

Gender Perspectives on Food Security

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Abstract:

Many efforts in water supply, energy as well as food security development in Southeast Asia are connected and have regional dimensions since they rely on transboundary river basins like the Lower Mekong River Basin (LMRB). Especially when it comes to food security and proper nutrition, the Mekong River is a central source of living. Mekong riparian states faced nearly 15 million malnutrition cases from 2019 to 2021. Approximately, 60 per cent of the undernourished are female. Since regional food security issues are closely related to water management and regional security issues in its member countries, this paper analyses food security in relation to the Mekong River Commission as a central interregional organisation for sustainable development within the LMRB.

Key words: food security; lmr; malnutrition; mekong river commission; nutrition; gen- der; lower mekong river basin

Introduction

With its growing population, rising economy and rapid urbanisation, Southeast Asia (SEA) is one of the most dynamic and fastest-growing regions in the world. With 1.75 billion people, the region is home to 20 per cent of the global population. Its population is growing by 1.5 per cent annually while its economy has expanded rapidly in recent decades. Despite its growth over recent decades, SEA has still <some of the worst levels of human deprivation in the world= [1]. More than 200 million people (12 per cent of the total population) still lack ac- cess to safe drinking water and more than 900 million (52 per cent of the population) do not have access to good and safe sanitary service (data from Rasul et al. 2021, 466-467). In addi- tion, severe food insecurity affects 22.1 million people (3.3 per cent) in SEA and about 125.5 million people (18.8 per cent) are moderately or severely concerned by food insecurity. [2]

Many efforts in water supply, energy as well as food security development in Southeast Asia are connected and have regional dimensions since they rely on transboundary river basinslike the Lower Mekong River Basin (LMRB). Starting from the mountains of Tibet, the Me- kong River is the 12th longest river in the world, flowing to the South China Sea via six countries, namely China, Myanmar, Laos, Thailand, Cambodia, and Vietnam. The Mekongs total length is about 4,200 km and it provides a source of living for about 70-80 million peo- ple within the riparian countries. [3] Especially when it comes to food security and proper nutrition, the Mekong River is a central source of living. Economic activities linked to food secu- rity within the Mekong Delta are composed of rice cultivation and its sophisticated rice crop ecosystem, as well as aquaculture and fishery. [4]

Within this paper, *transboundary basins* means river basins that include more than two bor- dering states, based on the definition of *transboundary waters* in Article 1 of the United Na- tions (UN) Water Convention: <any surface or ground waters which mark, cross or are locat- ed on boundaries between two or more States=.⁵ These bordering states will concurrently be called *riparian states* since they are states <bordering the same *transboundary waters*=, [6] such as in the context of the Lower Mekong River Basin. The usable amount of water within transboundary river basins like the LMB has to serve various human functions such as food production, energy generation, transportation, drinking water or socio- environmental preser- vation. It can be said that the needed supply of water for riparian countries feeds into their overall foreign relations with other countries. [7]

This paper is structured as follows: First, we will lay out our approach and aim within this paper, including research timeframe and objects of analysis. We will elaborate on our re- search questions about gender approaches for food security, and then define the gender con- cepts that we will be studying into. The Mekong River Commission developed its own gen- der mainstreaming approach, which we will be presenting to serve as a basic scope of under- standing regarding the gender perspective within the Mekong riparian states. Next, the paper will provide explicit data about the state of food security and nutrition within the Lower Mekong River states, specifically Myanmar, Laos, Thailand, Cambodia, and Vietnam. We name five potential drivers, namely biophysical and environmental; innovation, technology, and infrastructure; political and economic; socio-cultural; and demographic drivers, [8] which will be

further elaborated in terms of their significance for food security. Two of those drivers will then be examined more closely and put into context with income and gender considerations. We state that (1) income is a significant dimension of demography regarding food security and (2) gender is closely linked to food security, being a socio-cultural driver. Lastly, the paper bridges food security and gender to go into a discussion about policy recommendations for the Mekong River Commission. We close with a conclusion.

Research Questions

- Is food security in the Mekong Delta addressed by the Mekong River Commission?
- How does the Mekong River Commission address gender mainstreaming, especially in food security?
- Thesis: The Mekong River Commission should address food security as much as it addresses gender mainstreaming, because food security and gender are linked closely due to women's role in food security.

Methodology

This paper conducts a policy analysis using a method comprising both literature review and quantitative data. Most of the data for the literature review is extracted from secondary sources such as policy papers, academic research, journal articles, etc., combined with quantitative data extracted from the Food and Agriculture Organisation of the United Nations' FAOSTAT website. [9] Additionally, this paper will heavily consult documents and reports from the Mekong River Commission (MRC), the Food and Agriculture Organisation of the United Nations (FAO), the United Nations (UN) in general as well as the World Health Organisation (WHO).

