



# Minimum Cost of Nutritious Diet *Sri Lanka*

October 2013—September 2014



**HARTI**



**World Food Programme**

wfp.org

# MESSAGE FROM THE REPRESENTATIVE OF WORLD FOOD PROGRAMME

The World Food Programme is determined to fight hunger and improve the food and nutrition security among the poor. Sri Lanka is a lower middle income country of which the poverty rate has further decreased to 6.5% in 2014. However, the current malnutrition rates have certainly not followed the pace of poverty reduction which might be partly attributed to the fact that the food poverty line (cost of securing nutritional requirements) as part of the overall poverty line is calculated to meet only calorie requirements. The food poverty line does not consider the costs associated with a nutritious diet.

The Minimum Cost of Diet (CoD) is one of the most popular methods used globally to measure the population's affordability for a nutritious diet. WFP Sri Lanka extended its expertise and resources to establish a CoD monitoring system at the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI), Ministry of Agriculture. I am pleased that WFP was able to train more than 20 Government Technical Officials of HARTI, Ministry of Health, Ministry of Agriculture and Department of Census & Statistics on CoD methodology and tools.

Furthermore, I believe that the outputs of this study will directly contribute to identifying the provinces which need market and food security interventions and will also serve as an advocacy tool to highlight importance of food based nutrition interventions.

I congratulate the research team (HARTI, Department of Census & Statistics and Ministry of Health) for the commendable efforts extended in the production of this publication.

Ismail Omer

Representative- WFP Sri Lanka

# MESSAGE FROM THE DIRECTOR OF HARTI

Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) has been a leading socio-economic research institution in the agrarian and rural sector since it was founded in 1972 and continues to be the national model of the excellence in the field of food security analysis. In 2014, HARTI established a CoD monitoring system with the collaboration of WFP which is working as a focal point in monitoring CoD in Sri Lanka. The CoD tool can be used to calculate the affordability or economic access to a nutritious diet and helps determine whether malnutrition and micronutrient deficiencies are caused by limited access to nutritious food.

In this exercise, the researchers calculated the CoD for all the provinces covering cultivating and harvesting seasons. I trust that the findings of this report will be a policy guidance to improve food based nutritional intervention. This publication is a collaborative work of HARTI with WFP, the Ministry of Health and the Department of Census & Statistics.

I would like to express my gratitude to the WFP for extending its expertise and resources to establish CoD monitoring system at HARTI. Furthermore, I congratulate the research team for the commendable work in the production of this report.

Haputhanthri Darmasena

Director/ Chief Executive Officer - HARTI

# WHAT IS THE COD?

ANY OTHER FOOD BASKET AT THE SAME PRICE WILL BE LESS NUTRITIOUS, AND ANY OTHER FOOD BASKET OF THE SAME NUTRIENT VALUE WILL BE MORE EXPENSIVE

The Cost of Diet (COD) is a method to model the cost of a theoretical, simulated diet (food basket) which satisfies all nutritional requirements<sup>1</sup> of a household of specific composition of interest (e.g. breastfed child, lactating mother, and other members) at the minimal possible cost, based on the availability, price, and nutrient content of local foods. Any other food basket at the same price will be less nutritious, and any other food basket of the same nutrient value will be more expensive. When combined with household income data, the COD can be used to estimate the proportion of households that could theoretically afford a nutritious diet. Hence, the COD tool helps determine whether malnutrition and micronutrient deficiencies are caused by insufficient access to nutritious food.

The 1996 World Food Summit in Rome defined food security as existing 'when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. There are a very few approaches measuring food access in terms of access to a diet that meets all nutrient requirements (nutritious diet). The COD tool determines the prevalence of households that cannot access the most cost effective nutritious diet. Poverty estimates only take into account the affordability of sufficient calories. Using the COD to identify a Nutrient Poverty Line can complement existing food poverty lines which represent the required purchasing power to acquire sufficient energy.

The COD approach was developed by Save the Children UK in response to research that demonstrated that the impact of traditional nutrition education programmes has been limited because of the economic constraints faced by many households in low-income countries (Chastre et al, 2009). Even in contexts where food is sufficiently available households might face inadequate food consumption due to lack of knowledge about a nutritious diet and food and nutrition practices. In this context the degree of the nutrient gap is due to economic

constraints on acquiring a nutritious diet or lack of knowledge remains unknown. Meeting nutrient intake recommendations through a nutritious diet requires purchasing power. The required purchasing power can be quantified using the Cost of Diet approach. Based on locally available foods, the COD software identifies the cost of the cheapest possible combination of food items that meets the nutrient requirements of a household. The purchasing power required to meet nutrient intake recommendations can then be compared to actual purchasing power, based on the proportion of household income that can be spent on food.

In areas where the proportion of households that cannot afford a nutritious diet is high, interventions that provide either nutritious dense food and/or income assistance to households as well as improving market functioning for specific nutrient rich commodities may be required to make an impact on nutrition outcomes.

In areas where most people can afford an adequately nutritious diet but malnutrition still affects a considerable proportion of the population, interventions could be focused on education, behavioural change and water and sanitation to assure that nutritious choices are made, perhaps combined with micronutrient supplements for specific groups (Geniez et al, 2014).

The COD serves as advocacy tool to make the case for the importance of food-based nutrition interventions. Furthermore, the COD results can be used to model the comparative cost-effectiveness of various potential nutrition interventions and strategies (such as fortified complementary foods) by determines the cost of a nutritious diet that could be reduced as a result of the intervention.

The COD approach can also be used to model the effect of social safety nets on the affordability of a nutritious diet (vouchers or cash transfers) (Baldi et al, 2013; Frega et al, 2012).

<sup>1</sup>The tool takes into consideration the following individual nutritional requirements: energy, proteins, fat, absorbed calcium, magnesium, zinc, absorbed iron, thiamine (B1), riboflavin (B2), niacin equivalent, vitamin B6, pantothenic acid, folic acid, vitamin B12, vitamin C and retinol equivalent.

# COD APPLICATIONS

THE COD HELPS US SOLVE A COMPLEX PROBLEM: OPTIMIZING FOR NUTRIENTS WHILE CONSUMING FOOD ITEMS

## WHAT IS THE MINIMUM COST OF FOODS THAT MEET THE NUTRIENT NEEDS OF A TYPICAL HOUSEHOLD?

The Cost of Diet software applies linear programming routines to generate hypothetical diets using a combination of foods that will enable a household to meet their energy and nutrient requirements according to WHO/FAO recommendations at the lowest possible cost. The software can estimate the cost of four hypothetical diets:

1. **MCCAL:** The lowest cost diet that only meets the average energy requirements
2. **MCEFP:** The lowest cost diet that only meets the average energy and the recommended protein and fat requirements
3. **MCNUT:** The lowest cost diet that meets the average energy and the recommended nutrient requirements
4. **LACON:** The lowest cost diet that meets the average energy and the recommended nutrient requirements of the household and reflects cultural consumption patterns

The software provides the cost of the cheapest possible nutritious diet based on prices of locally available food items. It also generates a breakdown of the quantity at which each food item was included into the diet and the nutrients contributed by each food item. Based on the MCNUT diet results the analysts will decide whether or not a LACON should be calculated. While reflecting a typical local diet the LACON will always be more expensive and cannot be considered the cheapest possible nutritious diet.

## IS THIS DIET AFFORDABLE?

When combined with income data the results produced with the COD software can be used to estimate the percentage of households that can or cannot afford a nutritious diet. The underlying assumption is that members of households that cannot afford the cheapest possible nutritious diet are more likely to be malnourished. The MCNUT as a threshold to estimate whether income is sufficient to afford a nutritious diet is referred to as the “**Nutrient Poverty Line**”. In addition to the MCNUT the affordability of a diet that only meets calorie requirements is calculated for Sri Lanka. This calorie threshold is also referred to as “**Calorie Poverty Line**”.

The “**Official Poverty Line**” for Sri Lanka is calculated based on the cost of meeting calorie requirements using a standard food basket plus an small amount required for essential non-food items. The Calorie Poverty Line is not the same as the official poverty line. It measures the cheapest possible combination of food items at local prices that would provide the minimum calorie intake required.

The COD results show that income above the national poverty line may not be sufficient to access a nutritious diet and as such contribute to preventing malnutrition.

# COD SRI LANKA

MALNUTRITION REMAINS A MAJOR CHALLENGE IN SRI LANKA, PARTICULARLY IN TERMS OF ACUTE MALNUTRITION (WASTING)

Since the end of the civil war in May 2009, Sri Lanka has demonstrated strong economic performance and transitioned to a middle income country in January 2010. Despite the progress, vulnerability to food and nutrition insecurity and low resilience to climate variability persist around the country, mostly affecting the poorest households most. Malnutrition still remains a major challenge in Sri Lanka, particularly acute malnutrition. In the latest National Nutrition Survey, Global Acute Malnutrition (GAM) was reported as 19.6% (MoH & UNICEF, 2012). Rates have shown little improvement over the past decade, fluctuating around 15 percent stunted and wasted respectively and 25 percent underweight (WFP & MED, 2014).

As a result of Sri Lanka's rapid economic development which is mostly centralized in urban areas, food shortages mostly prevail in vulnerable pockets of the country. This can change rapidly whenever emergencies arise usually following natural disasters such as severe droughts and floods which can have detrimental effects on livelihood assets and destroy entire harvest with effects on food prices throughout the country (WFP, MED & HARTI, 2012).

