



Food and Agriculture
Organization of the
United Nations

2024

IN BRIEF

THE STATE OF **AGRICULTURAL COMMODITY MARKETS**

**TRADE AND NUTRITION:
POLICY COHERENCE
FOR HEALTHY DIETS**

This booklet contains the key messages and content from *The State of Agricultural Commodity Markets 2024*. The numbering of tables and figures corresponds to that publication, available at: <https://doi.org/10.4060/cd2144en>

Required citation:

FAO. 2024. *In Brief to The State of Agricultural Commodity Markets 2024 – Trade and nutrition: Policy coherence for healthy diets*. Rome. <https://doi.org/10.4060/cd3094en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

ISBN 978-92-5-139318-5

© FAO, 2024



Some rights reserved. This work is made available under the Creative Commons Attribution- 4.0 International licence (CC BY 4.0: <https://creativecommons.org/licenses/by/4.0/legalcode.en>).

Under the terms of this licence, this work may be copied, redistributed and adapted, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If a translation or adaptation of this work is created, it must include the following disclaimer along with the required citation: “This translation [or adaptation] was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation [or adaptation]. The original English edition shall be the authoritative edition.”

Any dispute arising under this licence that cannot be settled amicably shall be referred to arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL). The parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of such a dispute.

Third-party materials. This Creative Commons licence CC BY 4.0 does not apply to non-FAO copyright materials included in this publication. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

FAO photographs. FAO photographs that may appear in this work are not subject to the above-mentioned Creative Commons licence. Queries for the use of any FAO photographs should be submitted to: photo-library@fao.org.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and print copies can be purchased through the distributors listed there. For general enquiries about FAO publications please contact: publications@fao.org. Queries regarding rights and licensing of publications should be submitted to: copyright@fao.org.

COVER PHOTOGRAPH © iStock.com/Ake Ngiamsguan

THAILAND. Farmer heading to a floating market to sell organic produce.

CONTENTS

FOREWORD		
KEY MESSAGES		
TRADE AND NUTRITION: POLICY COHERENCE FOR HEALTHY DIETS		
THE NUTRITION TRANSITION		
FIGURE 1.1 Structural transformation and nutrition transition: Main drivers and outcomes, 2000–2022		
FIGURE 1.5 Total calories available for consumption in the world by food category, 1961–2021		
TRADE AND NUTRITION: IDENTIFYING THE LINKAGES		
FIGURE 2.1 Merchandise and food and agricultural trade, 2000–2022		
FIGURE 2.3 Evolution of trade by food category (based on daily per capita energy content), world, 2000–2021		
4	TRADE IN FOOD AND NUTRIENTS: FOOD DIVERSITY, NUTRIENT SUPPLY AND THE COST OF HEALTHY FOOD BASKETS	17
7		
9	FIGURE 3.1 Share of food items produced and supplied in all food items, 2010 and 2020, percent	18
10	FIGURE 3.14 Distribution of prices of foods according to their inclusion in healthy diet baskets, by average tariff level, 2017	19
11		
13	FOOD TRADE AND OBESITY	20
14	FIGURE 4.1 Prevalence of obesity among adults in the world, percent, 2022	21
15	STRENGTHENING POLICY COHERENCE FOR TRADE AND NUTRITION	23
16		

FOREWORD


Trade has played a vital role in human existence since the Neolithic period when foods, seeds and tools were exchanged through social networks and trade routes that connected our ancestors. Today, global food markets continue to connect people and countries and play a critical role in our agrifood systems. They facilitate the movement of food from surplus to deficit regions, share the food diversity and thereby contribute to global food security and nutrition.

Together with an increasingly interconnected worldwide economy, food markets have become more globalized and complementary. Between 2000 and 2022, the volume of food trade more than doubled. This surge reflects a world where more countries trade food with each other, with emerging economies becoming important players and low-income countries being better integrated into global food markets. Without a doubt, this significant expansion of food trade affects the availability, accessibility, affordability and diversity of foods in domestic markets and has important implications for our daily diets.