Based on the analysis provided throughout this paper, we aim to produce policy recommendations based on the gaps we have identified regarding food security in the Mekong Delta and to examine the practicality of the implementation of the recommended policies. The timeframe of analysis is between 2019 and 2021, because we see the necessity to include the impacts on food security caused by the COVID-19 pandemic in the Mekong Subregion. Based on the existing food security policies, this paper will specifically target the policies that have been put out by the Mekong River Commission [10] as it is an intergovernmental organisation that has worked in the Mekong region for around 25 years, serving as a regional platform and knowledge hub for regional dialogue and cooperation in the Lower Mekong River Basin. [11] Hence, this paper intends to look at food security policies through a gender perspective lens by taking gender-based differences into account at the MRC level.

It seems obvious that the MRC is focusing on water management and security in the region, rather than on food-related sectors. In this light, we would like to address this as a gap which the MRC should integrate into its work. Regional food security issues are closely related to water management and regional security issues within the member countries. Thus, is food security in the Mekong Delta well addressed by the Mekong River Commission?

Therefore, the paper will analyse food security issues through a gender perspective by using and applying gender mainstreaming and the gender-sensitive approach as a tool to achieve gender equality in this field. Accordingly, our central research question is: How does the Mekong River Commission address food security from a gender perspective?

Gender Concepts and Definitions

It can be said that women are generally more vulnerable in terms of food security than men as they are often responsible for growing and preparing food, for which they rely heavily on the availability of food in the

market.¹² Hence, indigenous communities and marginalised groups like women and girls in particular suffer from food insecurity and malnutrition. Women and infants, children and adolescents are at particular risk of malnutrition due to their higher needs in terms of consumption. According to the Asian Development Bank (ADB) report on gender equality and food security, <women and girls are overrepresented among those who are food-insecure. Worldwide, an estimated 60% of undernourished people are women or girls. = [13] When it comes to gender discussions in a particular field, there are many big key terms to be defined to understand the underlying issues in a deeper context. Therefore, the following parts will provide some important definitions and aspects to shed light on the intention of the discussion. A gender perspective is required to ensure that the specific needs of men and women and their vulnerabilities and capacities are properly recognised and addressed. [14] Gender mainstreaming is being interpreted through different definitions based on the respective institutions. The Council of Europe has defined gender mainstreaming as an approach to incorporate the gender perspective in all policies at all levels and stages by reorganising, improving, developing, and evaluating the policy processes. [15] The United Nations Economic and Social Council (ECOSOC) also defined the term in the same manner, yet further elaborated on the inclusion of women's and men's concerns and experiences as an essential factor of the design, implementation, monitoring and evaluation of policies and programmes in all societal spheres. [16] In contrast, gender-sensitivity refers to an approach to increase the awareness of gender, including the important effects of gender norms, roles and relations in a society. [17] There can be a lot of different forms of approach incorporated to sensitise the gender topic.

The Mekong River Commission Gender Cluster

A broader and sustainable approach to food security within the Mekong Delta thus must include gender-sensitive approaches. Since 2000, the governments of the Mekong riparian countries have committed through the *Mekong River Commission* (MRC) Council to develop and endorse the MRC Gender Strategy and Policy. [18] We propose that the Mekong River Commission should address food security as much as it addresses gender-sensitivity, because food security and gender are linked closely due to women's role in food security and its effects, and vice versa.

The MRC is the key transboundary governance institution within the Mekong River region. Four countries, namely Laos, Thailand, Cambodia and Vietnam, are members of the MRC while Myanmar and China are dialogue partners, following the recommendations for sustainable development in the Basin Development Strategy. [19] Since its organs are operating on a transregional level without having supranational competence, the MRC is a unique project with both ambitious as well as ambiguous governance roles. [20] The Mekong River Commission's vision is to promote prosperity in the Mekong River Basin while sustaining efforts to ensure the sustainable development and management of the Mekong's water resources²¹. Thus, its mission is to promote and coordinate sustainable management and development of the water and related resources for the mutual benefits of the lower Mekong countries and the people's wellbeing. [22]

In the meantime, it is worth mentioning the work of the MRC on gender policy, as in 2000, the MRC Council adopted the Gender Policy and Strategy, recognising gender equality as a national priority contributing towards both social and economic development of the region. At the institutional level, the MRC is committed to mainstreaming gender into development plans and policies by including gender aspects in Basin Development Strategies and Plans, strengthening technical capacity and accountability systems for gender mainstreaming in technical work, promoting a gender-sensitive organisational culture and working environment while generating the commitment of the leadership, promoting stakeholder participation and gender mainstreaming through

dialogues and training sessions as well as developing gender- related guidelines, toolkits and capacity-building tools. [23]

State of Food Security and Nutrition in Mekong Subregion in Data

Food is a human right and essential for everyone. The World Summit on Food Security in 2009 declared: <Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle=. [24]

When people are subjected to conditions of insufficient energy or nutrients or both for both long or short periods of time, the situation is said to be one of weak food security. Generally, the state of food security can be distinguished into four dimensions:

- Availability – sufficient supply of food in terms of quantity and quality;
- Accessibility – enough land, inputs and money to achieve the required food for goodhealth;
- Utilisation – preparation, consumption and disposal of food with the support of cleanwater, dietary knowledge and safe sanitation;
- Stability – stable and sustainable food supply access and availability during acuteshocks and chronic or cyclical events. [25]

Additional dimensions of *Sustainability and Agency* can be added

when considering food security and nutrition according to the High Level Panel Experts (HLPE) report from 2017 [26] and 2020 [27].