In this context the Hector Kobbekaduwa Agrarian Research & Training Institute (HARTI) has initiated a study on the "Minimum Cost of Diet" with the financial and technical assistance of the UN World Food Programme (WFP). The study was undertaken in collaboration with the Department of Census and Statistics and the Nutrition Enhancement Unit of the Ministry of Health.

The Marketing, Food Policy and Agribusiness Division of HARTI collects retail and wholesale prices of over 110 food commodities on a weekly basis as part of a food price monitoring system. The prices are collected in all district markets and district level major food producing areas of the island. This existing price data was used for COD analysis. Given that prices are collected regularly, the COD can be monitored over time and will be included in the regular food price monitoring system of HARTI.

The objective of the COD analysis in Sri Lanka is to identify whether a nutritious diet can be found using locally available foods and whether this diet can be afforded by the population across different geographical areas and seasons. The analysis depicted in this report covers the period starting from October 2013 to September 2014 and is divided into four seasons: Maha planting season (October 2013– January 2014), Maha harvesting season (February– March 2014), Yala planting season (April– July 2014) and Yala cultivation season (August– September 2014).

The COD is based on secondary price data from HARTI and income data from the Household Income and Expenditure Survey (HIES) 2012/13 (DCS, 2013b). A model household was determined based on household composition data from the Sri Lanka Census of Population and Housing (DCS, 2012). District price data for 86 food items were averaged for each season and aggregated at provincial level. The resulting per capita MCNUT and MCCAL were then compared to per capita income data from the same Province. The HIES (2012/13) determines that upon excluding the wealthiest quintile, households spend around 50% of income on food. As such, the MCNUT and MCCAL poverty lines were compared to 50% of household expenditure to determine the percentage of households that can theoretically afford and have sufficient economic access to a nutritious diet and/or sufficient calories.

## MODEL HOUSEHOLD FOR SRI LANKA COD ANALYSIS

- 1 Woman 30-59 years (lactating) 55 kg, moderately active
- 1 Man 30-59 years, 60 kg, moderately active
- 1 child 12-23 months
- 1 child 5-6 years
- 1 child 12-13 years

# NUTRIENT AND CALORIE POVERTY LINE

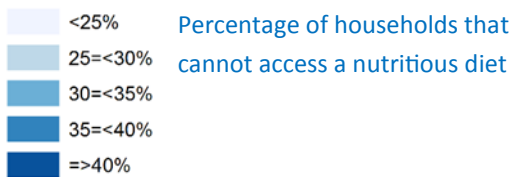
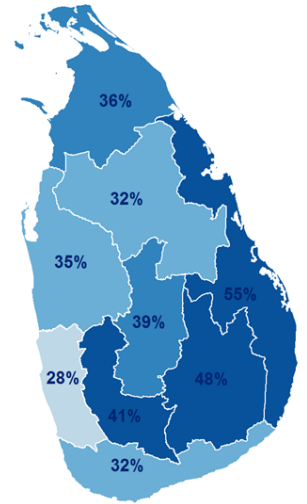
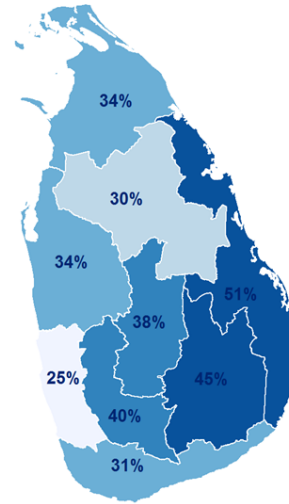
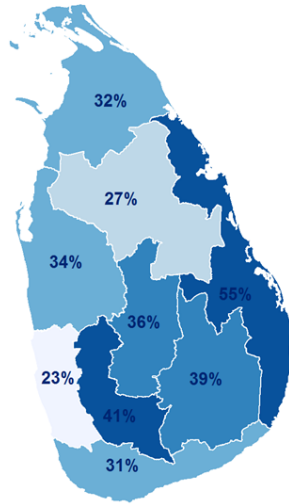
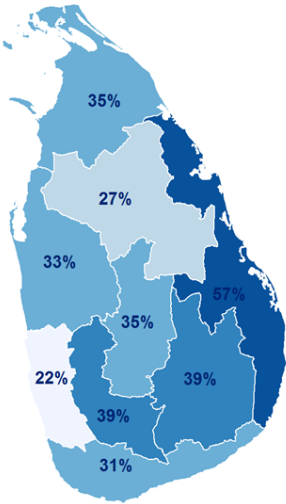
ACCESS TO NUTRITIOUS DIET ACROSS SEASONS (2013-14).

MAHA CULTIVATION

MAHA HARVESTING

YALA CULTIVATION

YALA HARVESTING



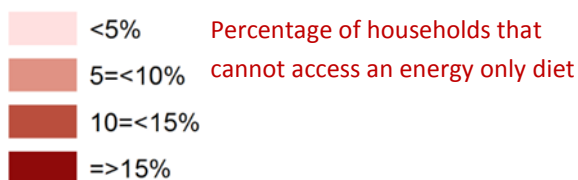
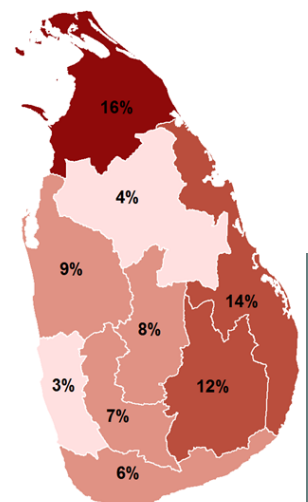
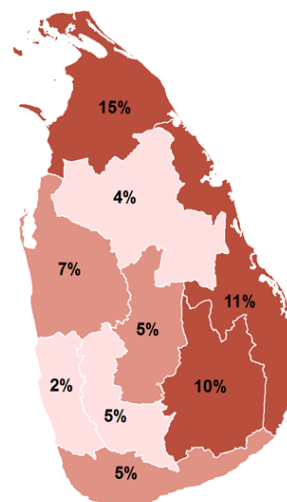
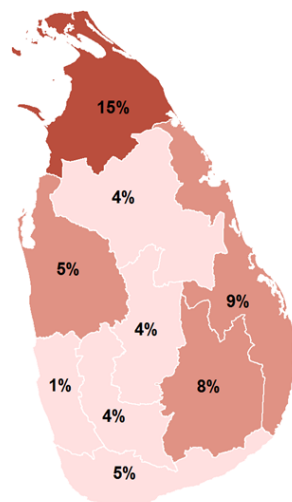
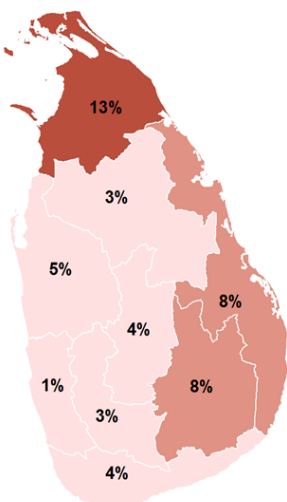
ACCESS TO ENERGY ONLY DIET ACROSS SEASONS (2013-14).

MAHA CULTIVATION

MAHA HARVESTING

YALA CULTIVATION

YALA HARVESTING



# RESULTS

THOUGH WIDELY AVAILABLE ACROSS SRI LANKA, ACCESS TO NUTRITIOUS FOOD IS LIMITED DUE TO ECONOMIC CONSTRAINTS

The cost of a nutritious diet for the model household varies from LKR 11,831 in the Northern Province in Maha harvesting season to LKR 18,913 in the Western Province in Yala harvesting season. The cost increases in all the provinces during Yala harvesting season. Compared to the Maha planting season, when prices of nutritious foods are at their lowest, the cost of a nutritious diet increased between 2% - 16%. The highest cost increase MCNUT was recorded in the Uva Province, while the lowest variation in cost was in the Northern Province.

The energy only diet ranges from LKR 4,898 in the Eastern Province in Maha planting season to LKR 7,268 in the Western Province in Yala harvesting season. The cost of an energy only diet increased significantly in Yala harvesting season. Compared to the Maha planting season, the cost of an energy only diet increased between 15% (Northern Province) to 41% (Western Province). This is predominantly caused by the steady rise in rice prices during 2014.

In undertaking the MCNUT analysis, certain nutrients appeared to be more difficult to obtain than others. These included iron across all provinces and calcium in

half of the provinces. Sri Lanka experiences a high prevalence of anaemia among children and pregnant women. Lack of iron rich foods in local markets may be a possible factor.

