

## Policy Brief

### Agriculture Policies for Nutrition Sensitive Agriculture Sector



#### *Main Research Report*

Policy Research in the Area of Food Consumption, Nutrition and Health

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(Available at [www.asmp.lk](http://www.asmp.lk))

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December 2024

**AGRICULTURE SECTOR MODERNIZATION PROJECT**

No 123/2, Pannipitiya Road, Battaramulla, Sri Lanka

# **Agriculture Policies for Nutrition Sensitive Agriculture**

## **Agriculture Sector Modernization Project**

### **Ministry of Agriculture, Livestock, Lands, and Irrigation**

**December 2024**

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## Executive Summary

The analysis of agricultural policy environment for Food Consumption, Nutrition and Health has been considered as one of the key elements of the ASMP. The agriculture sector should be directed to ensure food availability and nutritious diet, along with changes in food consumption behavior, targeting to reduce the burden of both under and over-nutrition problems in Sri Lanka. Policy Research Assignment undertaken for the ASMP has examined food consumption patterns and level of nutrition literacy across the country.

Sri Lanka is currently experiencing significant health and nutrition challenges due to food insecurity owing to reduced household purchasing power and poor agricultural food production. Due to the socio-economic and demographic changes taking place in the country, unhealthy dietary practices and a double burden of over and under nutrition have become common issues. Subsequently, epidemiologic transition of the country shows shifting the disease pattern from communicable diseases towards Non-communicable diseases (NCDs). Dietary behavior has become a root cause of NCDs and lifestyle modifications, including changing dietary patterns, is a vital concern in the management of NCDs.

Carbohydrate rich food, the cheapest sources of energy are being often used by the Sri Lankan consumers compare to much expensive proteins and fat enrich food. Overall protein consumption is lower than the recommendations. Nutritional quality of the food available in the Market plays a major influence on consumer's decision-making behavior on food consumption pattern and their health.

Modernized Agriculture sector should be directed to ensure availability of nutritious diet, anticipate changes in availability of nutritious food and food consumption behavior, targeting to reduce the burden of food insecurity and nutrition related issues. More focus needs to be given to promote nutrition-sensitive agriculture and food systems, not mere self-sufficiency of food production.

This report recommends enactment and implementation of appropriate legislations and other regulatory mechanisms with multi sectoral approach to ensure provision of safe nutrition to all citizens of Sri Lanka. Strengthening of capacity building of agriculture sector staff and community based workers for effective communication on nutrition promotion and strict regulations on ethical promotion campaigns for food products.

It also recommends the agriculture sector to maintain a data bank on nutritional composition of different crops/species and their varieties/cultivars and breeds to ensure that nutrient content also becomes a priority criterion in crop / cultivar/ species promotion and research. Popularize crop varieties based not only on yields but also on nutrient content (concept of nutrient productivity), thereby enhancing the nutrient supply through agricultural products.

## 1. Introduction

Under the Agriculture Sector Modernization Project, Food Consumption, Nutrition and Health has been considered as one of the key areas in the analysis of agricultural policy environment to improve and modernize the agriculture sector to be more nutrition sensitive while ensuring sustainability and profitability of the sector.

A study was undertaken by a team of consultants for the ASMP to review the existing policies and regulatory environment to identify the policy gaps, policy changes or new policies required to support improved food consumption pattern and nutrition status of the people.

Health and social status of Sri Lanka has shown a significant progress over the past several decades in terms of Life expectancy at birth, infant mortality rate and average birth weight etc of Sri Lankans. In 2018, Life expectancy was recorded as 76.8 years compared to 59.4 years in 1960 and 69.2 years in 1996. Infant mortality rate has declined to 6.4 deaths/1000 live births in 2018, from 70.6 deaths/1000 live births in 1960 and average birth weight is 2886 - 2900 g for Sri Lanka. However, the nutritional status of Sri Lankan children does not match the country's achievements in child survival and per capita GDP. The overall prevalence of stunting, wasting and underweight was 15.7%, 12.6% and 16.3%, respectively, among children.

According to the WHO cut-off values for Asians, the percentage of Sri Lankan adults in the overweight, obese and centrally obese categories were 25.2%, 9.2% and 26.2%, respectively. Overweight and obesity are emerging challenges leading to a double burden of malnutrition.

The increase in obesity leading to a rise in poor health conditions, such as heart disease, diabetes, and cancer—diseases (Non-Communicable Diseases-NCDs), subsequently increasing the burden to the health infrastructure.