The 2024 edition of *The State of Agricultural Commodity Markets* (SOCO) explores the intricate linkages between food trade, diets and nutrition. Trade can affect diets and nutrition through many channels and its effects can be heterogeneous as, by its very nature, trade is intertwined with economic growth, demographic shifts and societal interactions. The report provides comprehensive evidence of how trade affects supply and price, two essential elements of the food environment, which, in turn, can influence dietary patterns and contribute to nutritional outcomes.

Today, in most high- and upper-middle-income countries, dietary patterns and lifestyles have contributed to a high prevalence of overweight and obesity. Many low- and lower-middle-income countries are also experiencing rapid shifts in dietary patterns and increasing prevalence of overweight and obesity, while many have not yet been able to eradicate undernutrition. As a result, these countries are burdened with various forms of malnutrition including undernutrition, micronutrient deficiency, overweight and obesity all co-existing within the same country, community or household.

Healthy diets and good nutrition are necessary throughout the life course for survival, health, growth, development and all aspects of well-being. Eating a diet that is adequate



in nutrients, diverse across food groups, balanced in energy, moderate in unhealthy food consumption and safe helps us to grow, stay healthy and live active lives. The aspiration to end hunger and all forms of malnutrition, while promoting sustainable agrifood systems, is at the core of Sustainable Development Goal 2 (Zero Hunger). With the Sustainable Development Goals intrinsic to FAO's work, in 2021, the Organization adopted the Strategic Framework 2022–31, developed to support achieving the 2030 Agenda for Sustainable Development through the transformation to MORE efficient, inclusive, resilient and sustainable agrifood systems under four pillars – the “four betters”. One of the pillars, *better nutrition*, aims to end hunger, achieve food security and improve nutrition in all its forms through increased access to and consumption of healthy diets.

Food trade impacts nutrition through its effects on the availability, diversity and prices of foods. It can also have indirect impacts on nutrition through its effect on incomes, as trade can facilitate the structural transformation of the economy and growth.

Openness to trade can significantly increase the diversity of foods available for consumption in a country, a prerequisite to achieving healthy diets. Not all countries are endowed with adequate natural resources such as land and water to efficiently produce a wide variety of foods in sufficient quantities to meet the dietary needs and food preferences of their populations. As countries import foods that they are not able to produce efficiently, trade generates economic gains and, at the same time, it expands the variety of foods in a country, contributing to the diversity of foods available and potentially to nutrient supply. Indeed, the report finds that between 2010 and 2020, the average supply per capita of micronutrients across countries increased largely due to the expansion of trade. At the same time, food prices tend to be lower in countries that are more open to trade.

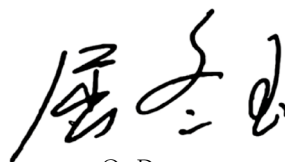
The contribution of trade to food availability, accessibility and affordability can inform the discussions on policy approaches to trade openness as compared with food self-sufficiency. The expansion of global food trade has been influenced by multilateral trade rules that have shaped a freer, fairer and more predictable trade environment, which, along with an increasing number of regional trade agreements, has promoted trade in food.

With the global rise in obesity affecting all world regions, there has been a growing emphasis on global guidelines and national policies in many countries. The report delves into the ongoing debate about the role of trade in undermining diet quality, and discusses the relationship between trade liberalization and regional trade agreements.

SOCO 2024 also examines the intersection of trade and nutrition policies such as food labelling and taxation and provides policymakers with an understanding of how such measures can support nutrition objectives in the changing landscape of global agrifood systems.

Regional trade agreements, which aim at deepening economic integration, are pivotal in shaping trade dynamics and the composition of food imports. The report accentuates that at a national level, there is scope to enhance policy coherence between trade and nutrition sectors by, for example, establishing mechanisms to facilitate collaboration between trade policymakers and those responsible for nutrition measures when negotiating and implementing trade agreements.

