

Background Document

FOOD CONSUMPTION PATTERN IN ASIA

A baseline study was conducted based on secondary literature and data to comprehend the food consumption pattern among the low-income households in across Asia. The study was conducted for Switch Asia countries in South Asia, Southeast and East Asia. A summary of the Baseline study is provided below.

1. Dietary Pattern in the region

The dietary pattern in Asia is very diverse and intrinsically linked with the cultural and religious practices. Nutrition and consumption traditionally have local roots and begin with local culture, resources, geography, history and genetics. As per the FAO data (FAO, 2021), the total food supply/availability across regions - South, East and Southeast Asia increased by 6.7%, 11.8% and 18.9% respectively between the year 2000 to 2018.

Table 1. Current per Capita Food Supply in South, Southeast and East Asia as per Food Balance Sheet (FAO, 2021) – Regional

	Food Supply (kcal/capita/day)			Fat Supply (g/capita/day)			Protein Supply (g/capita/day)		
EAT Lancet recommended	2500			51.8			209		
Region/Year	2000	2018	%Increase	2000	2018	%Increase	2000	2018	%Increase
South Asia	2390	2550	6.7	46.36	59.24	27.8	57.54	64.54	12.1
East Asia	2818	3152	11.8	76.64	98.83	28.9	84.76	99.66	17.6
South East Asia	2377	2828	18.9	46.15	66.69	44.5	54.86	73.19	33.4

The food supply per capita/kcal/day across the three sub-regions exceeds the EAT Lancet recommended healthy diet per capita/kcal/day of 2500 (Sharma et al., 2020). Considerable shifts have been occurring in the food consumption pattern throughout the globe. In terms of South Asia, it only exceeds marginally while in the other two sub-regions, Southeast and East Asia, it exceeds by a significant number (Table 1). Since the year 2000, Southeast Asia has seen a substantial increase in total calorie availability, with a regional increase of over 19%. Vietnam, Lao People's Democratic Republic and Myanmar in particular had relatively low-calorie availability in 2000. Studies have shown that there has been an increase in food availability and as a result an accompanying decrease in food insecurity. On the contrary, these changing dietary patterns have been observed and studied to be leading towards "nutrition transition" in these regions. The overall concepts of nutrition transition argues that traditional diets of these regions are getting replaced by high-energy diets leading to increased risk for various non-communicable diseases (NCDs) in South and Southeast Asian countries. Rice is still an extremely important component of Asian diets; studies show that absolute levels of consumption are either stable or declining. On surface, diets across Asia show a general trend towards diversification away from staples, but as per few contrasting studies, most food options on supermarket shelves are made from only six food ingredients including wheat and corn. The nutrition transition trend in the countries of South and Southeast Asia is occurring at a faster rate in mid and lower income groups and also sooner at the national level, that is, at a much lower level of Gross National Product. This increase in animal and vegetable fat availability, contributes to 15% of total calorie availability in China, Malaysia, and Pakistan (Thow et al., 2020). There has also been an increased consumption of food that is cooked in fats/oils in the entire region, especially in South Asia where use of oils like Vanaspati has been common since a long time. Shift is also being seen from traditional to more processed and "fast food" consumption across these regions. Processed food and high processed food are already an established practice in the region. It is an important component of food expenditure at 60% and 30% for rural regions and 73% and 42% at urban regions respectively. According to "The Global Burden of Disease" study (2017), Asia was found to be consuming more than the optimal limit for sodium, as well as sugared beverages pointing towards a low nutrition and unhealthy diet.

2. Transitioning towards healthier diets - Opportunities and Barriers

2.1. Fruits and vegetables are an essential part of a balanced and nutritious diet, their consumption has been linked to a reduced risk of numerous non-communicable diseases in epidemiological data. But from studies it can be seen that the daily intake of F&V in Asian countries, especially in South Asian countries is not up to the required level. South Asians consumed between 0.1 and 2.61 servings of fruit per day, irrespective of gender. In 23 of the 26 studies, there has been a consistent pattern of fruit eating, with less than 2 servings per day. Bhutan (WHO, 2004), Kolkata, India 2015-16 (Radhika G, et al., 2008), and Nepal (WHO, 2005), were the three studies that revealed both males and females eating more than 2 servings of fruit each day. A variety of factors play a role in this trend, one of the most significant ones being purchasing power. Studies also show that females and other marginalized

groups are more disadvantaged in this regard as most regions reported a lower F&V consumption among them. The key drivers and enablers identified through this study include factors pertaining to production, supply chains and consumer perception as well as consumption inequality. Reviewing case studies revealed that some of the most effective strategies to improve F&V consumption without affecting the supply chain or purchasing power include providing point of sales health information regarding the benefits of increased F&V consumption and initiatives incentivizing the customers by very small amounts for ordering a vegetable and fruit rich dishes. Both the strategies rely on providing positive feedback to customers when adopting a healthier consumption pattern. Implementation of similar initiatives can vastly improve F&V consumption within all regions and bring about a healthier generation for the future.