The Food Balance Sheets published by the Department of Census and Statistics (2000-2005) show that there is an increasing trend in the production of rice, vegetables, milk, meat and fruits over the five years period. Accordingly, per capita availability of calories and proteins

(g/day) has increased, an improvement in the food security situation.

However, changes in demographic and socio-economic factors show that the composition of the Sri Lankan diet has been markedly transformed (nutrition transition) into low fiber, high refined sugar and saturated fat containing high calorie diets.

Inequity of household food distribution, insufficient knowledge, inappropriate feeding and caring practices add to the problem of compromising nutrition security of the individual.

The nutrition transition affects all sections of the population, but individuals of low-income families are considered to be the most disadvantaged group of society.

Agriculture is one of the deciding factors of food availability and subsequently the nutrition levels. However, availability of food from agriculture sector does not ensure proper nutrition. The sector should be directed to ensure nutritious diet, along with changes in food consumption behavior targeting to reduce the burden of both under and over-nutrition.

National Agricultural Policy (NAP), drafted by Ministry of Agriculture with the assistance of FAO in 2016, suggested to promote nutrition-sensitive agriculture and food systems for Sri Lanka based on agro-ecological diversity, nutrition-specific objectives and through the use of nutrition-specific performance indicators.

NAP identified specifically the following key areas:

- 1) Increasing access to more healthy and nutritious food
- 2) Home gardening and urban agriculture
- 3) Integration with other sectors
- 4) Social and behavior Change Communication
- 5) Monitoring food security and vulnerability
- 6) Diversifying employment

National Nutrition Policy of Sri Lanka (Ministry of Health, 2010 and revised NNP 2021-2030), which was aimed at improving availability, utilization and stability of safe and nutritious foods, suite for the tastes and preferences of the Sri Lankan people and access to food that sufficient to meet the needs of all households and individuals, ensuring sustainable consumption. It has recognized that the agriculture sector has to play a major role in this aspect.

## 2. Approach:

This study was targeted at assessing the existing knowledge on nutrition, identifying factors, directly and indirectly influencing food consumption behavior, identifying the areas to be strengthened in policy to encourage nutritional literacy, multi-sectoral approach that required to understand the changes in food consumption patterns to promote sustainability in agricultural production and to promote healthy food consumption behavior

Multiple information collection procedures have been employed through food system approach to gather primary & secondary data by desk review and relevant information of selected key stakeholders, which include, household surveys, semi-structured interviews, focus group discussions and workshops.

National policies pertaining to food, Nutrition and health, available in relevant ministries, research organizations and departments were reviewed to get the insights of the present policy framework, policy inconsistencies and policy conflicts.

## 3. Findings, conclusions and recommendations

### 3.1 Issues identified in Food Consumption, Nutrition & Health

Trends of food supply, food Consumption, Nutrition Transition and the effect of Food Advertising, and Urbanization on Nutrition Transition has been reviewed.

#### 3.1.1 Per Capita Nutrient Supply

Based on Food balance sheet data for 1961- 2017, per capita food supply trends over the period showed a slight increment in the share of cereals (mainly rice & wheat but drop in starchy roots after 1975) as well as in fruits and nuts, pulses, variety of non-grain vegetable products, and vegetable oils. Per capita availability of animal-sourced food has improved significantly, mainly marine fish supply increased due to cease of war in 2009.

Per capita supply of sugar and alcohol have showed prominent increments in recent years and surpassed the WHO recommendations, showing an unfavorable trend.

#### 3.1.2. Per Capita Food Consumption

**Carbohydrate** - In contrast to other Asian countries, Sri Lankan adults consume proportionally more carbohydrates (>71% of energy). Per Capita Rice 114.7 kg, Wheat Flour & Bread 40.4 kg per annum. Almost 70% exceeded the upper limit of the recommendations for starch intake.

**Fruits and Vegetable Consumption** - Consumption of fruits among Sri Lankans is still relatively low compared to other developing countries and daily intake of fruit (0.43), vegetable (1.73) portions were well below national recommendations. Only 3.5% of adults consumed the recommended 5 portions of fruits and vegetables per day. Sri Lankans have never met the WHO recommended minimum intake of 400g of fruits and vegetables per day, during the period 1960-2013, except for the year 1980.

**Pulses and Nuts:** Consumption have increased over reference period and the gap between consumption and the WHO recommended level (30g per capita per day) has been narrowing over the years.