As an impact of food insecurity, malnutrition problems are found within the Lower Mekong Region. Women and infants, children and adolescents are at particular risk of malnutrition. <Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients". [28] Being overweight in children and young adults is the result of lack of access and/or availability of healthy and nutritious food in terms of food insecurity. Hence, the term *malnutrition* addresses three broad groups of conditions:

- Undernutrition, which includes wasting (low weight-for-height), stunting (low height- for-age) and underweight (low weight-for-age);
- Micronutrient-related malnutrition, which includes micronutrient deficiencies (a lack of important vitamins and minerals) or micronutrient excess; and
- Overweight, which includes obesity and diet-related non-communicable diseases(such as heart disease, stroke, diabetes, and some cancers). [29]

Results and Discussion

As shown in Tables 1 and 2, severe food insecurity affects 22.1 million people (3.3 per centof the total population) in Southeast Asia and about 125.5 million people (18.8 per cent of thetotal population) are moderately or severely concerned by food insecurity. [30]

	Prevalence of severe food insecurity (%)							Prevalence of moderate or severe food insecurity (%)						
	2014	2015	2016	2017	2018	2019	2020	2014	2015	2016	2017	2018	2019	2020
WORLD	8.3	8.1	8.3	8.7	9.6	10.1	11.9	22.6	22.8	23.6	24.9	25.9	26.6	30.4
AFRICA	17.7	18.3	19.8	20.5	20.6	21.9	25.9	47.3	48.0	50.9	52.5	52.7	54.2	59.6
Northern Africa	10.2	9.0	10.4	10.6	9.3	8.8	9.5	29.7	26.4	30.0	33.1	31.1	28.9	30.2
Sub-Saharan Africa	19.4	20.4	22.0	22.7	23.2	24.9	29.5	51.4	53.0	55.8	57.0	57.6	59.9	66.2
Eastern Africa	23.7	24.1	25.8	25.3	25.0	26.0	28.7	57.7	58.1	62.2	62.1	61.6	63.4	65.3
Middle Africa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	70.0
Southern Africa	18.9	18.9	19.0	19.0	19.1	19.2	22.7	43.8	43.9	44.0	44.1	44.2	44.3	49.7
Western Africa	8.6	10.8	12.9	15.3	16.8	19.6	28.8	39.2	42.8	45.5	48.7	50.6	54.2	68.3
ASIA	7.7	7.2	6.9	7.2	8.6	9.0	10.2	19.1	18.8	18.9	20.3	22.2	22.7	25.8
Central Asia	1.6	1.4	2.0	2.8	2.2	2.3	4.7	8.5	9.1	10.0	13.9	13.6	13.2	18.0
Eastern Asia	0.8	0.8	1.5	1.7	1.9	1.3	2.0	6.0	5.9	6.3	10.0	9.6	7.4	7.8
South-eastern Asia	2.4	2.2	2.5	2.9	2.6	2.6	3.3	15.4	15.3	17.0	17.8	17.3	16.8	18.8
Southern Asia	15.9	14.8	13.1	13.3	16.9	18.3	19.9	31.6	30.8	30.1	29.4	34.6	37.6	43.8
Western Asia	8.2	8.5	8.6	9.6	9.2	8.8	8.9	27.5	27.4	26.3	28.2	27.5	27.9	28.3

Table 1: Prevalence of food insecurity at severe level only, and at moderate or severe level, based on the food insecurity scale, 2014-2020.³¹

	Number of severely food insecure people (millions)							Number of moderately or severely food insecure people (millions)						
	2014	2015	2016	2017	2018	2019	2020	2014	2015	2016	2017	2018	2019	2020
WORLD	604.5	598.4	620.2	656.8	731.3	779.9	927.6	1 645.5	1 680.1	1 762.9	1 881.6	1 978.7	2 049.9	2 368.2
AFRICA	203.5	215.9	240.1	254.7	262.9	286.7	346.6	545.0	567.2	617.8	653.3	671.8	708.6	798.8
Northern Africa	22.4	20.2	23.7	24.6	22.0	21.2	23.4	65.1	59.1	68.6	77.0	73.7	69.8	74.5
Sub-Saharan Africa	181.0	195.7	216.5	230.1	241.0	265.5	323.2	479.8	508.1	549.2	576.3	598.1	638.8	724.4
Eastern Africa	89.9	94.0	103.2	104.2	105.6	113.0	127.9	218.7	226.3	248.9	255.4	260.5	275.0	290.9
Middle Africa	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	64.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	125.7
Southern Africa	11.7	11.9	12.1	12.3	12.6	12.8	15.3	27.2	27.7	28.1	28.6	29.0	29.5	33.5
Western Africa	29.6	38.0	46.8	56.9	63.9	76.7	115.7	134.0	150.5	164.4	180.7	192.8	212.0	274.3
ASIA	337.2	319.9	308.0	323.7	394.5	414.7	471.1	840.1	834.6	846.8	918.2	1 014.0	1 043.2	1 198.7
Central Asia	1.1	1.0	1.4	2.0	1.6	1.6	3.5	5.7	6.3	7.0	9.9	9.8	9.6	13.4
Eastern Asia	13.2	12.6	24.6	28.4	31.3	21.7	33.8	98.0	97.1	104.1	166.2	159.5	124.6	130.8
South-eastern Asia	15.2	13.6	16.1	18.5	17.1	16.9	22.1	96.3	96.8	109.1	115.5	113.6	111.0	125.5
Southern Asia	287.2	270.7	243.3	249.1	319.5	350.3	386.8	570.6	563.8	557.7	551.3	656.5	721.4	849.8
Western Asia	20.7	22.0	22.7	25.7	24.9	24.2	24.9	69.6	70.7	69.0	75.2	74.5	76.7	79.2

