main staples	2	Maize, rice, sorghum, other cereals; tubers; plantains
Pulses	3	Beans, peas, groundnuts and cashew nuts
Vegetables	1	Vegetables, and leaves
Fruits	1	Fruits
Meat / fish	4	Beef, goat, poultry, pork, eggs and fish
Milk	4	Milk, yogurt and other diary
Sugar	0.5	Sugar and sugar products, honey
Oil	0.5	Oils, fats and butter
Condiments	0	Spices, tea, coffee, salt, fish power, small amounts of milk for tea

Individual Dietary Diversity Score

Individual dietary diversity scores reflect nutrient adequacy of individuals. The score consists of a simple count of food groups that an individual has consumed over the preceding 24 hours. All foods eaten by the individual of interest, consumed inside or outside the home, irrespective of where they were prepared are considered for Individual Dietary Diversity Score. 9 food groups are included in the score. According to the studies in different age groups, an increase in individual dietary diversity score is associated with increased nutrient adequacy of the diet. To ensure macro and/or micronutrient adequacy of the diet, dietary diversity scores have been validated with several age/sex groups. Scores have been positively correlated with adequate micronutrient density of complementary foods for infants and young children, and macronutrient and micronutrient adequacy of the diet for non-breast-fed children, adolescents and adults. The food groups used to calculate Individual Dietary Diversity Score is illustrated in the table 28.[33]

Table 28 AA-2 Nine Food Groups of Individual Dietary Diversity Score

Group	Food Items
1	Starchy Staples - The starchy staples food group is a combination of Cereals and White roots and tubers

[32] USAID 2020, FFP Indicators Handbook, Part III Indicators for Emergency Activities January 2020

[33] Food and Agricultural Organization (FAO) 2013, Guidelines for measuring household and individual dietary diversity

2	Dark green leafy vegetables
3	Other vitamin A rich fruits and vegetables - The other vitamin A rich fruit and vegetable group is a combination of vitamin A rich vegetables and tubers and vitamin A rich fruit.
4	Other fruits and vegetables - The other fruit and vegetable group is a combination of other fruit and other vegetables.
5	Organ meat
6	Meat and Fish - The meat group is a combination of meat and fish
7	Eggs
8	Legumes, nuts and seeds
9	Milk and milk products

Reduced Coping Strategies Index (RCSI)

The Reduced Coping Strategies Index (RCSI) is a proxy indicator of household food insecurity. It considers both the frequency and severity of five pre-selected coping strategies that the household used in the seven days prior to the survey. It was asked from the respondents how many times within the previous 7 days they had to use the coping strategies as given in the table 29. The frequency was recorded by entering the relevant number (e.g. 0 – did not have to use the coping strategy; 2 – had to use it twice; 7 – had to use it every day in the past 7 days).[34]

Table 29 AA-3 Measures used for Reduced Coping Strategies Index

In the previous 7 days if there have been times when you did not have enough food or money to buy food, how often has your household had to	Frequency (0-7 – Number of days per week)	Severity Weight	Weighted Score (Frequency x Weight)
Q1 Did you rely on less preferred or less expensive food?		1	
Q2 Did you borrow food or rely on help from friends or relatives?		2	
Q3 Did you limit portion size during meal time?		1	
Q4 Did you restrict consumption by adults in order for small children to eat?		3	
Q5 Did you reduce the number of meals eaten in a day?		1	
Total Household Score			

[34] People In Need, Reduced Coping Strategy Index, https://www.indikit.net/indicator/3950-reduced-coping-strategy-index-rcsi

Livelihood Coping Strategies Food Security (LCSFS)

The Livelihood Coping Strategies Food Security (LCSFS) is an indicator used to identify medium and longer-term coping capacity of households due to lack of food or lack of money to purchase food and their ability to face challenges in the future. To measure the indicator, a series of questions is asked to understand the households' experiences on livelihood stress and asset depletion to cope with food shortages. 4 stress strategies, 3 crisis strategies and 3 emergency strategies that are most relevant for the context are used when calculating LCSFS indicator. The most relevant 10 strategies in their context is selected to calculate LCSFS.[35]