This edition of SOCO offers robust evidence and valuable insights for policymakers and other partners, enabling them to take practical steps towards enhancing access to nutritious food and enabling the consumption of healthy diets for improved nutrition. Achieving policy coherence between trade and nutrition sectors is imperative for addressing all the dimensions of sustainable development. Strengthening capacity among policymakers and partners can promote effective collaboration. FAO is steadfast in its commitment to collaborative efforts to advance the 2030 Agenda for Sustainable Development and the Sustainable Development Goals, striving towards the four betters: *better production, better nutrition, a better environment* and a *better life* – leaving no one behind.



Qu Dongyu
FAO Director-General

KEY MESSAGES

➔ Along the development path, income growth, urbanization, globalization and changes in employment are interrelated, occur simultaneously and reinforce each other. All affect food consumption and the composition of diets, giving rise to a nutrition transition.

➔ Income growth is a major driver of the nutrition transition, leading to a more diverse food environment and a declining share of staple foods in consumption. A more diverse food supply can provide the basis for better nutrition but can also result in a higher availability of ultra-processed foods including foods high in fats, sugars and/or salt, which can increase the prevalence of overweight and obesity.

➔ Nutrition transition trends vary across countries and do not give rise to a globalized dietary pattern. Over the 1961–2019 period, the broad dietary patterns of high-income countries and emerging economies have been changing rapidly, with the share of staple foods in total calories available declining fast. During the same period, the dietary patterns of lower-income countries changed at a slower rate.

➔ During the last two decades, food and agricultural trade increased significantly. In 2021, nearly 5 000 trillion kilocalories were traded, more than double the energy traded in 2000. Daily per capita food trade increased from 930 kcal in 2000 to 1 640 kcal in 2021. The value of food and agricultural trade increased fivefold, reaching USD 1.9 trillion in 2022.

➔ Food trade can affect nutrition through multiple pathways. Openness to food trade promotes higher availability, greater diversity and a more stable food supply throughout seasons. It can lower prices and improve access to food. Trade also affects the wider economy, spurring economic growth and accelerating the nutrition transition.

➔ Trade forms an integral part of our agrifood systems and it is indispensable for addressing nutritional objectives. In economics, the love of variety is an important determinant of gains from trade. Nutrition science adds to this finding. Dietary diversity is key for the adequacy of micronutrient supply.

➔ Between 2010 and 2020, the average supply per capita of essential micronutrients increased across countries. Those countries that are more open to trade achieved higher levels of adequacy of nutrient supply.

➔ By lowering import tariffs and harmonizing sanitary and phytosanitary measures and technical barriers to trade, regional trade agreements have a significant impact on food trade because they reduce trade obstacles and increase consumer trust.

➔ Income affects the demand for food imports. As incomes grow, a country would rapidly increase the demand for imports of ultra-processed foods. A 10 percent increase in income results in a 11 percent increase in the demand for imports of ultra-processed foods but only a 7 percent increase in the demand for imports of unprocessed and minimally processed foods.

➔ Governments can implement trade policy measures to address nutrition objectives. WTO rules do not constrain the policy space to pursue these objectives, but they influence the choice of the policy instrument, including ensuring that there is no discrimination between like products of different foreign and domestic origin.

➔ Strengthening policy coherence between trade and nutrition can address the economic, social and health dimensions of sustainable development. Building capacities among trade policymakers and nutrition officials is key to prioritizing nutrition and fostering collaboration.

TRADE AND NUTRITION: POLICY COHERENCE FOR HEALTHY DIETS

Trade is integral to our agrifood systems as it fulfils the fundamental function of moving food from surplus to deficit regions, thus contributing to food security globally. Global food markets connect people and countries across the globe, contribute to efficient natural resources use worldwide, facilitate the supply of sufficient, safe and diverse food, and generate income for farmers and those employed in the food and agricultural sectors. Trade is inherent to the economic, social and environmental dimensions of sustainable development. It is closely related to economic growth, interacts with people and links with the environment.