Table 2: Number of people experiencing food insecurity at severe level only, and at moderate or severe level, based on the food insecurity scale, 2014-2020.³²

Table 3 is based on combined data from FAOSTAT [33] that provides information about the state of undernourishment within the five countries of the Lower Mekong Delta between 2016 and 2021. It provides an oversight of the specific selected indicator 8 hunger and food insecurity 9 by extracting data from the FAOSTAT web page showing the number of people being undernourished (millions) on a 3-year average. [34] In terms of our analysis, the period 2019 to 2021 is especially interesting. According to FAOSTAT's collected data, nearly 15 million

people faced undernutrition and food insecurity in the Mekong riparian states in the period 2019-2021. Looking deeper, the malnutrition data of Cambodia and Laos in the period 2019-2021 did not change compared with those in the period 2018-2020. However, in Myanmar and Thailand, the malnutrition level rose in the 2019-2021 period. As a positive sign, the malnutrition level fell in the period 2019-2021 in Vietnam compared with the level from the 2018-2020 period.

Number of people undernourished (in million) 2016-2021 (3-year average)					
	Cambodia	Laos PDR	Myanmar	Thailand	Vietnam
2016-2018	1.2	0.4	1.6	5.4	6.8
2017-2019	1.1	0.4	1.4	5.4	6.5
2018-2020	1	0.4	NR	5.5	6
2019-2021	1	0.4	1.7	6.2	5.6

Table 3: Number of people undernourished in the Mekong region from 2016 to 2021.³⁵

According to the *Economist Impact Global Food Security Index* [36], Vietnam stands at 46th, followed by Thailand, standing at 64th, Myanmar at 72nd, Cambodia at 78th and Laos at 81st, among 113 countries. These data showed Mekong riparian states' food security conditions and pointed out concerns regarding the food security conditions in the Mekong riparian states.

Drivers of food insecurity

According to the *High Level Panel of Experts on Food Security and Nutrition* [37], there are five drivers that change the functionality of the food system: biophysical and environmental; innovation, technology and infrastructure; political and economic; socio-cultural; and demographic drivers.³⁸ First, natural resources, ecosystem services and climate change are included under biophysical and environmental drivers. Since the Mekong region is predominantly organized agriculturally, drivers like climate change have a direct effect on the food security of riparian states. Second, innovation, technology and infrastructure drivers