**Animal food products** Per capita fish consumption shows a tremendous increase of 45g per day in 1961 to 70g per day in 2013. In addition, per capita daily egg consumption has increased from 2.5g in 1961 to 12g in 2013. Per capita daily meat and milk consumption also rose from 11g to 18g and 48g to 96g respectively during the same period.

**Sugar** - Average consumption by Sri Lankan has seen a two-fold increase within five decades which is an unhealthy sign. Having been 48.21g per capita per day (178 Kcal/day) in 1961, it has risen to 72.14g of sugar per day (266 Kcal/day) in 2013. According to the food balance sheets, as a percentage, energy intake from sugar was 2.32% of the total energy intake in 1961 and the respective figure in 2013 is 10.47%. With this massive increase, per capita intake of sugar has surpassed the WHO recommend level (below 10% of energy intake from sugar).

### **Infant/Children Feeding Practices**

Overall, 62 percent of Sri Lankan children aged 6-23 months met the minimum standard with respect to all three IYCF feeding practices but the most common problem identified is of children aged 6-23 months received foods from the minimum number of food groups which is inadequate for their age.



## **Micronutrient Deficiencies**

In Several studies done over the period 2010-2017 found that Micronutrient deficiencies specially Iron (3.9 – 33%), Iodine (1.4 – 62.5%), Zinc (5.8 – 28%), Calcium (47%) and Vitamin A, B & C (3% - 8%) in Children and Pregnant Mothers in Sri Lanka.

Although there are limitations associated with the use of food balance sheets, the results have proved the lack in availability of healthy food/diet for Sri Lankans and the change in consumption patterns also not healthy due to availability of limited food groups.

### **3.2 Food Advertising and Urbanization on Nutrition Transition**

- Sri Lanka is experiencing a transformation of food supply systems due to rapid urbanization,
- Traditional marketing systems are gradually replaced by more attractive supermarkets.
- Booming of Fast-food chains and popularization of western lifestyles lead towards dietary practices of significantly higher consumption of calorie, fat and sugar content, are expected to result in higher incidence of dietary-related non-communicable diseases and micronutrient deficiencies.
- Television advertising has strong relationship with the food demand by the children of Age 9-14. Nearly 90% of the advertisements categorized as ‘unhealthy’ foods. None of the advertisements contained disclaimers.
- Unhealthy fast food huts have become a common practice in public events but no promotion of healthy fast foods in such events.
- Use of celebrities and sports stars in advertisement is another strategy of promoting foods with poor nutrition quality.

### **3.3 Nutrition and Health System**

As per the National Health Statistics, Sri Lanka is experiencing double burden of malnutrition, in which co-existence of over nutrition featured with chronic diseases, while undernutrition remained certain section of the community. There has been a rapid increase in the prevalence of chronic NCDs between 1990 and 2017 reflecting epidemiological transition in parallel to the rapid urbanization, change in lifestyle and dietary practices.

### **i) Food Safety Issues**

National policy and strategy on cleaner production for the agriculture sector (NPSCPA) has been formulated with an objective of achieving sustainable agriculture for national prosperity, ensuring food security of the nation through ecologically sound, economically viable and socially acceptable agricultural systems. This policy supports the environment and natural resource management sustainably.

The NAP targeting several key areas of sustainable agriculture, which includes reduction of use of agricultural chemicals, implementing Good Agricultural Practice (GAP), and popularizing organic and low-input agriculture.

### **ii) Food-borne diseases**

There is a declining trend in food-borne infectious diseases (dysentery, enteric fever, and viral hepatitis) during the last decade.

The improvements attributed to the improvement of general living conditions, improved awareness about hygienic practices, and provision of purified water, continuous monitoring of water sources and food establishments by the public health staff

## **3.4 Outcome of Field Surveys, Workshops and Interviews**

Consultative Workshops and Semi-structured Interviews undertaken to identify Nutrition literacy and the awareness of the food & Nutrition related issues among agriculture sector workers and community-based workers. It was revealed;

- Nutrition is not identified adequately as an objective of agriculture, not in acts/regulations/ strategic plans /actions plans related to agriculture and agriculture related programmes. It is not recognized as mandatory
- Malnutrition was not considered as a critical issue in agriculture related policies and action plans. There is an idea about nutrition status of vulnerable groups but there is no national level approach to consider it as an indicator.
- Nutrition value of foods or nutritional requirements and nutritional quality of the overall diet was not given due importance and consideration in Agriculture programs. Methods to reduce post-harvest losses have been introduced but not to maintain the nutrient content of foods.
- Need to strengthen policies and regulations to improve food and nutrition security among

the sectors of Sri Lanka. Not enough emphasis on multi sectorial action plan for nutrition - Food fortification (micronutrient) program – Food Technology development