Out of all food items included in the analysis, the following were selected through linear programming to provide the least costly nutritious diet: **Rice, Dhal, Mukunuwenna, Dried Salaya, Chickpea, Coconut oil, Palm oil, Chicken liver, Dried Sprats and Dried chilies.**

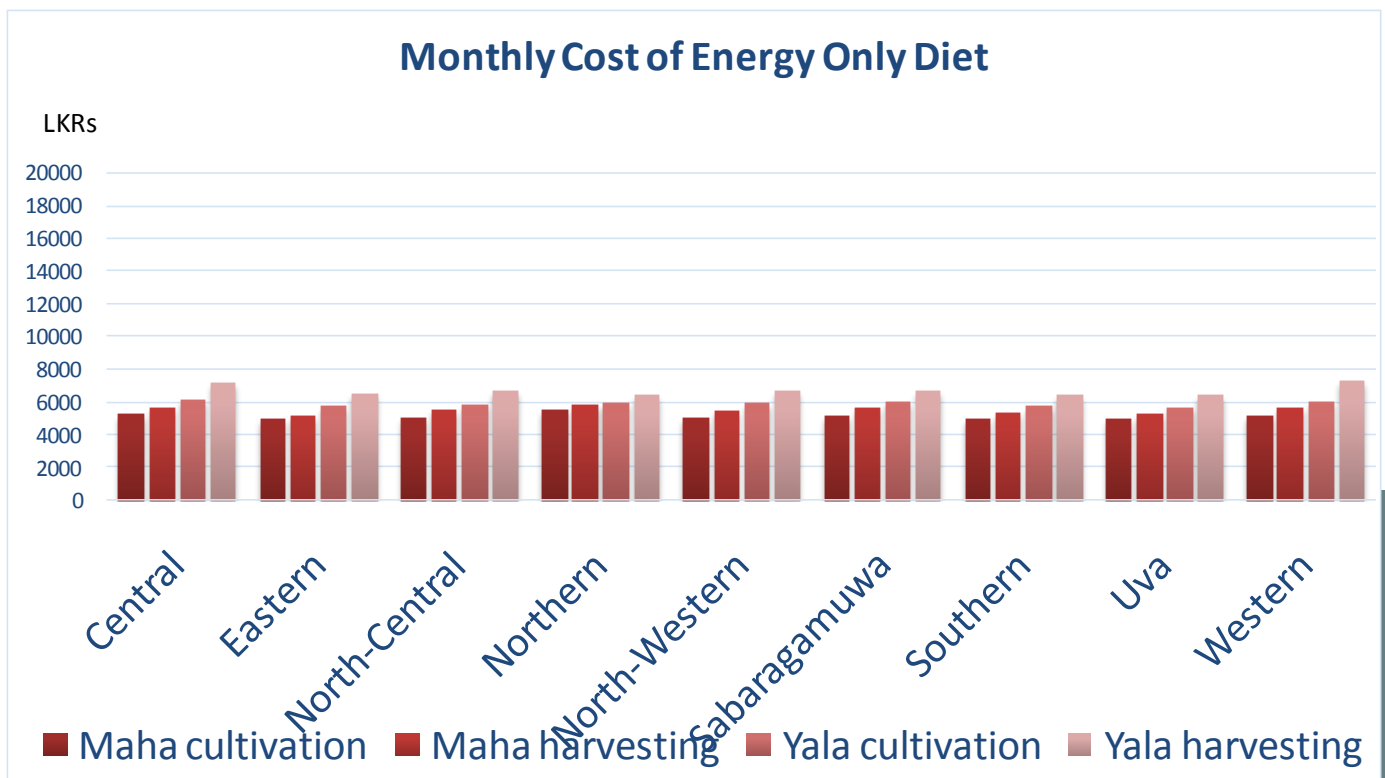
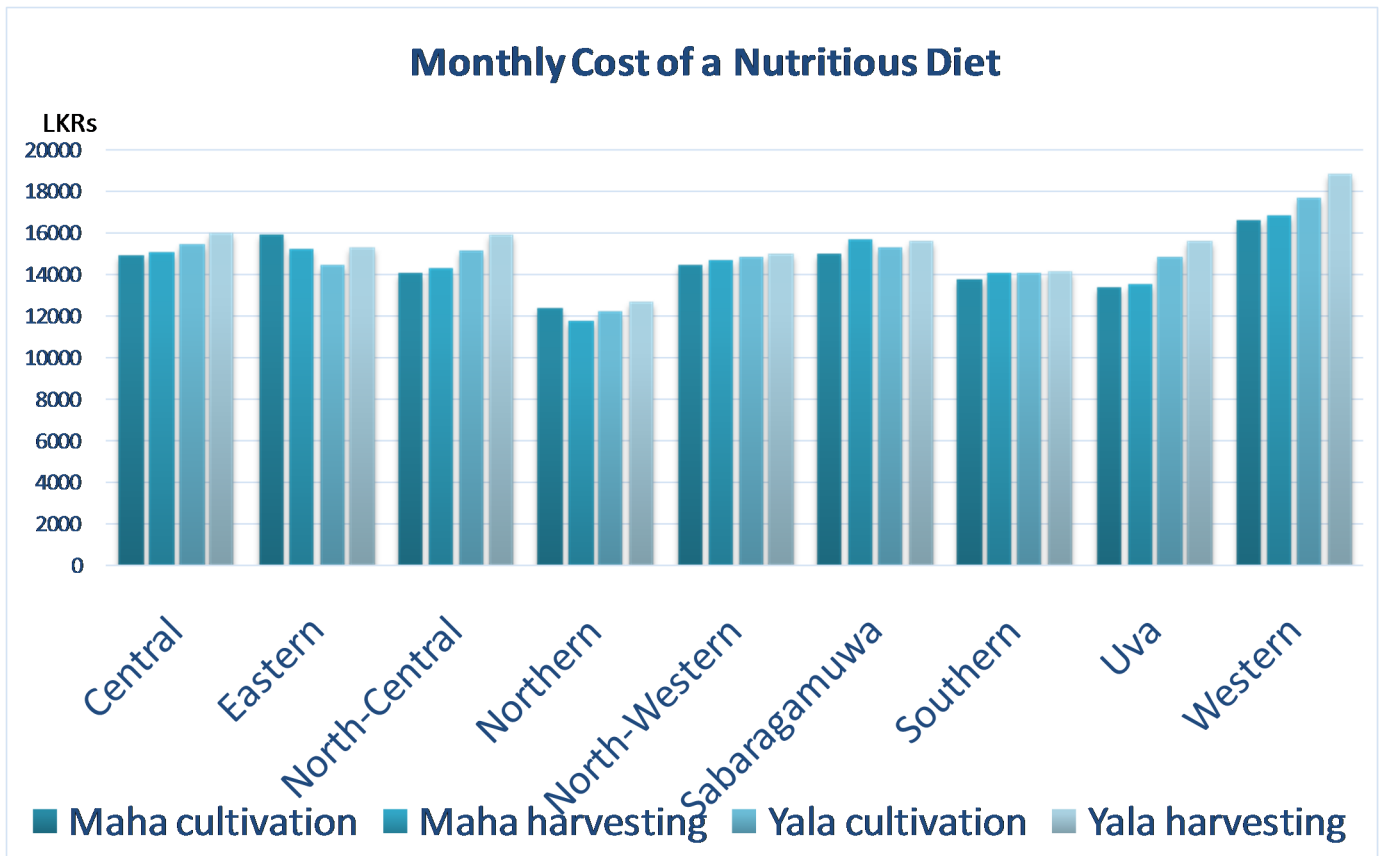
Regionally, more than half of the households in the Eastern Province could not afford an adequately nutritious diet during the past year. In the Uva Province it ranged between 39% and 48%, while in the Northern and Central Provinces the percentage ranged between 27% and 36%.

In contrast, most households in Sri Lanka could afford sufficient calorie diets, except for the Northern Province where about 15% of the households cannot even afford a calorie only diet. In the Eastern Province the percentage of households unable to access sufficient calories increased significantly during Yala season (11-14%).





# MONTHLY COSTS



## Results MCNUT

PROVINCE	MAHA CULTIVATION		MAHA HARVESTING		YALA CULTIVATION		YALA HARVESTING	
	MCNUT IN LKR	% CANNOT AFFORD MCNUT	MCNUT IN LKR	% CANNOT AFFORD MCNUT	MCNUT IN LKR	% CANNOT AFFORD MCNUT	MCNUT IN LKR	% CANNOT AFFORD MCNUT
Central	14,964	35%	15,154	36%	15,506	38%	16,048	39%
Eastern	15,976	57%	15,283	55%	14,490	51%	15,334	55%
North Central	14,117	27%	14,361	27%	15,162	30%	15,937	32%
North Western	14,479	33%	14,724	34%	14,872	34%	15,031	35%
Northern	12,454	35%	11,831	32%	12,307	34%	12,721	36%
Sabaragamuwa	15,064	39%	15,698	41%	15,336	40%	15,645	41%
Southern	13,813	31%	14,083	31%	14,118	31%	14,204	32%
Uva	13,452	39%	13,578	39%	14,894	45%	15,625	48%
Western	16,645	22%	16,917	23%	17,732	25%	18,913	28%

## Results MCCAL

PROVINCE	MAHA CULTIVATION		MAHA HARVESTING		YALA CULTIVATION		YALA HARVESTING	
	MCCAL IN LKR	% CANNOT AFFORD MCCAL	MCCAL IN LKR	% CANNOT AFFORD MCCAL	MCCAL IN LKR	% CANNOT AFFORD MCCAL	MCCAL IN LKR	% CANNOT AFFORD MCCAL
Central	5,181	4%	5,659	4%	6,080	5%	7,156	8%
Eastern	4,898	8%	5,138	9%	5,723	11%	6,545	14%
North Central	5,061	3%	5,482	4%	5,828	4%	6,680	4%
North Western	5,003	5%	5,413	5%	5,913	7%	6,729	9%
Northern	5,536	13%	5,796	15%	5,959	15%	6,360	16%
Sabaragamuwa	5,118	3%	5,612	4%	5,996	5%	6,697	7%
Southern	4,966	4%	5,312	5%	5,678	5%	6,368	6%
Uva	4,900	8%	5,262	8%	5,658	10%	6,405	12%
Western	5,171	1%	5,579	1%	5,969	2%	7,268	3%