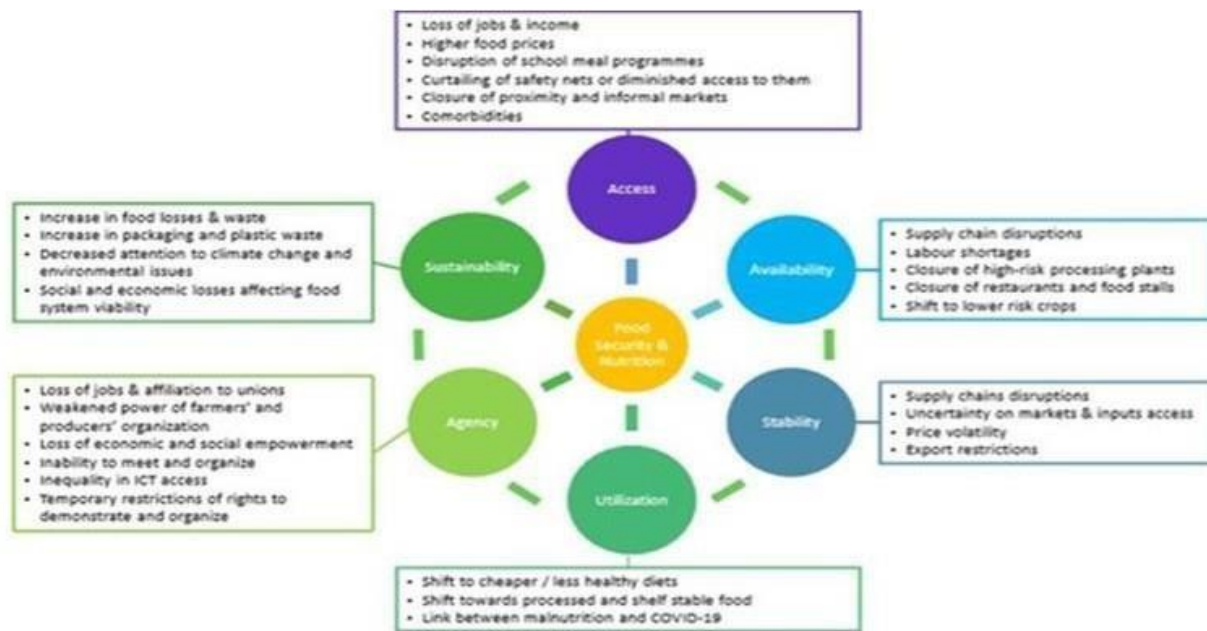
generally play a key role for the Global South. As stated in the Asian Development Bank (ADB) report, conducted by Oliver de Schutter, a lack of technology and infrastructure is one of the major problems contributing to food loss in the countries of the Global South.³⁹ Political and economic drivers can be subdivided into leadership, globalisation and trade, food, agriculture and nutrition policies, food prices and price volatility, land tenure and conflicts and humanitarian crises. Third, political crises, food prices and trade relate to each other and affect the food availability and accessibility dimensions of food security. Fourth, cultures and rituals as well as social traditions, including women's empowerment, are part of socio-cultural drivers. [40]

Since women and girls are primarily responsible for food production, preparation, processing, and distribution as well as food marketing activities, socio-cultural drivers play an important role in food security and the food system. [41] Hence, the socio-cultural discrimination women face not only exposes them to material deprivation, it also makes it more difficult for them to fulfil their vital roles in food security. This is

particularly true of improving women's access to education and strengthening their role in decision making within the household and within society. [42] Finally, demographic drivers such as population growth, income and changing age distribution, urbanisation and migration or forced displacement can cause malnutrition and food insecurity. [43] Meanwhile, the prevalence of overweight and obesity caused by low dietary quality in adults and children is rapidly rising. On the one hand, being overweight can be seen as an interrelation with the fast-growing living standard in Asia, often highest among the wealthiest households. On the other hand, in countries with broad access to inexpensive, highly processed convenience foods, overweight among children and young adults can be seen as a consequence of missing healthy nutrition. [44] Generally, healthy diets including fruits, vegetables and dairy products are often unaffordable, driven by high prices or are lacking in constant accessibility. Affordability is particularly critical for mothers and their children when ensuring food security and nutrition, especially in rural areas. [45]

An Extraordinary Driver: The COVID-19 Pandemic

Food security has been and will always be an important topic to discuss locally and globally, especially right now with the effects of the COVID-19 pandemic and the geopolitical tensions in the region. [46] Besides gender-based discrimination affecting food security, since the Mekong riparian states are predominantly agricultural countries, extreme climate events and natural disasters indicated by climate change are the major factors affecting food security in the region. In this sense, COVID-19 can be seen to be a natural climate conflict. [47] Before the pandemic, nearly 18 million people in the Mekong region were undernourished and faced food insecurity. According to FAO et al. Asia and Pacific is the region with the largest share of the global population that are undernourished, approximately 351 million people, which is more than half of the global total (688 million) =. [48] According to FAO, in 2019, Southeast Asia, which includes the Mekong River area, had the second highest number of undernourished people, numbering 64.7 million. [49]



Source: Authors.

Figure 1: The impacts of COVID-19 on the six dimensions of food security.⁵⁰

The increased occurrence of these major drivers, now exacerbated by the COVID-19 pandemic, has led to a rise in hunger and has undermined progress in reducing all forms of malnutrition, particularly in low- and middle-income countries within the Global South. [51] Households in Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Mongolia, Philippines, and Solomon Islands suffered income losses, including farm and non-farm losses, and lower wages and remittances, based on a study by the World Bank High-Frequency Phone Surveys (HFPS). From this survey, about 75 per cent in Cambodia responded that as a result of income loss there is a reduction in purchasing power for the goods to consume during the pandemic. [52] Due to its universality, the pandemic affects most of the stated drivers of food security and caused heavier burdens for the already affected states of the Lower Mekong Basin.

Demography: Food and Income

Since poverty amplifies the risk of suffering from malnutrition, poor people and low-income families are more likely to be affected by different forms of malnutrition. Both undernutrition and overnutrition directly and

indirectly correlate with poverty. [53] According to FAO, people living on less than US\$1.90 per day spend up to 80 per cent of their income on food.⁵⁴ Informal workers in Thailand reported receiving only 27 per cent of their pre-pandemic average monthly salary, putting them near the extreme poverty level of US\$1.90 per day. [55] Therefore, due to lack of accessibility, rising prices or insecurity, people affected by poverty can often be unable to afford to buy food in the quality and quantity needed for a diverse and healthy diet. [56]

Approximately 462 million adults worldwide were underweighting in 2014, while 1.9 billion were either overweight or obese, because of demographic drivers connected to income. Both groups can be considered as suffering from forms of food insecurity. In 2016, an estimated 155 million children under the age of 5 were suffering from stunting, while 41 million were overweight or obese. [57] In one way or another, every country in the world is affected by some form of malnutrition since combating malnutrition in all its forms is one of the greatest global health challenges.