2.2. Organic food: Within the purview of food security, organic food can be of significance as it increases accessibility to healthy, pesticide-free and sustainably produced food which is the need of the hour. Organic foods, particularly in developing and underdeveloped countries, can contribute to real socio-economic and environmentally sustainable development. This is owing to the organic principles, which entail effective management of the environment, local resources (local seed kinds, manure, etc.) and thus cost-effectiveness. On the other hand, the demand for organic products both locally and nationally is booming. On a global scale, this presents enormous growth possibilities and creative opportunities. Organic farming lowers the danger of crop failure and stabilizes the returns to small farmers' families and enhances their quality of life. In this study, in four countries Vietnam, Nepal, China, and India, the study looked at different consumption patterns, sustainable ways for promoting organic food, and the present condition of different policies, plans, and frameworks aimed at enhancing the organic food market. As, in China, certification instruments played an important role for promoting sustainable consumption. As of 2019, 126 standards have been issued for China's green food labelling, and 31,946 products from 13,860 enterprises have obtained green food labelling. All the selected countries looked to improve the WTP (Willingness to pay) of the consumers of organic products. There needs to be a better communication with the consumers about the benefits of organic products and its distinction from the other products in the market. The consumers should be made aware about the different standards and certifications that organic products qualify with. Instances where the consumers are willing to pay more for a healthier alternative, the authorities must work towards improving the availability, accessibility and affordability related with the products. Organic goods must become more accessible to the lower-income groups that make up the bulk of the population in these nations. Governments must collaborate with elements such as NGOs, Certification bodies, market entities and Production players. This will ensure natural-food literate consumer, thus paving a way to food security and sustainable consumption in these countries.

2.3. Neglected and Underutilized Food Crops: As the report discusses about solutions for sustainable consumption and enhanced food security, the Neglected and Underutilized Food Crops can be used as a potential tool to ensure that sustainable food security is achieved. They provide remarkable opportunities in all Asian countries to not only improve their dietary and consumption pattern but also the income of farmers and others which are connected in the value chain. There are about 778 species (261 fruits, 55 root or tuber, 213 vegetables, 28 millets as well as pseudo cereals, 25 industrial crops, 34 nuts, 14 grains legumes/pulses and 148 others) of un-utilized species present in the Asia-Pacific

region which are not utilized to their full potential. For example: Sweet Potatoes and Date Palm found in the Asian region are very advantageous because they are a fibrous diet and extremely rich in carotenoids and pro-Vitamin A and antioxidants. These crops are being lost at an alarming rate before being completely researched on due to various economic, environmental, political and social factors which is ultimately leading to the staple crops taking over the commercial global market. The last few decades especially after the green revolution, the commercialization of few crops to achieve the specific agricultural targets by implementing projects and policies have led to the marginalization of the NUFCs despite their innate significant adaptive and prominent livelihood features, yet it has been reported that about 7.4 million plant genetic resources have been reserved roughly in about 1750 gene banks around the world but the presence of the neglected and un-utilized species remains underrepresented. These crops are one of the prerequisites to achieve universal food security because at the country level, NUFCs can strengthen food and economic shocks. Throughout history, it is mentioned how farmers and local communities have relied on the crops as “Famine Food” (during 2004 tsunamis especially in Asian Countries) where all the important staple crops have failed immensely. In such aspect, Bhutan has launched a project “Participatory On-Farm Conservation, Sustainable Use and Management of Neglected and Un-Utilized Crop Species (NUS) for Livelihood and Adaptation to Climate Change”. This project would benefit by selecting and promoting NUFCs in the marginal areas which would help in achieving sustainable food security and will also help in adaptation of climate resilience, food and nutrition. Though the NUFCs have lower yield in comparison to the staple crops, however, they are more resilient to climate change and biotic factors which makes them quite favourable. A number of policies and projects have been launched in Nepal like ((IPGRI-APO (1991), IFAD: High Value Agriculture Projects in Hill and Mountain Areas (2010-17), IFAD-NUS3 Project Research on Amaranth (2013)) to promote and include NUFCs in the mainstream market. The countries like India and Myanmar are yet to come up with some stringent ideas for promoting and mainstreaming the NUFC’s in their agricultural journeys. The neglected and un-utilized food crops which can be potential species that can help to address issues of food security and all targets of SDG 2 can be called as “Future Smart Crops” or FSCs. This would not only diversify the agricultural system but will also help to achieve and promote sustainable production and consumption. Thus, it can also be an essential tool to achieve the targets of SDG 2.