Since the beginning of the twenty-first century, globalization and trade increased significantly. Food and agricultural trade nearly quintupled, rising from USD 400 billion in 2000 to USD 1.9 trillion in 2022. Food trade made up around 85 percent of all trade in food

and agriculture. The energy it carried more than doubled between 2000 and 2021, reaching almost 5 000 trillion kilocalories in 2021. Adjusted for global population growth, food trade increased from 930 kcal per capita per day in 2000 to 1 640 kcal per capita per day in 2021.

Nevertheless, the rapid globalization of food markets has raised concerns about the potential impacts of progressively increasing food trade on societies. Food production for exports is seen as contributing to the depletion of natural resources. Trade could widen inequality, especially in countries where the agricultural sector is made up of a large number of resource-poor farmers who cannot compete globally. More exposure to global food markets could result in an increased availability of energy-dense foods with low nutritional value relative to nutritious foods, which could contribute towards unhealthy or poor diets, worsening nutritional outcomes.

The 2024 edition of *The State of Agricultural Commodity Markets* (SOCO 2024) explores the complex linkages between food trade and nutrition and generates evidence to identify how trade affects dietary patterns and nutritional outcomes. The report examines the intersection of trade policies and nutrition measures and provides policymakers with an understanding of how to address nutrition objectives in the changing landscape of global agrifood systems.

THE NUTRITION TRANSITION

As countries develop, the relative importance of agriculture in gross domestic product (GDP) and employment declines. A reallocation of economic activities away from agriculture to other more productive sectors such as manufacturing and services takes place, fueling economic growth. On average, over the past decades, global GDP per capita more than doubled from USD 5 517 in 2000 to USD 12 688 in 2022, while the global share of agriculture in employment declined from 40 percent in 2000 to 26 percent in 2022 (Figure 1.1, panels A and B). Historically, this shift from a predominantly agrarian economy to one in which manufacturing and services play a larger role is also associated with urbanization, deeper integration into global markets and lifestyle changes including shifts in dietary patterns.

Along this development path, dietary patterns change, driven by structural

transformation's economic, social and demographic dynamics. This nutrition transition takes place with changes in the types and quantities of foods consumed and the composition of diets. It is also reflected by a change in nutritional outcomes, most importantly, by a decline in the prevalence of undernourishment and the prevalence of stunting in children under five years of age and an upward trend in the prevalence of overweight and obesity.

In many developing countries, this shift from undernutrition to overweight and obesity is the most significant characteristic of the nutrition transition and is also evident in global averages. While the prevalence of undernourishment in the world declined significantly from 12.7 percent to 9.2 percent between 2000 and 2022 (Figure 1.1, panel C), the global prevalence of obesity in the adult population increased from 8.7 percent in 2000 to 15.8 percent in 2022 (Figure 1.1, panel D).

Income growth is a major driver of the change in food consumption and dietary patterns. For the poor, as food budgets make up a large part of their income, diets tend to be less diversified compared with high-income consumers. Many low-income consumers' diets consist of relatively cheaper staple foods to provide adequate calories, with more expensive foods making up a lesser part. As income grows, dietary patterns become more diverse and progressively more people start consuming more meat and

FIGURE 1.1 STRUCTURAL TRANSFORMATION AND NUTRITION TRANSITION: MAIN DRIVERS AND OUTCOMES, 2000–2022

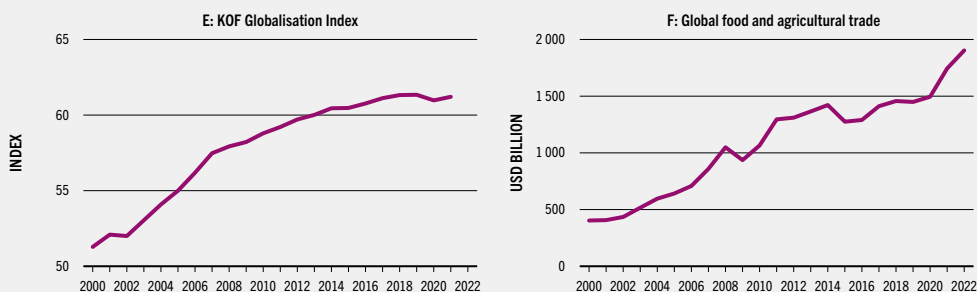
fish, milk and dairy products, eggs, fruits and vegetables, and sweets.