Generally, malnutrition increases health care costs, reduces productivity, and slows economic growth, which can perpetuate a cycle of poverty and

ill-health. [58] <While many forms of mal- nutrition are obvious, some two billion people worldwide are affected by 8hidden hunger9: that is, they lack an adequate supply of vitamins and minerals, such as iodine,

iron and vita- min A=. [59]

Socio-Cultural: Food and Gender

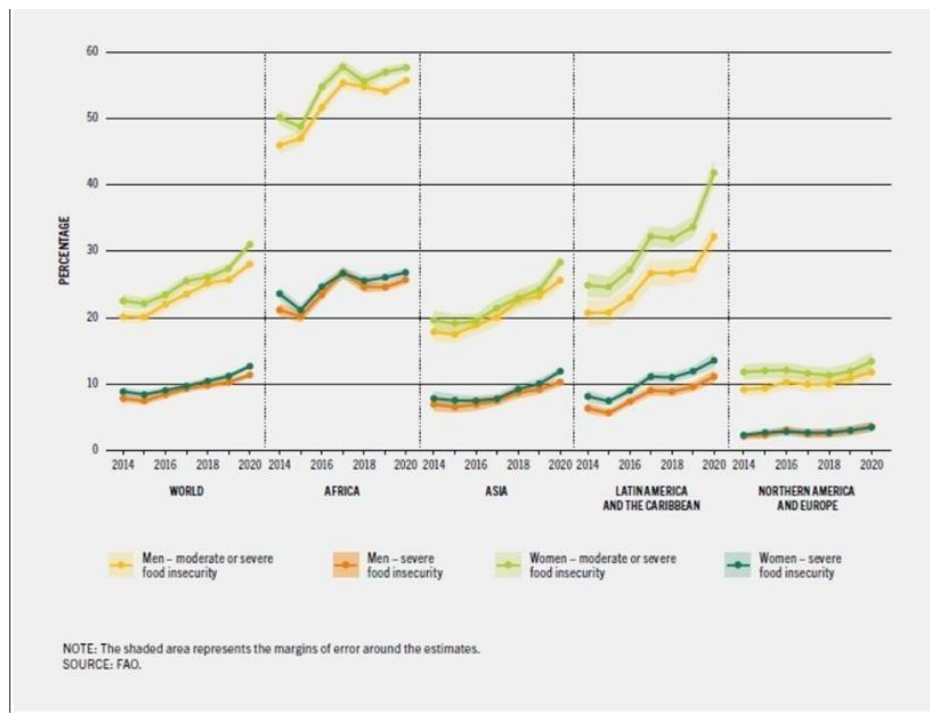


Figure 2: Globally and in every region, the prevalence of food insecurity is higher among women than men⁶⁰

<At the global level, the gender gap in the prevalence of moderate or severe food in- security has grown even larger in the year of the COVID-19 pandemic, with the prev- alence of moderate or severe food insecurity being 10 per cent higher among women than men in 2020, compared with 6 per cent in 2019=. [61]

Women and girls are important key role players in the whole food supply chain. They are responsible for household food production, sustaining the agricultural land, buying and most- ly carrying the products home, and preparing, cooking as well as serving food to the family. Due to societal and cultural norms in the Global South, women and girls play significant roles in maintaining the three pillars of food security: food production, economic access to availa- ble food, and nutrition security. Most often, those predefined gendered roles are directly linked to a lack or the impossibility of access to education for girls and women, thus bonding them to fulfilling household duties. [62]

Additionally, even though female farmers often work together with their husbands on the land, due to norms constraining women to the household, they are generally limited in terms of user rights as well as are made invisible to the public. There are common patterns in the division of public and non-public aspects of labour among men and women in rice agricul- ture.⁶³ Men do specific tasks, including seedbed and land preparation, fertilizer spraying and pesticide application. Transplanting, weeding, manual harvesting, and post-harvest activities are shared by men and women, but they are generally regarded as men9s activities. The preparation of lunch and snacks for hired labourers and their delivery to the field as well as prepa- ration of dinner for the household are only regarded as female activities. Even though men and women work together in the field, access to resources such as land ownership, credit to purchase agricultural inputs, leadership and membership in agricultural and non-agricultural organisations and access to extension services are dominated by men. [64]

However, Asia9s female labour participation rate declined by 1.3 per cent compared to a 1 per cent fall for males between December 2019 and June 2020. 50 per cent of women in formal employment have had their paid work hours reduced compared to the start of the pandemic, in contrast to 35 per cent for men. Within the food and agriculture industry, an estimated 66 per cent of women and 57 per cent of men in the region noted an income drop from farming and fishing. [65]