# DISCUSSION AND CONCLUSION

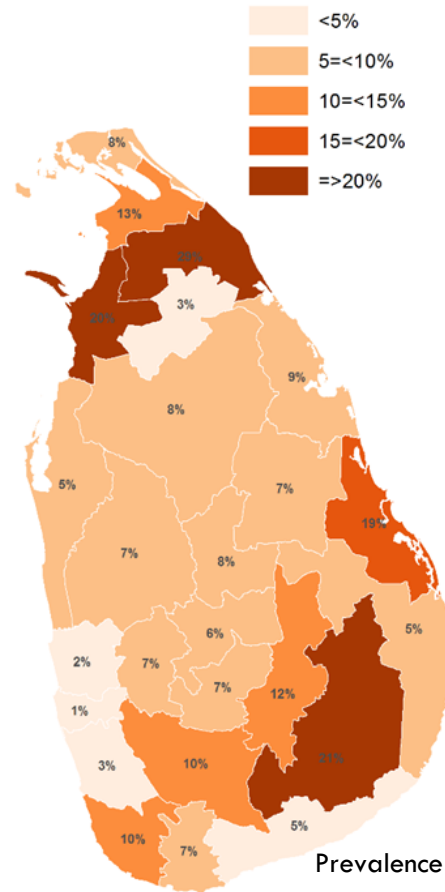
## COD and Poverty

The official poverty line is calculated based on food and non-food requirements. The poverty head count ratio reflects those households with a total expenditure below this line. The MCCAL in contrast is only based on calories and uses 50% of household income. Irrespective of the way poverty is measured, the magnitude and geographic distribution of poverty is comparable. However, being able to afford an energy only diet masks a household's ability to afford a nutritious diet. A low poverty head count therefore does not mean that the population is food secure. It is almost three times higher in terms of nutrition poverty.

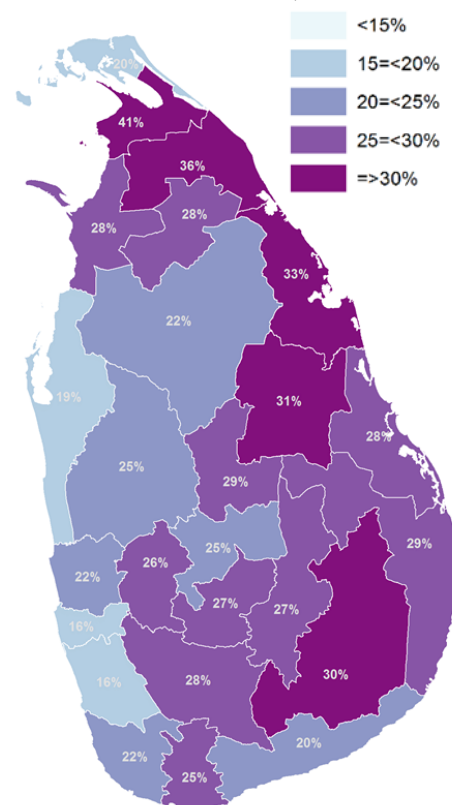
## COD and Malnutrition

There seems to be a direct link between the cost of diet results and malnutrition outcomes. This indicates that the inability of households to access sufficient nutritious food could be a key contributing factor of malnutrition in the country. Interventions directed at preventing and reducing malnutrition should therefore either supplement incomes, make nutrient rich foods available or facilitate market functioning in addition to programmes focusing on nutrition awareness, improvement in water and sanitary facilities and access health facilities, to make an impact on nutrition outcomes

Households below the poverty line



Prevalence of underweight (Children 6-9 months)





## Target groups

By calculating both, the Nutrient and Calorie Poverty Line, the approach provides a refined framework for policy decision making as it allows categorizing specific population groups based on their capacity to afford diets.

Households in Group C can afford both, sufficient calories and nutrients, Group B can afford calories but not nutrients and Group A can afford neither of the two. It can be assumed that members of households in Group A are more likely to be deficient in both micro- and macronutrients, members of households in Group B are more likely to be deficient in micronutrients, while members of households in Group C can afford both micro- and macronutrients. However, this does not guarantee that households in Group C consume a nutritious diet.

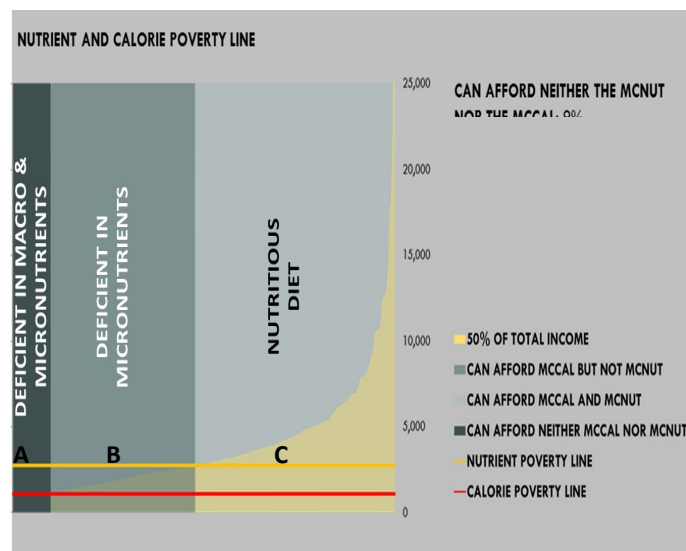
The COD can contribute to identifying suitable interventions for households in the three determined groups. The proposed interventions below are in line with the National Nutrition Policy of Sri Lanka (MoH, 2010) and the Multi-sector Action Plan for Nutrition (NNC, 2013).

**Group A:** Food based approaches to ensure access to adequate, nutritious, safe and quality food at affordable price throughout the year. Interventions for this group might include food assistance and social safety interventions to improve access to sufficient micro- and macronutrients.

**Group B:** Nutrient enhancement by promoting and facilit-








tating improvement of commonly consumed food items (eg. Food fortification) to ensure micronutrient supplementation to vulnerable groups. Interventions for this group include micronutrient supplementations as well as social safety net interventions which improve access to sufficient micronutrients.

**Group C:** Promotion of dietary diversification to ensure consumption of a wide variety of foods ensuring intake of all macro- and micronutrients to prevent deficiency disorders and diet related chronic diseases. Interventions include nutrition education campaigns, behavioral change communication to increase awareness and improve consumption of nutritious food amongst households which can afford a nutritious diet.



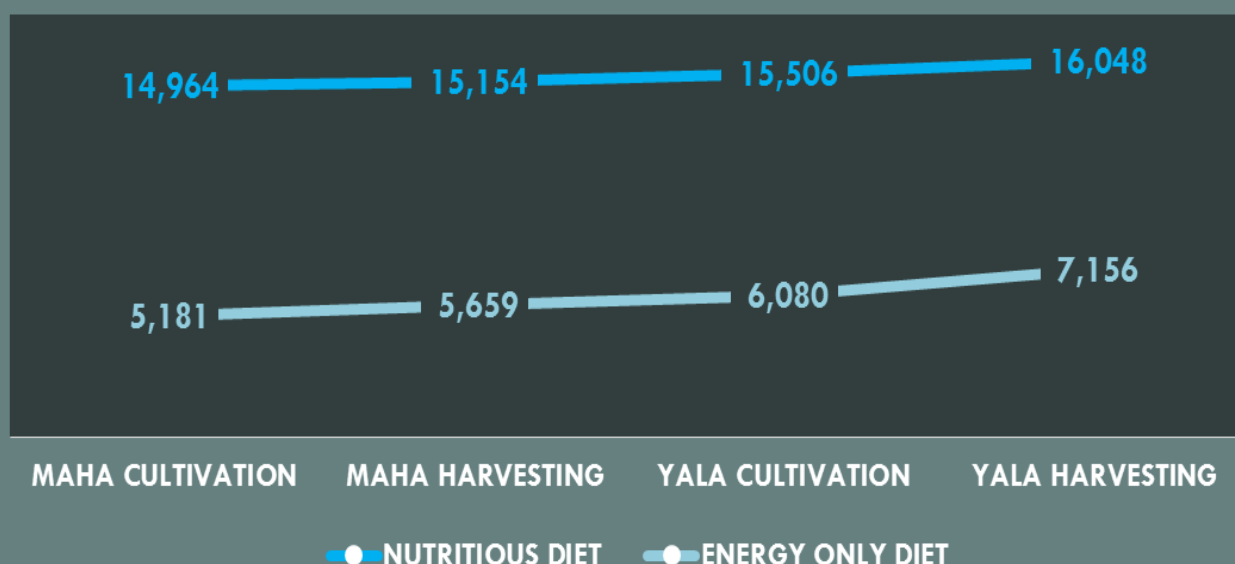
# CENTRAL PROVINCE

In the Central Province the MCNUT increased continuously across all the seasons. It increased by 7% in Yala harvesting season compared to the Maha planting season. Prices of nadu rice, raw white rice, red dhal, dried sprats and dried salaya are slightly higher in the province compared to the others which caused the MCNUT to be the second highest of all provinces in Yala harvesting season. When combined with 50% of total per capita income, 35% of households cannot afford a nutritious diet in Maha planting season. This increased to 39% in Yala harvesting season. Only 4% of households cannot afford the MCCAL in Maha harvesting season. It increased to 8% in Yala harvesting season. The results highlight that both the access to energy only diet and nutrition poverty levels increased across the seasons in the Central Province.

