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**REVIEW ARTICLE** 

# Women's Role in Transforming Food Systems in Sri Lanka – A Narrative Review

Rajika Dewasurendra<sup>1</sup> and Nadira D. Karunaweera<sup>1</sup>

<sup>1</sup>Faculty of Medicine, University of Colombo, Sri Lanka

# **Correspondence:**

Nadira Karunaweera Faculty of Medicine, University of Colombo, 25, Kynsey Road, Colombo 08. Sri Lanka

Telephone: +94 11 2699284 Email: nadira@parasit.cmb.ac.lk

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#### ORCID

Nadira Karunaweera http://orcid.org/0000-0003-3985-1817

#### **ABSTRACT**

A food system is referred to as a complex web of activities involving production, processing, transport, selling, and consumption of food. This is often associated with governance and economics of food production, wastage of food, effects on the environment during this process, and impact on individual and population health. Sri Lanka is considered as an agricultural country with women playing an active role in food systems, particularly in the past. In ancient Sri Lanka, agriculture was not essentially a revenue generation process but was everybody's service and public responsibility, where they cultivated land (either in paddy fields, chena, or home garden that surrounded the house) to provide food for the family, and rear cattle/hens for eggs and milk. The excess would be shared or stored for future consumption. The women were actively involved in all related chores, from the initial steps of cultivation to harvesting, which further extended to food preparation and preservation. However, the role of women in areas associated with food systems changed with time— the colonial era, the post-colonial era, and then the modern era, when the processes involved in modern food culture has replaced the traditional food systems in Sri Lanka. This narrative review discusses the changing role of women in food systems in Sri Lanka, from the ancient era to modern times.

**Keywords:** food system, gender role, women in agriculture, food security, waste management, food market, nutrition, health



About the Authors: Dr. Nadira D. Karunaweera is the Chair and Senior Professor of Parasitology at the Faculty of Medicine, University of Colombo, Sri Lanka, adjunct Professor of Jamia Hamdard University in New Delhi, India, and an honorary Visiting Fellow at the School of Public Health, Harvard University, USA. She is a trained Medical Parasitologist and among the Top 2% of Scientists in the list of outstanding researchers prepared by Elsevier BV, Stanford University, USA since 2019. Prof. Karunaweera is currently the President of the National Academy of Sciences of Sri Lanka (NASSL), an elected Fellow of the World Academy of Sciences (TWAS) and a member of the Women in Science and Engineering (WISE) committee of AASSA. Dr. R. Dewasurendra is Scientific Assistant and Lab and Data Manager in the Department of Parasitology of the Faculty of Medicine, University of Colombo. Her researches and publications are primarily on malaria and leishmaniasis in the fields of host and parasite genetics, immunology, risk factors and related topics.

#### **INTRODUCTION**

Food is a basic essential of all living things, including humans. With evolution, man has learned to move from a simple "pick and eat" habit to more complicated food habits involving producing and processing food. It further developed into a complex system with a civilization that included transportation and selling of produced food. All components that are interconnected from production to consumption are referred to as a food system. It is a complex web of activities that involves the production, processing, transport, selling, preserving, and consumption of food. Further, there are many associated factors that are closely connected with each step of this chain of activities, i.e., governance, economics, wastage, environmental impact, food security, as well as individual and community health (Eriksen 2008).

Historical evidence points towards the existence of human habitation in Sri Lanka as far back as the 6th century BCE together with Indo-Aryan settlements (Deraniyagala 1996). This island has been predominantly an agricultural country, facilitated by two monsoonal seasons with high precipitation and sunlight throughout the year. In the early part of civilization, males played a significant role in food provision to the family and females were responsible for the preparation and preservation of food. The role of women, however, changed with time from the historical era to the modern era. This article will discuss the involvement of women and their changing role with time divided into different phases, viz., a) ancient era b) medieval era, c) colonial

era, d) post-colonial era, and the e) modern period (De Silva 2005).

#### A. The Ancient Era (543 BCE - 1505)

The ancient era of Sri Lanka is the period from early colonization of Indo-Arvan settlements to the collapse of the "Rajarata" or the north-central kingdom. This period encompasses two main kingdoms, namely, Anuradhapura and Polonnaruwa spanning through 377 BCE to 1232. This was regarded as an era of irrigational agriculture. Irrigation agriculture played a pivotal role in ancient Sri Lanka, facilitating the cultivation of crops such as rice, grains, and spices. The Anuradhapura Kingdom, renowned for its sophisticated hydraulic civilization, developed extensive irrigation systems to harness water resources for agricultural purposes. These systems, including reservoirs, tanks, and irrigation canals, were meticulously engineered and maintained, enabling year-round cultivation and ensuring food security for the population. The management of water resources was a central concern of ancient Sri Lankan society, with kings often commissioning ambitious irrigation projects to enhance agricultural productivity and control water distribution (Abeywardena et al.2018a; Abeywardena et al. 2018b).