1. Answers concerning utilization of each strategy are recorded (no = 0, yes = 1). Exhaustion of a livelihood coping strategy in months prior to the data collection is also recorded as a 'yes' answer.
2. Household is allocated to one of the four groups: no use of (stress, crisis or emergency) livelihood coping strategies, use of stress strategies, use of crisis strategies and use of emergency strategies. Household is allocated to a group based on the most severe strategy used.
3. For IPC purposes households using no stress, crisis or emergency strategies are allocated to Phase 1, households using stress strategies are allocated to Phase 2, households using crisis strategies are allocated to Phase 3, and households using emergency strategies are allocated to Phase 4.[36]

[35] World Food Programme 2021, VAM Resource Center, Livelihood Coping Strategies - Food Security, 5th November 2021, https://resources.vam.wfp.org/data-analysis/quantitative/food-security/livelihood-coping-strategies-food-security
[36] Global Food Security Cluster 2020, Programme Quality Working Group, FSL Indicator Handbook

Table 30 AA-4 Livelihood-based coping strategies for generic context

No	During the past 30 days, did anyone in your household have to engage in any following activities due to lack of food?	Indicative severity of the strategy
1.1	Sold household assets/goods (radio, furniture, refrigerator, television, jewelry, etc.) *due to lack of food*	Stress
1.2	Purchased food/non-food on credit (incur debts) *due to lack of food*	Stress
1.3	Spent savings due to lack of food	Stress
1.4	Sent household members to eat elsewhere *due to lack of food*	Stress
1.5	Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.) *due to lack of food*	Crisis
1.6	Reduced expenses on health (including drugs) or education *due to lack of food*	Crisis
1.7	Withdrew children from school *due to lack of food*	Crisis
1.8	Mortgaged/Sold house or land *due to lack of food*	Emergency
1.9	Begged and/or scavenged (asked strangers for money/food) *due to lack of food*	Emergency
1.10	Engaged in illegal income activities (theft, prostitution) *due to lack of food*	Emergency

Price increase of key food items

Table 31 AA-5 Increase in prices of Rice Varieties from April to May 2022

COMMODITY	Average Price in SLR in 4th Week of April[37] 2022	Average Price in SLR in 4th Week of May[38] 2022	Percentage of Increase
Samba 1	231.43	236.11	2.02%
Samba 2	219.41	224.44	2.29%
Keeri Samba	262.33	268.75	2.45%
Nadu 1	217.07	223.44	2.93%
Nadu 2	204.58	214.18	4.69%
Raw (Red)	216.21	225.29	4.20%
Raw (White)	215.47	224.06	3.99%
Samba-imported	191.74	217.5	13.43%
Nadu-imported	188.75	213.82	13.28%
Raw (White)-imported	181.35	196.38	8.29%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

[37] 4th Week of April is 22nd – 28th April 2022
[38] 4th Week of May is 20th – 26th May 2022

The prices of all varieties of rice increased from April to May 2022 with imported rice reporting 8% to 13% of increase in price. The prices of local varieties of rice such as Samba, Nadhu, Raw (White) and Raw (Red) increased by 2% and 5%. As the wholesalers have a shortage of the supply of rice with difficulties in meeting consumer demand, it now takes more days to fulfill orders.[23]

Table 32 AA-6 Increase in prices of Dried Chilies, Onions & Potato from April to May 2022

COMMODITY	Average Price in SLR in 4th Week of April[37]	Average Price in SLR in 4th Week of May[38]	Percentage of Increase
Dried Chilies-imported	1567.67	1866.67	19.07%
Onion-imported	358.06	397.78	11.09%
Big Onion-imported	212.78	212.43	-0.16%
Potato Nuwara Eliya	310.83	340.61	9.58%
Potato-imported	198.55	234.85	18.28%

Source: WFP Sri Lanka Joint Rapid Food Security Assessment (2022)

The average price of imported dried chilies increased by 19% from April to May 2022, while the price of imported onion rose by 11% within the same period. The average price for big onion slightly decreased with 0.16% of reduction. The price of Nuwara Eliya potato rose to LKR 340 per Kg in May 2022 with 9.58% of increase in price. The price of imported potato reported 18% of increase. Compared with the same period last year, current prices of Nuwara Eliya and other imported potato varieties have increased by 59%.[23]

July 2022