<FAO concluded that, if women had the same access to productive resources as men, they could increase yields on their farms by 20–30 per cent globally. This could raise total agricultural output in the Global South by 2.5–4 per cent, which could in turn re- duce the number of people suffering food insecurity and hunger in the world by 12–17per cent=. [66]

Women9s economic access to food comes through one or more of three means. The first means is obtaining food through their own production when they have access to resources and assets. This may contribute to their autonomy and empowerment in their households and may also contribute to insulating their households from high food prices and malnutrition. The second means is purchasing food with income from waged employment, which could be from the farm or self-employment. Finally, the third means is accessing food through redistributive mechanisms in the form of government- and NGO-supported social protection measures, or through informal forms of solidarity within households or communities. [67] How- ever, such changes in the food supply system would require social protection, which plays an essential role in assuring food security. Such social protection can be provided on an informal basis by family and community networks, by non-government organisations, or through for- mally organised programmes by the government and local collectives. [68]

The Asian Development Bank (ADB) supported a \$17.5 million fund grant and a \$11.6 mil- lion loan to the Cambodia Emergency Food Assistance Programme. This programme aims to help the government of

Cambodia meet unexpectedly high costs for food, fuel and agricultural inputs arising from the safety net programmes for the poor and vulnerable. The programme was implemented in seven provinces in the Tonle Sap Basin and urban slums of Phnom Penh. After being revised in June 2009, the programme was expanded to a larger number of geographical areas in September 2012. The programme benefited a total of 500,000 people (89,000 households) in its initial phase. The food-for-work and cash-for-work programmes supported the creation of infrastructure for small-scale farmers and a majority of women farmers to increase their productivity and incomes. A recent assessment of the programme showed that 22,756 female-headed households benefited from free rice distribution (around 12,000 tons of rice was distributed during the food-lean period of late October/early November 2008); 31,555 girls benefited from a school feeding programme; 5,510 girls were awarded scholarships; 6,453 female-headed households had access to a food-for-work programme; 127 female volunteer teachers for the early childhood learning centres had access to a monthly rice grant; and 47,150 women (including 8,937 female-headed households) earned an income through a cash-for-work programme. Furthermore, a total of 13,841 female-headed households benefited from the distribution of quality seeds and subsidised sale of fertilizers. This is an example of a social protection programme from Cambodia investing in women to build resilience in times of crises. [69]

Because of the COVID-19 pandemic and subsequent economic crisis, prices for food, fuel, as well as requirements for agriculture such as fertilizers and machines were found rising rapidly in the Mekong riparian states. Hence, such kinds of social protection programmes can be extended in the Mekong riparian states to support food security and fulfil Sustainable Development Goal 2 (SDG 2).⁷⁰

Discussion: Bridging Food Security and Gender Mainstreaming As the world continues to face mounting demographic pressures, access to food and stable nutrition will be challenged while the demand for accessible and affordable food will surge. Increasing urbanisation, deteriorating agricultural spaces, and resource scarcity all work to exacerbate economic, political, and social drivers of conflict. Looking at it from a socio-economic perspective, malnutrition increases health costs and seriously affects people's livelihoods.⁷¹ For instance, overweight and obesity are associated with a higher risk of non-communicable diseases (NCDs). This can easily become a substantial financial burden, particularly in low-income households in the Global South. Mendelson Forman states in a policy memo at Stimson that fighting food insecurity requires a dynamic and comprehensive policy approach reflecting the issue's natural integration of economics, development, and national security while recognising gender-sensitive needs.⁷² Women, infants, children, and adolescents are at particular risk of malnutrition. In addition, women of reproductive age and infants in their first 1,000 days, from conception to their second birthday, need special attention.⁷³ Consequently, looking at the growing demand for water, food, energy, and other consumption goods, combined with increased resource scarcity, authors such as Rasul et al.⁷⁴, De Schutter⁷⁵, Akter et al.⁷⁶ and Quisumbing et al.⁷⁷ rightly stress the need for integrated solutions.

At the Mekong River Commission, gender mainstreaming policies have been laid out at two different levels – institutional level and national level.⁷⁸ At the institutional level, the MRC has been advocating for gender mainstreaming by integrating gender aspects into all their strategies and plans, while at the same time strengthening the technical capacity and accountability system for gender mainstreaming in the technical work at the MRC. Furthermore, the internal aspect cannot be overlooked, in the sense that the institution has promoted a gender-sensitive organisational culture and working environment among colleagues. Externally, the institution should also take a further step to promote gender mainstreaming through dialogues and training with the relevant stakeholders by applying and sharing the developed gender guidelines and toolkits. Meanwhile, at the national level, the respective

members have developed their own national gender strategies and plans, in which the MRC has taken an active role in supporting the national agencies in mainstreaming gender into their respective initiatives and implementation, including capacity building, training on gender-related topics, and recognising gender equality as one of the national priorities to increase equitable economic and social development. On the side lines, the MRC developed a *Gender Responsiveness Plan* [79] in order to support the member countries to mainstream gender into their respective development plans, particularly in climate change and adaptation. [80]