During ancient times in Sri Lanka, agriculture served as a communal obligation rather than solely a means of generating revenue. It was considered a collective duty for all members of society to cultivate land, whether in paddy fields, chena, or around their homes, with the

primary aim of providing sustenance for their families. Any surplus produce harvested would be shared among the community or preserved for future use, emphasizing the communal nature of agricultural practices and the importance of self-sufficiency in food production.

The involvement of men and women in these food system-related activities had a clearcut margin, i.e., men played a significant role in irrigational, cultivating, and harvesting processes while women engaged in more home-based activities including food processing, such as threshing, winnowing, and milling grains (Munasinghe 2004, Kiribamune 1990). The main source carbohydrates came from cultivated cereals such as rice, finger millet (Eleusine coracana), and maize (Zea mays) (Mihiranie et al. 2020). The grains were milled to flour and were used in preparation of various main courses (e.g., roti, pittu etc.). Similarly, paddy was processed into edible rice grains. Milling and processing paddy were household tasks that mainly the women undertook (Mihiranie et al. 2020). Furthermore, extracting oil from coconut kernels, sesame seeds, and other nuts, which is considered a laborious task was done within the ancient kitchen itself, with the involvement of the housewife of the ancient era. Additionally, women were often involved in managing household gardens and small-scale farming activities, cultivating vegetables, fruits, and xmedicinal herbs to supplement the family's diet and provide essential nutrients. They were aware of different medicinal herbs capable of treating different ailments and carefully selected the food types to suit the unique requirements of every family member e.g. children, pregnant women, and the elderly (Irangani 2020). Their expertise in agricultural practices and food preservation techniques was passed down through generations, contributing to the resilience and sustainability of food systems in the ancient Anuradhapura Kingdom.

#### B. The Medieval Era (1232 – 1505)

The decline of the ancient kingdoms occurred during the 13th century, with the Indian invasions. The prosperity of the ancient kingdoms faded away, as the irrigation systems and hydro-agriculture were largely neglected (Samarathunga et al. 2020). During this period, civilization moved from the north-central Sri Lanka to the south and south-western parts of the country in the wet zone (Wimalasena 2015). The Medieval era

consisted of several dynasties i.e., Seethawaka, Kotte, Raigama etc., of comparatively shorter periods. During this period, significant changes occurred in Indian Ocean trade. While there had always been a demand for gems, pearls, ivory, and other commodities, the international spice trade, i.e., cinnamon, cardamom, and nutmeg, increased after the thirteenth century. Agriculture did not require major irrigation projects in the wet zone, but paddy remained the staple crop. The ancient poetry by various Ceylonese medieval poets in the 14th century i.e., Parevi sandeshaya, Gira sandeshaya, Hansa sandeshaya mention the involvement of women in paddy cultivation — a less laborious secondary role, e.g., chasing away the birds from the fields, staying in the fields to protect the crops. Similarly, the ancient poetry further describes the involvement of women in animal husbandry especially referring to herdswomen ("Gopalu liya" Tisara Sandeshaya verse 87, Gira Sandeshaya verse 75). However, as the spice trade flourished, a more structured and organized cultivation of economic crops surfaced. In addition to their domestic responsibilities, women participated in assisting men with the cultivation and processing of these crops (Wimalasena 2015).

#### C. The Colonial Era (1505 – 1948)

The first European invasion occurred in 1505 by the Portuguese followed by the Dutch in 1638. The British expropriation started in 1796. The Portuguese and the Dutch, and the British until 1815 only managed to take over the maritime provinces, and the central Sri Lanka especially the Kingdom of Kandy was under the rule of the Ceylonese king. The European rule had a definite impact on the economy and the lifestyle of the people who inhabited the coastal plains of Sri Lanka, while the central Sri Lanka remained a 'land-lock – territory' (Koggalage 2015).

The Kandyan women took more of a secondary role in food cultivation, where primarily the plough agricultural methods were used. Women were more involved in weeding, planting and harvesting, and afterward processing the crops (Koggalage 2015). The chronicles of Robert Knox, the English explorer (1681), point out that these activities were not regarded as household chores for women, but they were able to earn wages by undertaking these jobs in others' fields indicating women's labor in agriculture documented for the first time (Koggalage 2015).

Further, with the collapse of hydro-agriculture systems, the women had to participate in "chena" cultivation, where men cultivate various pulses i.e., maize, kurakkan, and other vegetables in cleared land inside the jungles, to support the economy and maintain the family's nutrition (Chandrika 2021).