- No clear idea for people on Home Gardening, no market for products, promote only during special problems.
- No targeted program to improve farmer's income & social level, nutrition status as vulnerable group, No program to solve destructive low price for the harvest of farmers and Marketing problems, farmers do not have a buffer system to cope up crop losses,
- Nutrition knowledge is low in value chain actors need programs from Ministry of Health

Focus Group discussions were conducted under 3 themes, with 20 farm families in 4 districts with female participants to assess the nutrition literacy among farm household.

### Theme 1 Healthy Diet

The participants had an idea that a healthy diet means a diet improve the health condition of a person. Participants identified list of barriers to eat a healthy diet: busy lifestyle, consumption of alcohol, lack of cooking skills, health issues, laziness (ignorance), and lack of knowledge, myths and beliefs, pest damages on cultivations, affordability, and unavailability of variation in the preferences. The majority of the participants perceived that busy lifestyle is a barrier to get a healthy diet. When they are busy, they do not think about the healthiness or the nutrient content of the diet, easily prepared foods are consumed. Laziness (ignorance) of the people also identified as a barrier to consume a healthy diet.

### Theme 2. Nutritional values of foods

Majority of the participants consider fish, pulses, meat and eggs provide proteins for body growth while improve bone health, brain development, provide energy, provide immunity against diseases and organ health. Eating fruits is to gain vitamins and minerals while support digestion, eye health, prevent from diseases and avoid nutrient deficiencies, Milk and milk products provide calcium and ensures teeth and bone health and provide fats to ensure gastric health. Participants perceived that fat and sugar are more important as an energy source. It helps to body growth and to enhance the appetite.

### Theme 3. Nutrition-related issues in the community

Nutrition-related issues in the community identified as low birth weight, underweight of pregnant mothers and children, weight loss, were the most common issues. Anemia and non-communicable diseases were the second most highlighted issues and followed by vision problems, Lack of brain development, issues in fertility, goiter, lethargy, low immunity level, calcium deficiency (Issues in dental health, Osteoporosis) and stunting were indicated by the participants.

Findings in the study indicate that food literacy related to knowledge is there, with some gaps. However, applying knowledge into practice has several barriers, including poverty, ignorance or lack of motivation, the high cost of healthy foods, and lack of time.

A household survey was carried out with over 600 farmers to assess dietary intake. Lower dietary intake was observed based on the sector concerning food security status. A substantial proportion of the studied population failed to achieve the recommended intake. It is important to improve family nutrition outcomes through various intervention programs.

## 4. Policy Review

A comprehensive desk review has been conducted to study the available policy documents and regulatory measures related with food, nutrition and health. 28 policy and program documents have been reviewed. Out of which 05 have been selected and analyzed as major relevant Policies to the Agriculture Sector.

## 5. Conclusions and Recommendation

Overall, it is evident from the present study that there are long standing imbalances in Sri Lankan food supply, in comparison with WHO recommendations. More realistic and sustainable agricultural policies will be needed to prevent the adverse consequences of these inappropriate food and nutrient supply patterns. To explore the potential of the food and agriculture sector to meet the demands and challenges, it is useful to examine trends in food and nutrient supply patterns in the country, which this study tried to find out.

### 5.1. Policy recommendations

In reviewing existing policies and proposing new recommendations it is essential to take following main aspects into consideration:

- Evaluate total food system, multi-sectoral approach and improving nutrition literacy among all stakeholders.
- Ensuring nutrition security, food security and food safety by ensuring culturally appropriate food availability.
- Empowering farming community by prioritization of poverty reduction strategies.

## **5.2 Proposed Policy Statements**

Following policy statements are targeting improvement of the Sri Lankan consumers and agricultural food production sector.