	 CEREALS	 PULSES	 VEGETABLES	 MEAT	 FISH	 OIL	 BREASTMILK
ALL SEASONS	NADU RICE RAW RICE	CHICKPEA	GOTUKOLA MUKUNUWE NNA DRIED CHILLIES	CHICKEN LIVER	DRIED FISH SALAYA	COCONUT OIL	BREAST MILK
MAHA CULT							
MAHA HARV							
YALA CULT							
YALA HARV			+ DRUMSTIC				

## DIET COMPOSITION

### SEASONAL COST OF DIET



## COST OF DIET

# EASTERN PROVINCE

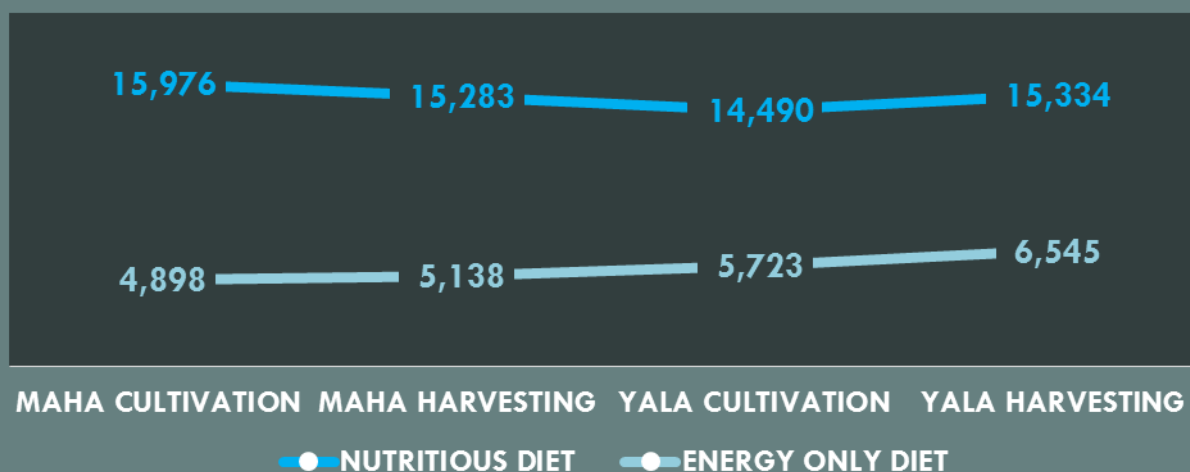
Food prices in the Eastern Province are lower compared to national average prices, especially in the Yala harvesting season. As a result the MCCAL and MCNUT poverty lines are among the lowest among all provinces. In contrast to other provinces, the MCNUT decreased across the seasons by 4%, 9% and 4% respectively, in Maha harvesting season, Yala planting season and Yala harvesting season compared to the Maha planting season. However, per capita income is by far the lowest in the Eastern Province. Using 50% of total per capita income, 55% of households can not afford the MCNUT and 14% can not afford the MCCAL during 2014 Yala harvesting season. The percentage of households that do not have access to a nutritious diet is the highest among all provinces across the four seasons.

## DIET COMPOSITION

	CEREALS	PULSES	VEGETABLES	MEAT	FISH	OIL	BREASTMILK	ROOTS AND TUBERS
ALL SEASONS	NADU RICE RAW RICE		GOTUKOLA MUKUNUWEN NA DRIEDCHILLIES	CHICKEN LIVER		COCONUT OIL	BREAST MILK	
MAHA CULT		+ RED DHAL			+ DRIED FISH SALAYA			
MAHA HARV		+ CHICKPEA + RED DHAL			+ DRIED FISH SPRATS	+ PALM OIL		
YALA CULT		+ CHICKPEA + COWPEA + RED DHAL			+ DRIED FISH SALAYA	+ PALM OIL		+ MANIOC
YALAHARV		+ CHICKPEA + COWPEA			+ DRIED FISH SALAYA	+ PALM OIL		

## COST OF DIET

### SEASONAL COST OF DIET



# NORTH CENTRAL PROVINCE

In the North Central Province, the cost of MCNUT and MCCAL diet increased across the seasons. Compared to the Maha planting season, MCNUT and MCCAL increased by 13% and 34% respectively in Yala harvesting season. Using 50% of total per capita income, 27% of households cannot afford a nutritious diet in Maha planting season. This increased to 32% in Yala harvesting season. The main factor driving the increased diet cost was a rise in the price of rice and dried fish varieties. The percentage of households which cannot afford MCCAL did not change significantly and remained around 4% across all the seasons.

	CEREALS	PULSES	VEGETABLES	MEAT	FISH	OIL	BREAST MILK	MILK
ALL SEASONS	NADU RICE	RED DHAL	GOTUKOLA MUKUNUWE NNA DRIED CHILLIES	CHICKE N LIVER	DRIED FISH SALAYA	COCONUT OIL PALM OIL	BREAST MILK	
MAHA CULT	+ RAW RICE	+ CHICKPEA						
MAHA HARV	+ RAW RICE	+ CHICKPEA	+ CAPSICUM					+ FRESH COW MILK
YALA CULT		+ COWPEA	+ KANKUN					
YALA HARV			+ DRUMSTIC					+ FRESH COW MILK

DIET COMPOSITION

## SEASONAL COST OF DIET

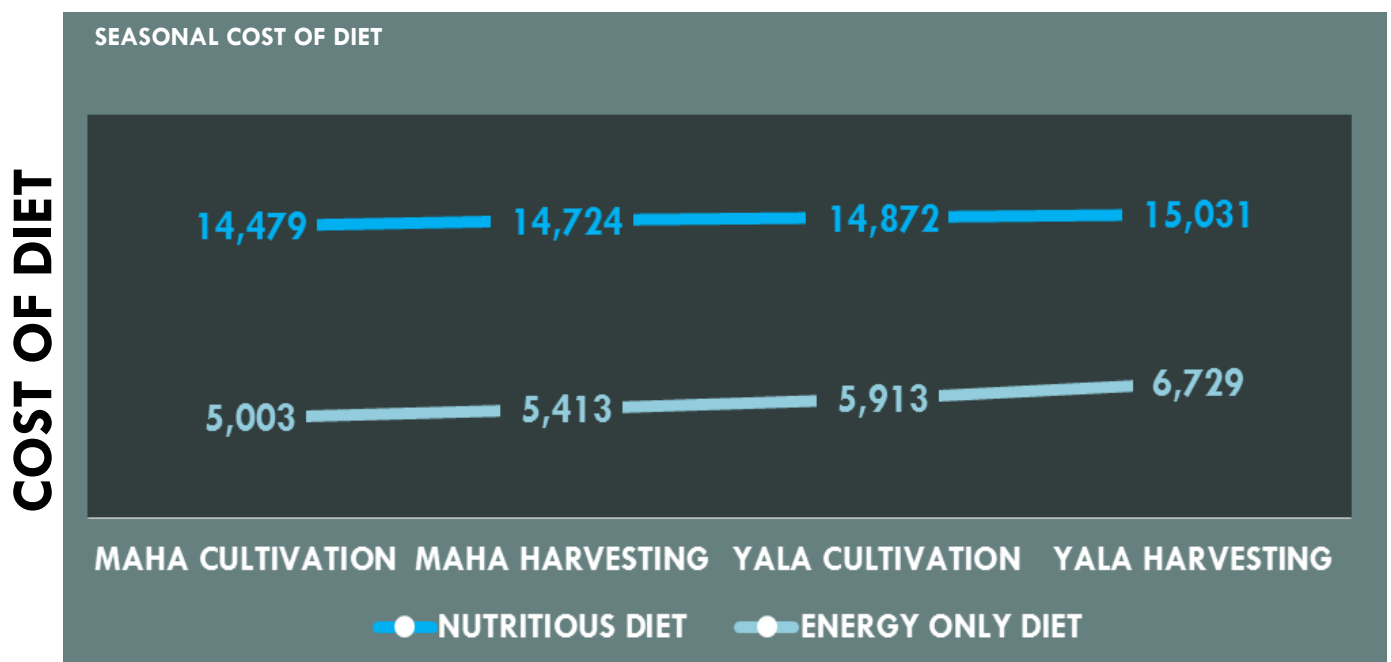
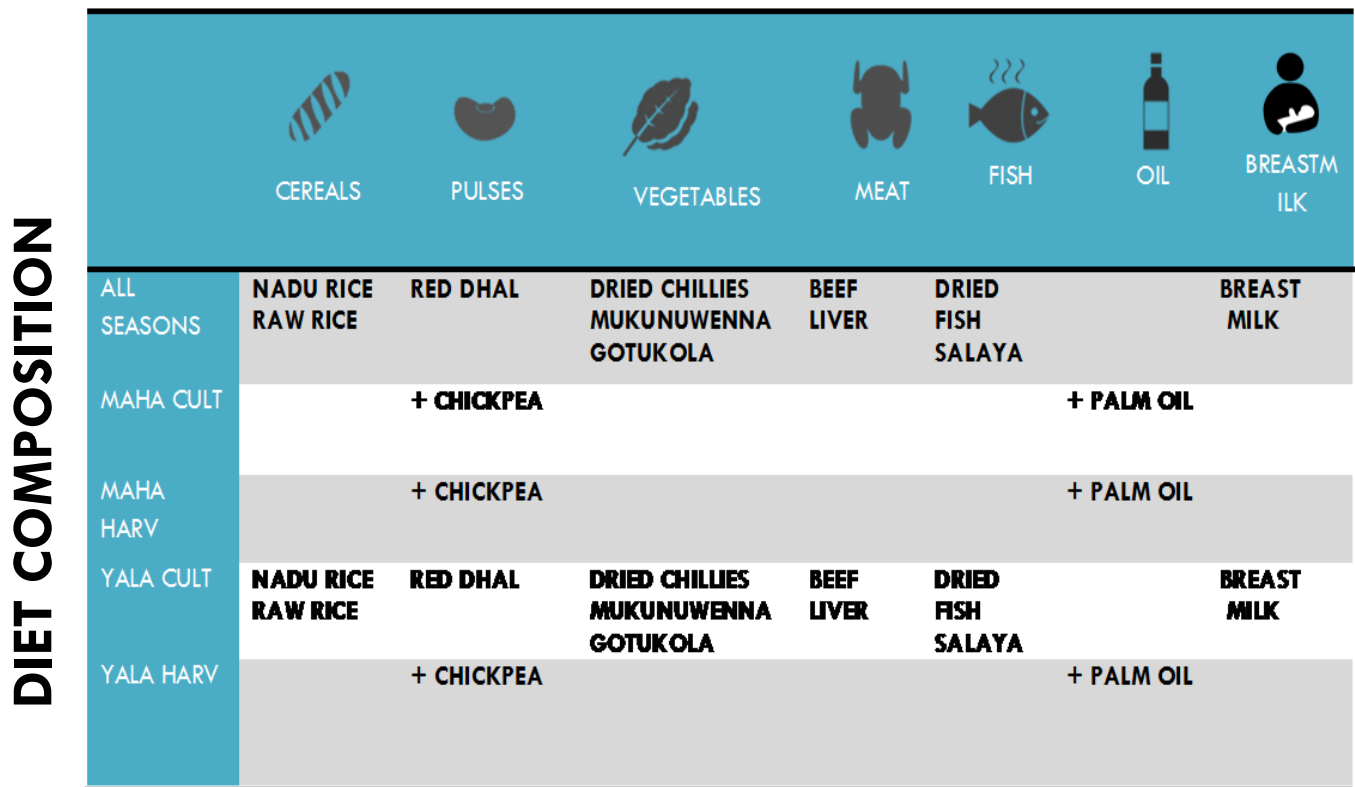