The women in coastal areas were more exposed to trading agriculture, hence, had a secondary or little involvement in ploughing agricultural activities in contrast to up-country women from Kandy. They continued to participate in household chores, cooking, gardening, and providing nutrition to the family and at the same time, the colonial era was also the period in which the women participated in food trading, in marketplaces, or using personal spaces such as under shady trees. The trading items could have been either excessive crops (e.g., grains, fruits, vegetables) or homemade food items (Munasinghe 2004). Under the Portuguese and Dutch rule, cinnamon, toddy, and fish industries developed as the main trade industries in the coastal areas. Thus, the involvement of women in these household industrial labor was common in this era (Van Daele 2013).

Further, the Portuguese, in the early 16th century, likely introduced bread-making techniques to Sri Lanka. Later, the Dutch and British further developed and influenced the baking culture on the island. Therefore, it can be assumed that the role of women in household activities eased as the making of rice flour-based food became less popular with more use of wheat flour. Similarly, sweets and confectionaries were introduced as well.

There is no evidence, however, to assume that food transportation and wastage occurred during this era for the locally grown crops and other food products. This was not the case for the other economic crops which were introduced by the British after they gained control over the entire country in 1815.

The coffee industry was introduced to Sri Lanka by the Dutch in the late 17th century and was subsequently taken over by the British (Dewasiri 2007). However, due to the fungal disease 'Coffee blight', the British introduced tea in the mid-hills of the country. Similarly, rubber plantations were also introduced in the middle lowlands of the country (Wickramasinghe 2004, Herath 1984). Although coconut had been native to Sri Lanka,

large-scale coconut plantations were founded by the Dutch and continued by the British. As this large-scale export agriculture emerged and flourished, it reduced the availability of land for chena cultivation (the traditional vegetable cultivation by cutting trees and making plots in the middle of the jungle) (Dewasiri 2007). Similarly, the men worked in plantations as laborers for a wage. Thus, the involvement of women in agricultural activities became limited to home gardening and homebased-poultry activities, compared to the activities involving paddy cultivation and associated tasks, which women were engaged in, in the ancient era. With the development of economic crops, women engaged in various processing activities for payment, i.e., coconut de-husking, cinnamon peeling, tea leaf plucking, rubber milk harvesting, etc. (Kurian and Jayawardena 2013).

### D. Post colonial Era (1948 – late 1970s)

Sri Lanka gained independence from the British rule in 1948. It was declared a dominion, and later, in 1972, it became a republic. This was an era in which many political, economic, and social changes took place. One notable change was the establishment of the free education policy (Liyanage 2014). A significant transformation occurred with the implementation of the free education policy, allowing children from all backgrounds to access improved educational opportunities. In postcolonial era, women's contribution to the economy changed dramatically, with the percentage of women who actively contributed to the country's economy gradually increasing. The impact of these social, cultural, and economic changes that happened after gaining independence had a significant impact on women's role in food systems in Sri Lanka.

In the early post-colonial era, paddy cultivation, vegetable, and fruit farming, as well as poultry, converted from a more home-based, self-feeding pattern to a more economical and trading pattern, where food markets and shops became prevalent. Yet, eateries, where people can get a cooked meal, were not available on every corner, but the outlets were largely simple coffee shops (termed "Kopi kade"), which served traditional snacks, especially sweetmeats and a cup of tea or coffee, especially to traders visiting villages and passersby. This is the beginning of the era where women withdrew gradually from family-based crop cultivation and farm keeping and

engaged more in giving support for income generation for the family. The colonial and post-colonial era was the transitional period of Sri Lankan food culture, where the contribution of women was more focused towards, postharvest activities (i.e., food preparation/ preservation/ focusing on nutritional values) than the agricultural and trade ventures. Although women did not primarily undertake agriculture and farming by themselves, many women tended to work in farms and fields for a wage. Based on their educational background they engaged in various occupations including agricultural-based jobs. This allowed women to participate in various activities related to food systems including, food processing, waste management, pollution management, policy generation, and health care. On the other hand, homemakers or the housewives still took the initiative to maintain home gardens and grow fruits and vegetables for family's consumption.

# E. Modern Era (Late 1970s to date)

Significant social and economic changes occurred in 1978, due to political and economic reforms (Warnapala 1979, Athukorala et al., 2000). Under these new trade policies, the control for the many imported goods was liberalized, increasing the influx of agricultural products, food items, as well as enabling popular international food chains to enter the country (Balakrishnan 1980). This caused substantial alterations to women's role in food systems. With the development, increase in numbers and the spread of markets, the need of women to engage in home-based agricultural activities (e.g., home gardening, animal husbandry) diminished. It was economically convenient and advantageous to buy vegetables and other necessities from the market rather than engage in its production. Although in the rural areas where semi-agricultural system still functioned, in urban areas, the lack of available land prevented families from engaging in any form of agriculture. Even in rural areas, the main agricultural activities were more economy-centric than consumer-based like it used to be. Furthermore, women's participation in the labor force increased gradually i.e., from 6.9% of female government employees in 1950 to 22.3% in 1980; this further increased to 44.9% in 2016 (Department of Census and Statistics 2016). Thus, women's role in food systems was mainly confined to economic engagement as business ventures (e.g., cultivation for trade, agricultural, food

processing activities performed for a wage, second-hand food marketing etc.). However, it is important to note a small proportion of women still continue to engage in cultivation, processing and marketing of the economical crops, which were initiated in the colonial era.