Together with the shift towards more diverse dietary patterns, the consumption of processed and ultra-processed foods high in fats, sugars and/or salt, which are associated with a higher risk of overweight and obesity, increases. Urbanization and lifestyle changes also support this shift from diets composed of mainly staple foods towards

a more diverse diet and higher consumption of processed foods. Since the 1980s, the transformation of the food processing industry and food retail sector has been a major factor in facilitating the nutrition transition in developing countries and emerging economies.

Between 1961 and 2021, the global average dietary energy available for human consumption increased by 35 percent, from 2 200 to 2 980 calories

FIGURE 1.1 (Continued)



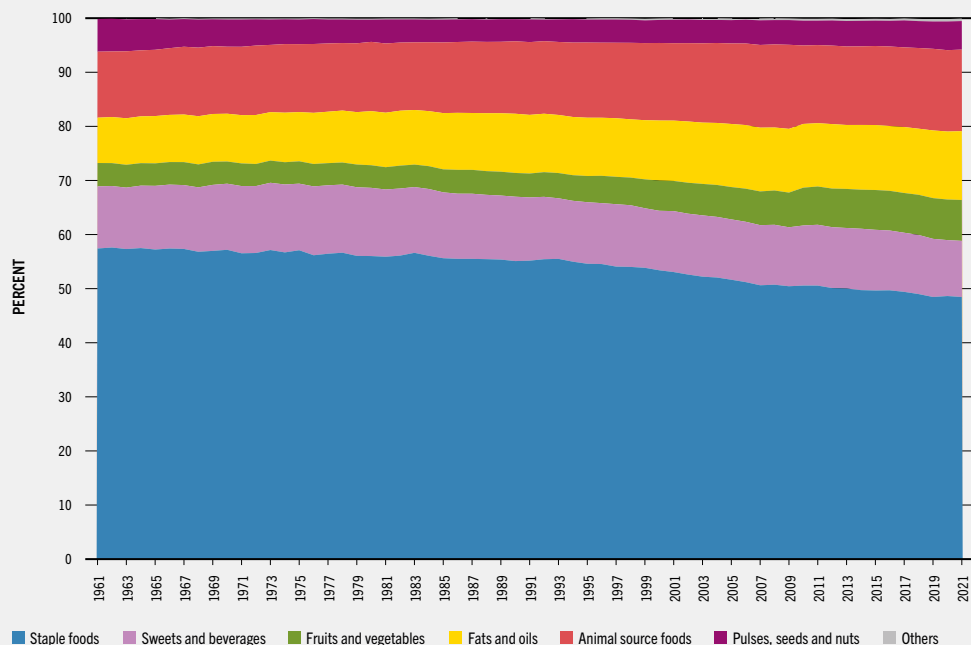
NOTES: Prevalence of obesity is defined as the percentage of adults whose body mass index (BMI) is equal to or greater than 30 kg/m². Prevalence of overweight is defined as the percentage of adults whose BMI is equal to or greater than 25 kg/m². The prevalence of stunting is defined as the percentage of children under the age of five years with a height-for-age less than -2 standard deviations below the World Health Organization Child Growth Standards median. The KOF Globalisation Index summarizes for each country the extent of trade, financial, interpersonal, informational, cultural and political globalization. Food and agricultural trade includes all food and agricultural products except fish and aquatic products.