MAHA CULTIVATION MAHA HARVESTING YALA CULTIVATION YALA HARVESTING  
 ● NUTRITIOUS DIET ● ENERGY ONLY DIET

COST OF DIET

# NORTH WESTERN PROVINCE

In North Western Province the MCNUT and the MCCAL increased by 4% and 34% respectively in Yala harvesting season compared to the Maha planting season. One third of households cannot afford a nutritious diet in Maha planting season. This increased to 35% in Yala harvesting season. In Maha planting season 5% of the household cannot afford sufficient energy and this increased to 9% in Yala harvesting season. The increase of rice prices by around 30% in Yala harvesting season compared to Maha planting season can be identified as one of the main causes of hardships.



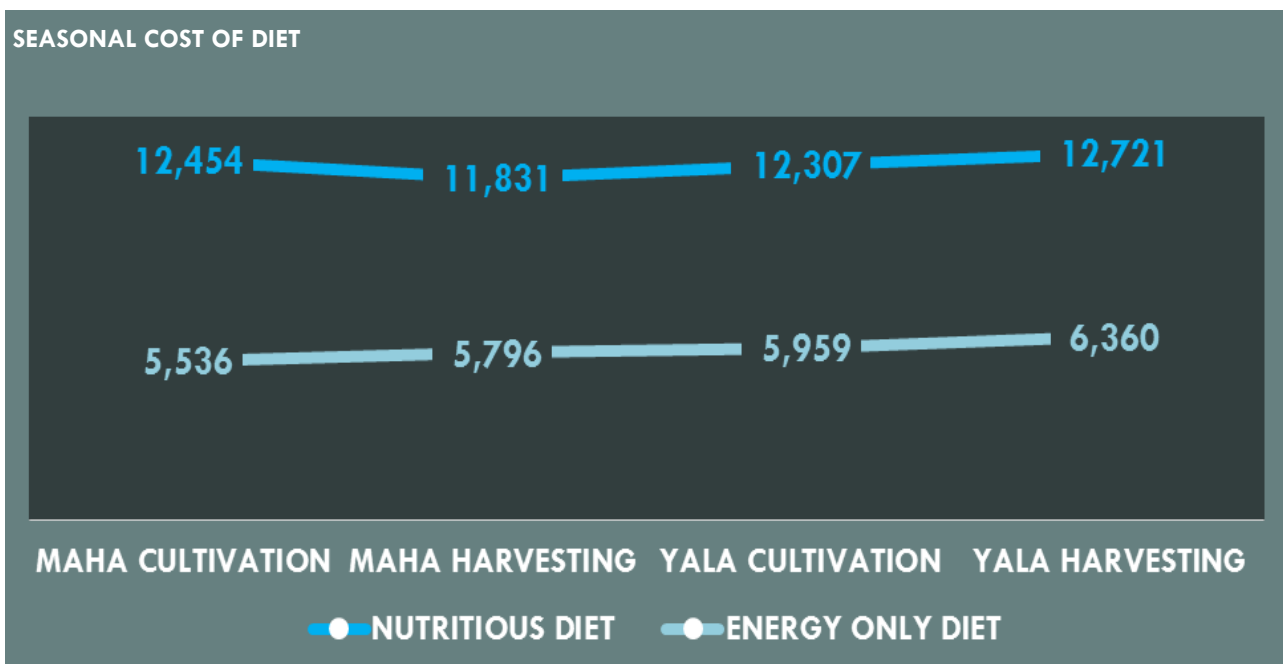


# NORTHERN PROVINCE

In the Northern Province, food prices are lower than the national average and rice prices increased at a lower rate. Hence, the cost of MCNUT and MCCAL diet are lower in the Northern province compared to other provinces. MCNUT and MCCAL increased by 2% and 14% in Yala planting season compared to the Maha planting season. About 36% of the households cannot afford a nutritious diet and 16% cannot afford an energy only diet in Yala harvesting season.

	CEREALS	PULSES	VEGETABLES	MEAT	FISH	OIL	BREAST MILK	ROOTS AND TUBERS
ALL SEASONS	NADU RICE	RED DHAL	MUKUNUWEN NA DRIED CHILLIES CAPSICUM	CHICKEN LIVER	DRIED FISH SALAYA	PALM OIL COCONUT OIL	BREAST MILK	
MAHA CULT	+ RAW RICE	+ CHICKPEA	+ GOTUKOLA					
MAHA HARV	+ RAW RICE	+ CHICKPEA	+ GOTUKOLA					+ MANIOC
YALA CULT	+ RAW RICE		+ GOTUKOLA					+ MANIOC
YALA HARV			+ DRUMSTICK					

## DIET COMPOSITION



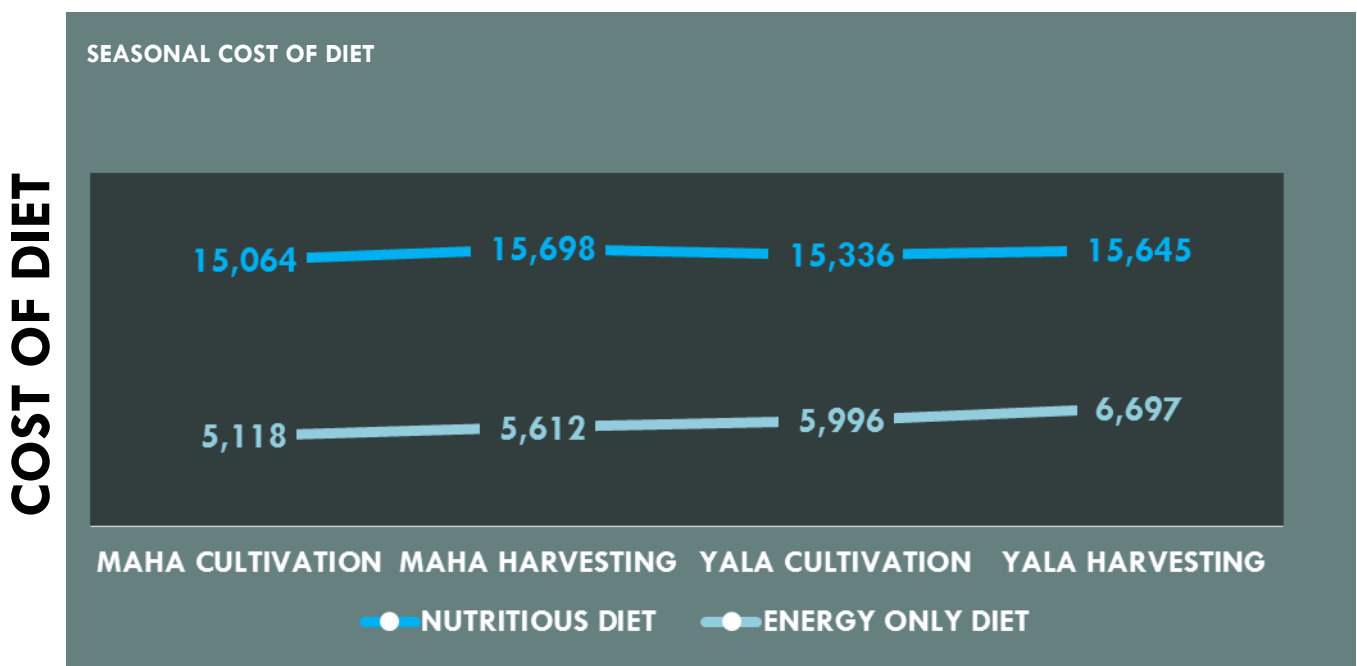
## COST OF DIET

# SABARAGAMUWA PROVINCE

In the Sabaragamuwa province, MCNUT and MCCAL increased by 2% and 31% respectively in Yala harvesting season compared to the Maha planting season. In contrast, MCNUT decreased by 5% and 1% respectively in Maha harvesting season and Yala cultivation season compared to the Maha planting season. In Yala harvesting season, prices of nadu rice and dried salaya were above the national average. Further, 41% of the population cannot afford a nutritious diet while 7% cannot afford sufficient energy.