With these new developments other factors associated with food systems, which were not very prominent in previous eras became notable, i.e., environmental implications, health hazards, food chain markets, food wastage, food insecurity, which also involved women either directly or indirectly.

# Women's role in agriculture and the food market

Agriculture for economic reasons: Women still maintain gardens/ small scale cultivation lands in rural areas to sell the harvest in the local market. Further, women's engagement in agriculture has evolved significantly, with increased mechanization and improved access to education leading to more efficient and informed farming practices among female farmers. Historically, women were often confined to subsistence farming and labor-intensive tasks, but modern advancements have enabled their participation in more diverse and lucrative agricultural activities. In many regions, women have taken on leadership roles within agricultural cooperatives and organizations, advocating for policy changes and better resource allocation. Access to technology and microfinance has empowered women to become entrepreneurs, enhancing their economic independence and contribution to the agricultural economy. Additionally, gender-specific agricultural training programs have increased, further equipping women with the skills needed to thrive in this sector.

Processed food market and food exports: Women are engaged in processed food market, rural areas, where they have entered small-scale businesses e.g., mushroom cultivation, small-scale eateries with local food items (roti, hoppers, string hoppers) and juices (fruit juice and porridge). Furthermore, a few women entrepreneurs have developed into national-scale or large-scale food producers with some even entering the export market (e.g., Sri Lankan tea, spices and spice mixes, Sri Lankan pickles and curries, etc.,) (Athukorala et al. 2023).

**Food chain markets, Supermarkets and Hotels:** Women are engaged in various activities related to food systems, for a wage in markets and hotels including cleaning, food processing, cooking, serving etc.

# Women's role in food waste management and food security

Food waste can be described as food that is discarded or lost along the food supply chain. Wastage can happen in production, transportation, or storage. One of the main ways of food wastage, however, is household food wastage, which is discarded unconsumed. Household planning and the implementation of preservative methods help in minimizing food wastage at household levels. In this context, contemporary women are pivotal in managing food waste and passing down this pertinent knowledge to future generations. At the domestic level, women play a vital role in food security, by minimizing household wastage, ensuring the health and nutrition of the family members and in most rural settings by carrying out home-gardening. It is important to mention that women are also engaged in policy making, management, and other activities (i.e., addressing environmental implications due to food system activities) at the provincial, national, and international level.

#### **Changes in Food Consumption Patterns and Health**

Rice is the staple food in Sri Lanka. From the ancient era, women were more focused towards providing a nutritional meal for the family. Along with rice, at least 3 or 4 side dishes were prepared, including a green leaf *mellum* (dishes prepared with fresh leaves), a vegetable and a protein source (eggs, fish, dried fish or occasionally meat). However, with gradual economic growth, and globalization people can be seen shifting away from the traditional home-cooked food, adopting either westernized meals or pre-cooked food from the eateries (Bandara et al., 2021). The main reason for this can be assumed as the increase of the proportion of women in the labor force, where females as well as the males engaged in occupations with less time available for food preparation.

One of the latest changes in the food culture is "street food", especially in the capital and the suburbs. Women can be seen as vendors, alongside the roads,

selling various kinds of short-eats, juices and popular fast foods. The adverse effect of this scenario is the lack of hygiene and other health hazards (e.g., increase of non-communicable diseases). With these changes the burden of non-communicable diseases in the country has increased gradually (Rannan-Eliya 2010).

#### **SUMMARY**

In summary, women's role in food systems has transformed over time, with increased access to education and employment opportunities enabling them to contribute financially to household food security. Traditionally women were seen as primary caregivers responsible for meal preparation, and as a secondary labor force in paddy field and chena cultivation. Women now often share the household duties as well as contribute to economic activities with other family members, fostering more equitable household dynamics. Advances in nutrition education have empowered women to make healthier food choices, significantly improving family diets, and overall well-being. The rise of convenience foods and modern appliances has also reduced the time women spend on meal preparation, allowing them to balance work and family responsibilities more effectively. Furthermore, women's involvement in community and school nutrition programs has expanded, enhancing their influence on broader public health initiatives and food policies.

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Conflicts of interest – There are no conflicts of interest

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