The MRC Indicator Framework includes three gender indicators: (i) gender equality in ownership of land, (ii) gender equity in education, and (iii) female-male ratio of people employed in the Lower Mekong Basin (LMB) water-related sectors.⁸¹ Positive effects of these three indicators can improve the accessibility aspect of food security and nutritional outcomes. As outlined throughout the paper, gender equity is the key to sustainable development for the Global South. Mainstreaming gender sensitivity into development policies can significantly contribute to economic growth and poverty reduction in the riparian states, which further narrows the gender gaps and increases the access of men and women to safe and sufficient food. Furthermore, by ensuring the equality of genders and empowering women in all sectors, the Mekong countries will be able to achieve the Sustainable Development Goals. According to the 17 SDGs, actions like *zero hunger* (SDG 2) or *decent work and economic growth* (SDG8) must go hand-in-hand with *gender equality* (SDG 5). [82]

We have sharply stated how tightly linked and important gender-sensitive public policies and improved nutritional outcomes are for agricultural investment and rural development. Women in Asia and the Pacific region face obstacles in all their roles as food producers, providers, and preparers, mostly due to socio-cultural, demographic as well as natural drivers such as COVID-19. They are affected as waged workers both on and off farms, as beneficiaries of social protection measures, and as primary caregivers, particularly during the early years of a child's life. By removing these obstacles, not only will women and girls gain, but also all of society will benefit because of enhanced human capital as well as the significant improvements in food security arising from diversified ways of contribution. [83]

Hence, we strongly support that policy implementation must be linked with gender-sensitivity mainstreaming and this requires every sector's involvement in terms of food security: the agriculture sector, rural development sector, education sector, financial sector of government organisations and other organisations should all together consider to implement gender-sensitive policies.

Policy recommendations for safe food for all genders:

- 1) Women and girls are keenly aware of the needs of their households and local communities: Active promotion of a stronger representation of women at an early stage through, for instance, educational programmes, low-level engagement or thematic sponsorship is needed.
- 2) Women are underrepresented in decision-making bodies within relevant stakeholder groups like the Mekong River Commission: There is a need for an integrated approach for a more balanced representation of women in decision making and policy implementation to address unequal nutrition supply, food insecurities, and integrated water management frameworks.⁸⁴
- 3) Food security and food-related impacts from instabilities arising from climate change should be adequately captured in the Nationally Determined Contributions (NDCs) of MRC member countries.
- 4) Development of a more gender-balanced policy framework at the transregional level by the Mekong River Commission states,

where the interests of indigenous communities and marginalised gender groups are holistically accommodated.

- 5) For conflict-affected areas, humanitarian, development, and peacebuilding policies should be developed together.⁸⁵
- 6) The interventions should be pro-poor and inclusive to tackle poverty and structural in-equalities.⁸⁶
- 7) There should be technical and policy support for COVID-19 recovery actions for *building back better* (inclusive recovery) and green agrifood transformation (sustainable and resilient recovery).⁸⁷

Conclusion

In conclusion, food insecurity and malnutrition are serious threats to all individuals as well as the general development of countries within the Lower Mekong Basin. As shown in the data presented, food insecurity presents substantial challenges to human health and wellbeing through higher disease and mortality rates, which further affect the economic development of the Mekong countries. Particularly in the Mekong region, the MRC is not focusing enough on food security, though it is closely related to water security and management. The countries in the Mekong Region currently face double or triple burdens of malnutrition, as they are simultaneously affected by undernutrition, micronutrient deficiencies and overweight, caused by a lack of accessibility and availability, insufficient utilisation, and instability.⁸⁸

It can be said that, as a consequence of gender inequality combined with the pandemic and regional conflicts, the Mekong riparian states face serious food insecurity conditions. It has been proven that women play a key role in the three pillars of food security: food production, economic access, and nutritional security; thus gender mainstreaming and women empowerment in the food system must be addressed accordingly.⁸⁹ Land ownership, one of the gender indicators of the MRC Indicator Framework, is a major determinant of the ability of rural women to improve the productivity of the land they use, to rebalance decision-making power within the household, and to raise their status in the household, the community as well as society.⁹⁰ Providing basic food safety, nutritional education, and agriculture technology training to women can raise the production of safe and nutritious food. Additionally, creating incentive programmes, job opportunities for women or financial support to women leading small and medium-sized enterprises will not only increase their income, but will also increase their economical stability to afford food. Lastly, more investments in women and their maternal health care will enhance the nutritional security of both women and children since care work in Asian countries is still predominantly a gendered job.⁹¹

Therefore, food security is the essence of the Mekong states' development strategy and should be addressed properly through gender mainstreaming as well as new concepts for female support, optimally developed by the Mekong River Commission to break the cycle of poverty and to increase economic growth.

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