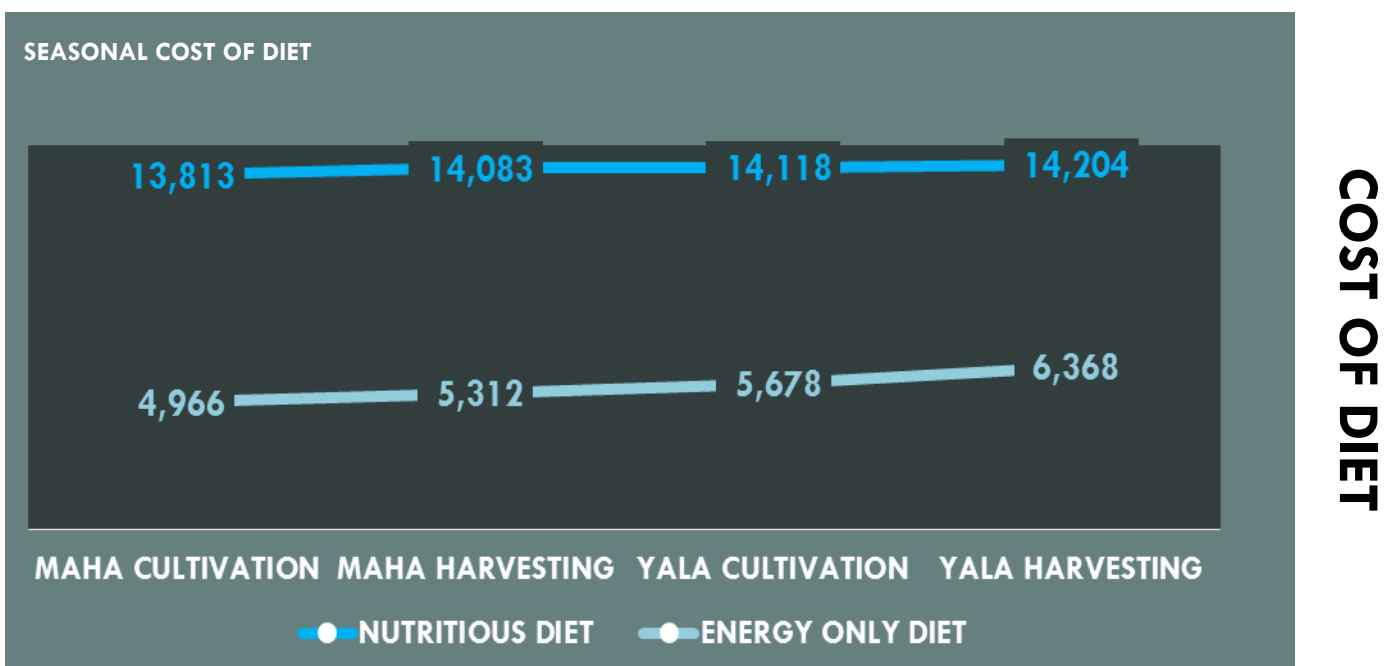
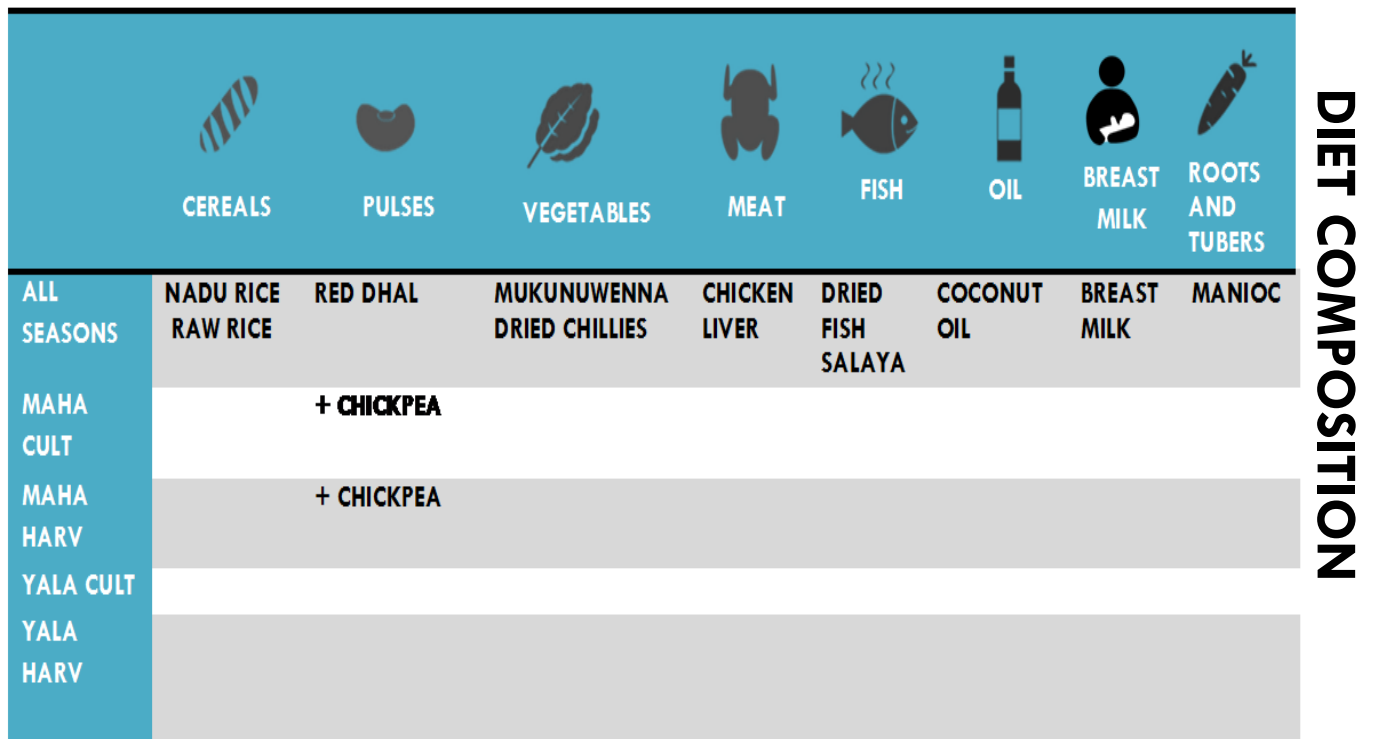
**DIET COMPOSITION**

	CEREALS	PULSES	VEGETABLES	MEAT	FISH	OIL	BREAST MILK	ROOTS AND TUBERS
ALL SEASONS	NADU RICE RAW RICE	CHICKPEA RED DHAL	MUKUNUWENNA DRIED CHILLIES	CHICKEN LIVER	DRIED FISH SALAYA	COCONUT OIL PALM OIL	BREAST MILK	
MAHA CULT					+ DRIED FISH SPRATS			+ MANIOC
MAHA HARV					+ DRIED FISH SPRATS			+ MANIOC
YALA CULT					+ DRIED FISH SPRATS			+ MANIOC
YALA HARV			+ CAPSICUM DRUMSTIC					



# SOUTHERN PROVINCE

In the Southern Province, MCNUT and MCCAL increased across the seasons. The MCCAL increased by 28% in the Yala harvesting season mainly due to increases in the price of rice. Food prices in the Southern Province are slightly lower than in other provinces and MCCAL and MCNUT recorded the second lowest of all provinces in Yala harvesting season. The Southern Province recorded the best affordability after the Western Province and 94% and 68% of the total population can afford a calorie only and nutritious diet, respectively, in the Yala harvesting season. With the increase of food prices across the seasons the level of affordability decreased slightly.