SOURCES: Authors' own elaboration based on World Bank. 2024. World Development Indicators: GDP per capita (current US\$). [Accessed on 12 April 2024]. <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD>. Licence: CC-BY-4.0; World Bank. 2024. World Development Indicators: Employment in agriculture (% of total employment) (modeled ILO estimate). [Accessed on 12 April 2024]. <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS>. Licence: CC-BY-4.0; World Bank. 2024. World Development Indicators: Urban population (% of total population). [Accessed on 12 April 2024]. <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>. Licence: CC-BY-4.0; UNICEF, WHO & World Bank. 2023. Joint child malnutrition estimates (JME). In: *WHO*. Geneva, Switzerland. [Cited 15 June 2024]. <https://www.who.int/teams/nutrition-and-food-safety/monitoring-nutritional-status-and-food-safetyand-events/joint-child-malnutrition-estimates>; FAO. 2024. FAOSTAT: Suite of Food Security Indicators. [Accessed on 12 April 2024]. <https://www.fao.org/faostat/en/#data/FS>. Licence: CC-BY-4.0; WHO. 2024. The Global Health Observatory: Prevalence of obesity among adults. [Accessed on 27 May 2024]. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-obesity-among-adults-bmi--30-\(age-standardizedestimate\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-obesity-among-adults-bmi--30-(age-standardizedestimate)-(-)); WHO. 2024. The Global Health Observatory: Prevalence of overweight among adults. [Accessed on 27 May 2024]. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-adults-bmi--25-\(age-standardized-estimate\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-overweight-among-adults-bmi--25-(age-standardized-estimate)-(-)); KOF Swiss Economic Institute. 2024. KOF Globalisation Index. In: *KOF Swiss Economic Institute*. Zurich, Switzerland. [Cited 12 April 2024]. <https://kof.ethz.ch/en/forecastsand-indicators/indicators/kof-globalisation-index.html>; Gygli, S., Haelg, F., Potrafke, N. & Sturm, J.-E. 2019. The KOF Globalisation Index – revisited. *The Review of International Organizations*, 14(3): 543–574. <https://doi.org/10.1007/s11558-019-09344-2>; FAO. 2024. FAOSTAT: Trade – Crops and livestock products. [Accessed on 12 April 2024]. <https://www.fao.org/faostat/en/#data/TCL>. Licence: CC-BY-4.0.

<https://doi.org/10.4060/cd2144en-Fig1.01>

per person per day. Globally, during the same period, the share of staple foods available for human consumption declined from 57.4 percent to 48.4 percent, while the share of animal


source foods grew from 12.2 percent to 15.1 percent and that of fats and oils increased from 8.4 to 12.7 percent (Figure 1.5). Yet, these changes have been largely uneven across countries,

FIGURE 1.5 TOTAL CALORIES AVAILABLE FOR CONSUMPTION IN THE WORLD BY FOOD CATEGORY, 1961–2021

NOTE: A new methodology to calculate food balances has been applied by FAO since 2010.

SOURCE: Authors' own elaboration based on FAO. 2024. FAOSTAT: Food Balances. [Accessed on 12 April 2024].

<https://www.fao.org/faostat/en/#data/FBS>. Licence: CC-BY-4.0.

<https://doi.org/10.4060/cd2144en-Fig1.05> 

depending on different rates of income growth and the trends of other drivers of the nutrition transition.

Trade is central to the globalization of food and agriculture. Global markets contribute to the availability of a variety of foods enabling dietary diversity, accelerating the

nutrition transition and impacting nutritional outcomes. At the same time, trade can increase the availability of ultra-processed foods that are high in energy density and high in fats, sugars and/or salt, shaping dietary patterns associated with overweight and obesity.

Trade's effects can be widely heterogeneous across countries both in direction and magnitude, depending on a country's position on the development path, its structural characteristics and the national policy environment. This renders the relationship between trade and nutrition outcomes ambiguous and challenging to identify and measure empirically. For example, analysis suggests that openness to trade reduces stunting in children under five years of age at all levels of development. The effects of trade on overweight and obesity appear to be highly context specific. In import-dependent countries with limited domestic food and agricultural production capacity, food trade can be associated with an increasing prevalence of obesity.