2.4. Local food: Food systems having their bases laid out in the local ecosystems are being seen as the solutions to reducing food miles. In those terms, local food systems are been seen through the perspective of the distance between the producers and consumers and also are attached with aspects such as freshness, promoting and supporting local producers, and tackling environmental concerns. Local food supply chains consisting of lesser checkpoints in-between the producers and consumers such as community- supported agriculture is one of the widely talked about methods to promote a better sustainable consumption system. The case studies like of Indonesia, Malaysia, Sri Lanka and India demonstrate various sustainable agricultural practices like urban farming, Bio intensive farming, modern irrigation methods and vertical farming that share common goals for local food, food miles and urban agriculture. Regular crop production and the idea of a usual distribution system need further transitions and promotion to local sales opportunities as well. The concept of local food has undoubtedly served as an important ideological and behavioural role in highlighting various aspects in the food system. With respect to comparison of local food systems to other food systems, according to

studies there are a number of intermediary examples revealing the dynamic of both local and global food chains, as well as the formation of new chain topologies in response to market opportunities. Rather than seeing local and global as diametrically opposed, sustainability evaluation must evaluate scenarios when "global" and "local" food chains complement and synergize. (Brunori et al., 2016). Overall, urban agriculture is an emerging practice in many parts of Asia which provides wide range of functions such economic revitalization, effective city supply chain, community engagement, waste management, energy conservation, biodiversity etc. This contributes towards securing features of various sustainable development goals and a healthy development of localised food systems especially in urban and peri-urban regions.

2.5. Traditional food: Another important aspect discussed in terms of food security comes with preserving our traditional food systems. Traditional foods not just form the cultural heritage for the countries and its people but also, they are one of the most valuable treasures of natural nutrition and healthy diets. Countries in South Asia like India has a well enrooted history of these traditional foods emerging from decade old practices of traditional agriculture Dave, M (2021). Countries like Japan, Vietnam also have an impeccable history of traditional food practices and have multiple health benefits and resistance to many NCD's which are prevalent all over the world today. As discussed above over the period of time with changing consumption patterns traditional foods to an extent have lost its value especially with introduction of fast foods and other easy to prepare or processed foods but still many traditional foods make the major part of our diet like rice in Vietnam (Tran, 2020) and many other countries in over South, Southeast and East Asia. As the world nowadays is suffering everyday through new health challenges like increasing cardiovascular diseases, nutritional deficiencies, lifestyle changes and recent viruses and infections like COVID-19, there is a need for better immunities, healthy diet and appropriate nutrition levels. This is where the traditional food can benefit the society to cope with such challenges, especially in many low-income countries and highly populated poverty ridden regions across South and south east Asia, where many traditional foods are still included in daily diets of people, but some have completely lost their values. Redefining and modification of traditional foods can also be very beneficial, as example of tofu discussed in the study. For the same, educating the head cook of the family will help to improve the overall nutritional levels of the family. Government support to encourage the local people for selling traditional foods, and also incorporate it in the nutritional schemes like mid-day meal in India (for improving child nutrition from beginning) will help mainstream these food systems into the present-day food systems for developing holistic and sustainable consumption across Asia with help of its rich culture and heritage.

3. Enabling environment for transitioning towards healthier and more sustainable diets:

The baseline report identifies that, policies play an important role in influencing the eating habits of the people. Poor nutrition and its impacts have a high economic cost. Malnutrition brings a loss of \$5.5 trillion dollars per annum to the world economy. It has been found that a 1% decrease in the height of

an adult due to stunting in childhood causes an economic productivity loss of 1.4%. Hence investing in nutrition is crucial for ensuring steady economic growth. Proper nutritional intervention also helps to ensure social equity. Through the nutritional policies of India, Nepal, Thailand and Indonesia, we were able to gauge the crucial role played by these programmes in the respective nations' nutrition agenda and their success. For example, programmes like ICDS in India, MSNP in Nepal and similar ones in Indonesia and Thailand and various subsidies offered by the governments in these countries has led to improved consumption and decreasing trends in stunting, malnutrition and other nutritional anomalies reflecting a successful role of played by government and NGOs in these nations. Although, there is lack in policy system efficacy, administrative efficiency and there is lack of trust in government among the citizens.

However, the complex interactions of various factors in the global food system require a comprehensive and systemic policy framework that goes beyond emergency response and requires enhanced state capacity for efficient administration and appropriate enforcement, along with building citizen trust in the government. This will pave a way for the Asian countries to reach the 2030 SDGs of Zero Hunger, No Poverty, Reduced Inequalities, Good Health and Well-being, Access to clean and safe drinking water, decent work and economic growth.