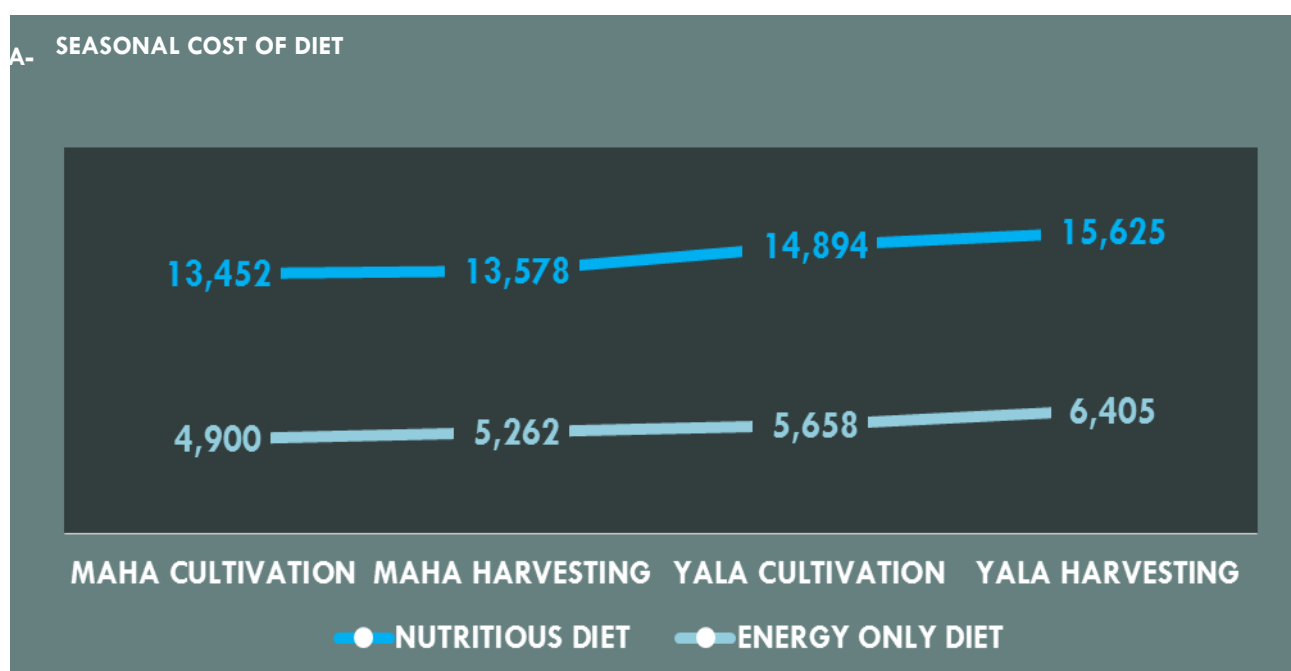
# UVA PROVINCE

In the Uva Province both MCCAL and MCNUT increased continuously across the seasons. MCCAL and MCNUT increased by 31% and 16% in *Yala* harvesting season compared to *Maha* cultivation season mainly due to the price increase of staple food. The level of affordability of both calories only diet and nutritious diet remained at the same level in *Maha* planting season and *Maha* harvesting season and then decreased in *Yala* harvesting season. In *Yala* harvesting season 48% of the total population cannot afford a nutritious diet.

## DIET COMPOSITION

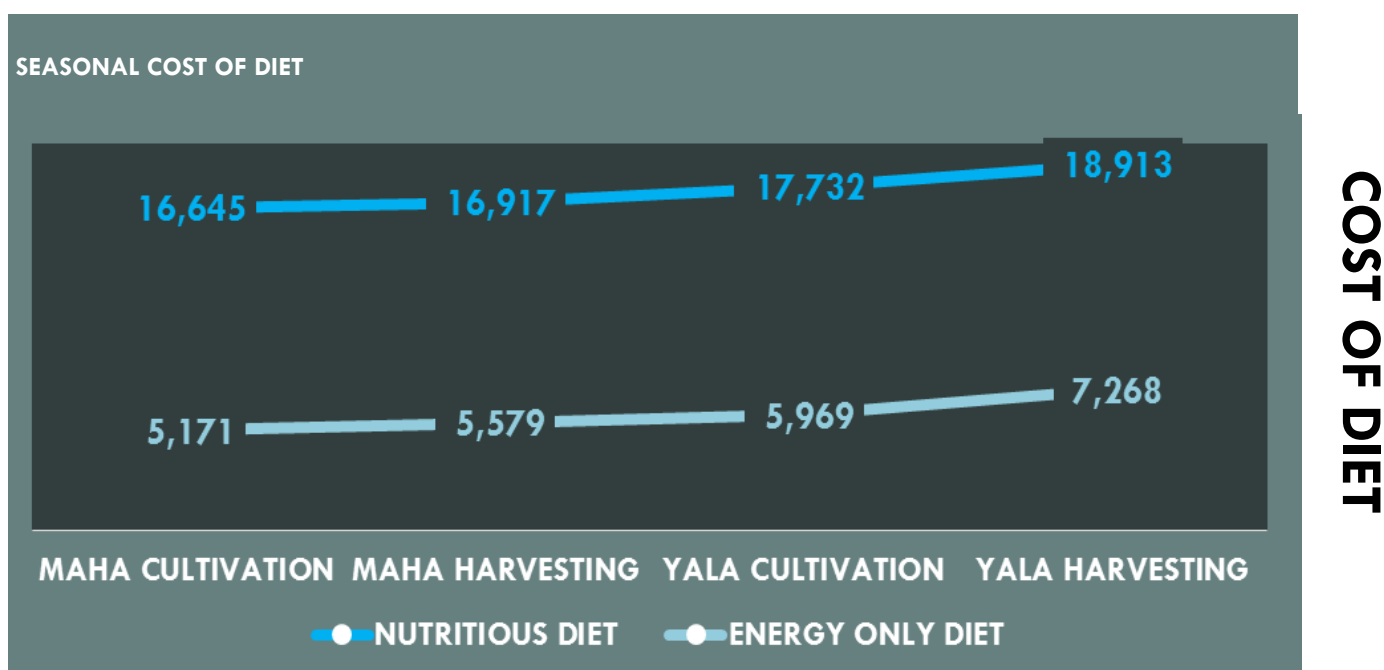
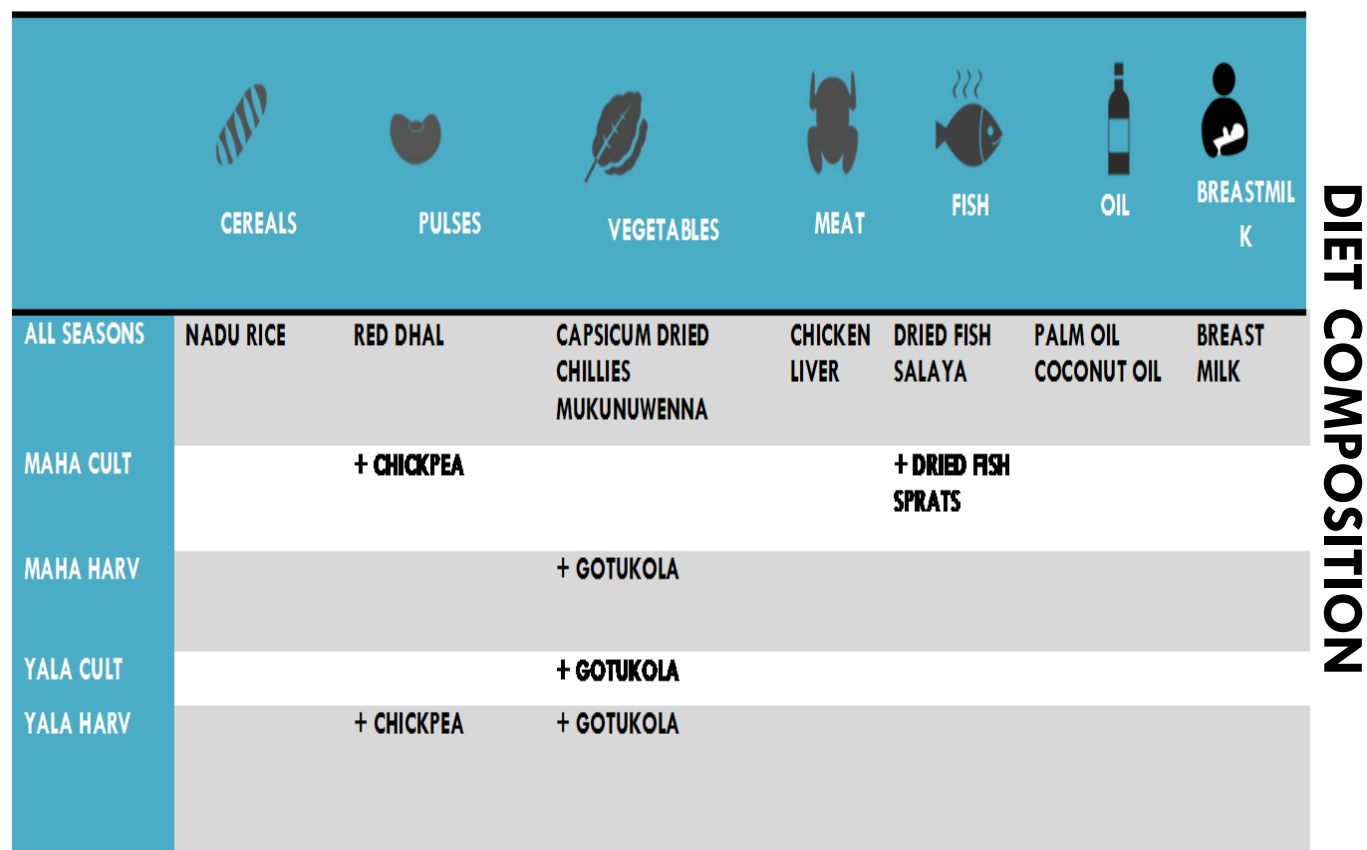
	CEREALS	PULSES	VEGETABLES	MEAT	FISH	OIL	BREAST MILK	ROOTS AND TUBERS	MILK
ALL SEASONS	NADU RICE	RED DHAL	DRIED CHILLIES MUKUNUWENNA CAPSICUM	CHICKEN LIVER	DRIED FISH SALAYA	PALM OIL COCONUT OIL	BREAST MILK		FRESH COW MILK
MAHA CULT		+ CHICKPEA						+ MANIOC	
MAHA HARV	+ RAW RICE	+ CHICKPEA						+ MANIOC	
YALA CULT	+ RAW RICE	+ CHICKPEA							
YALA HARV									

## COST OF DIET



# WESTERN PROVINCE

The Western Province recorded the highest MCNUT. The Cost of diet increased across the seasons. Food prices are above the national average. The MCNUT and MCCAL increased by 14% and 41% in *Yala* harvesting season compared to *Maha* planting season. In *Maha* planting season 22% of the households could not access a nutritious diet. This increased to 28% in *Yala* harvesting season. Only 1% of total household could not afford sufficient energy in *Maha* planting season. It increased to 3% in *Yala* harvesting season.



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