- Enact and implement of appropriate legislations and other regulatory mechanisms to ensure provision of safe nutrition to all citizens of Sri Lanka.
- Promote behavior change communication to all sections of population enabling them to make right food choices and care practices.
- Strengthen capacity building of agriculture sector staff and community-based workers for effective behavior change communication with regards to nutritional promotion in all sections of the community.
- Ensure appropriate and adequate nutrition and related services for all enabling them to access adequate, nutritious, and safe and quality food at affordable price throughout the year.
- Empower the community by reorganizing grass root level community organizations, in programs planning, implementation and monitoring of nutrition intervention programs.
- Ensure dissemination of appropriate nutrition messages and Media promotion programs in a responsible and ethical manner.
- Promote consumption of a wide variety of foods ensuring intake of all macro and micronutrients to prevent deficiency disorders and diet related chronic diseases.
- Promote and facilitate improvement of quality of commonly consumed food items (e.g. food fortification) to ensure micronutrient supplementation for vulnerable groups.

- Establish a mechanism for regular consultation and dialogue between political leadership, policy planners and other stakeholders to ensure sustainability of programs in coherence with other nutrition related policies.
- Strengthen partnerships and networking with relevant sectors and stakeholders including private sector for undertaking collaborative programs to improve nutrition at community level.
- Promote establishment and operation of National Nutrition Surveillance System providing policy makers, programs managers, and nutrition care providers with evidence needed for better programs management.
- Priorities and support research-oriented multi-sectoral activities and utilize evidence for regular monitoring and periodic evaluations of food and nutrition security.

### **5.3 Recommendations of actions for Agriculture sector**

1. Maintaining a data bank on food composition, as well as data on yields, for different species and their varieties/cultivars and breeds (including underutilized foods) to ensure that nutrient content becomes a priority criterion in crop / cultivar promotion and research include plant Breeding.
2. Popularize crop varieties based not only on yields but also on nutrient content (concept of nutrient productivity), thereby enhancing the nutrient supply of agricultural products, especially for micronutrients.
3. Establishing community seed banks and smallholder seed enterprises to enhance availability of and access to genetic resources and thereby strengthen local food systems.
4. Implementation of market-based approaches (value chain development) to stimulate production and consumption of – biodiverse nutritious foods.
5. Existing material on biodiversity (e.g. Voluntary Guidelines for Mainstreaming Biodiversity into Policies, Programs and National and Regional Plans of Action on Nutrition; Food Composition Database for Biodiversity) can be used to mainstream biodiversity into nutrition and agriculture
6. Raising awareness of the general public and of different stakeholders on the importance

of biodiverse foods for nutrition, as well as incorporating biodiversity in extension systems, are also key elements for enhancing nutrition-sensitive agriculture.

7. Close monitoring of food process – farm to plate - prevent adulteration, addition of harmful and toxic substances etc. and strengthen strict enforcement of legislation (food act).
8. Multi sectoral nutrition sensitive interventions should be carried out through coordination with ministry of health.
9. Availability of healthy dietary choices, and physical activities should be ensured at every setting.
10. Relationship between food consumption/ dietary intake and NCD should be explored through research.
11. The food industry must be more socially responsible and refrain from all types of unethical food and beverage advertising.
12. Regulatory mechanisms should be strengthened, and strictly enforced with regards to uncontrolled food advertisement. Strengthen legislation that will restrict food advertising and promotion aimed at children and bring in new provisions in the statute to prevent the use of children in advertisement of foods and beverages. A multi-sectoral national advertising policy that outlines the promotion of food products needs to be in place in Sri Lanka.
13. Public to be vigilant and report unethical food advertisements aimed at children to the Consumer Affairs Authority and the Ministry of Health. Parents should pay attention to the health and nutrition qualities of food than the mere demands of their children when they buy food for children.
14. Community-based fortification can help to increase availability and affordability of fortified staples for rural dwellers; other strategies include, among others, micro-franchises and linkages between manufacturers of fortified foods and traditional retailers/street vendors, as well as doorstep distribution and partnerships with non-profit organizations.
15. Improve nutrition literacy among school children, adolescents and both parents.

16. Multi-sectoral approach is needed to enhance food security and reduce poverty. Special attention must be paid for pregnant mothers and children under 5 years of age in poor households and programs implemented to break the cycle of malnutrition and poverty.

17. Develop strategies for dietary diversification, availability of low-cost nutritious food throughout the year via agriculture modernization. Promote adequate intake of proteins including animal proteins and increase availability of fruits and vegetables with adequate quality.

## 6. Reference:

**Research Report on “Policy Research in the Area of Food Consumption, Nutrition and Health,”** by MG Consultants Pvt, Nawala, Rajagiriya , undertaken for the Agriculture Sector Modernization Project, Ministry of Agriculture, November 2020, available at [www.asmp.lk](http://www.asmp.lk)

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