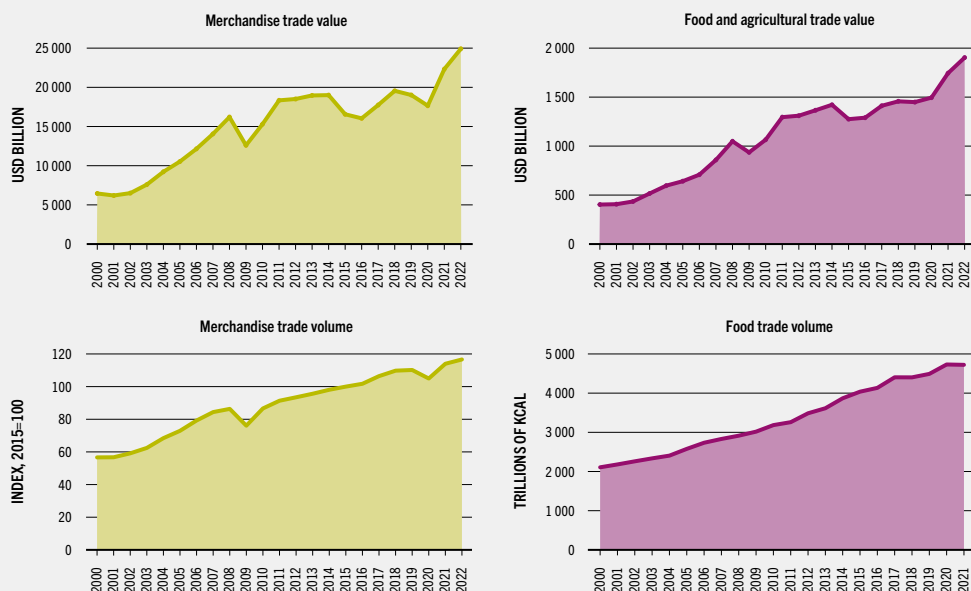
TRADE AND NUTRITION: IDENTIFYING THE LINKAGES

Global food markets facilitate the supply of sufficient, safe and diverse food to people across countries, generating income for farmers and those employed in the food and agricultural sectors. World merchandise export value increased almost fourfold; merchandise export volume doubled (Figure 2.1). Food and agricultural trade nearly quintupled, rising from USD 400 billion in 2000 to USD 1.9 trillion in 2022. In 2022, food trade made up around 85 percent of all trade in food and agriculture. The energy it carried more than doubled between 2000 and 2021, reaching almost 5 000 trillion kilocalories in 2021.

Staple foods account for the largest share of calories traded. However, reflecting the nutrition transition, the share of staple foods in global food trade decreased from 48 percent in 2000 to around 42 percent in 2021, while the shares of fats and oils, and pulses, seeds and nuts increased. In the other food categories, including animal source foods, fruits and vegetables, the shares in global food trade remained relatively stable between 2000 and 2021 (Figure 2.3).

As fruits and vegetables are low in calories, their shares in total calories traded are very low. In 2021, the share of fruit imports by high-income countries was 2.3 percent, that of vegetables amounted to 1.0 percent. In low- and middle-income countries, these shares were even lower, both in terms of calories (0.7 percent for fruits and 0.3 percent for vegetables) and value.

Food trade plays an important role in contributing to the supply of nutrients around the world. With the increase in food trade, there has been a corresponding rise in the trade of nutrients. For example, per capita trade in vitamin C and calcium from food increased by almost 90 percent between 2000 and 2021. When examining trade between different regions, Europe and Northern America stand out as the world's top importers of vitamin C from food in absolute terms. These imports are mainly sourced from southern hemisphere regions. Northern American interregional vitamin C imports primarily come from Latin America and

FIGURE 2.1 MERCHANDISE AND FOOD AND AGRICULTURAL TRADE, 2000–2022

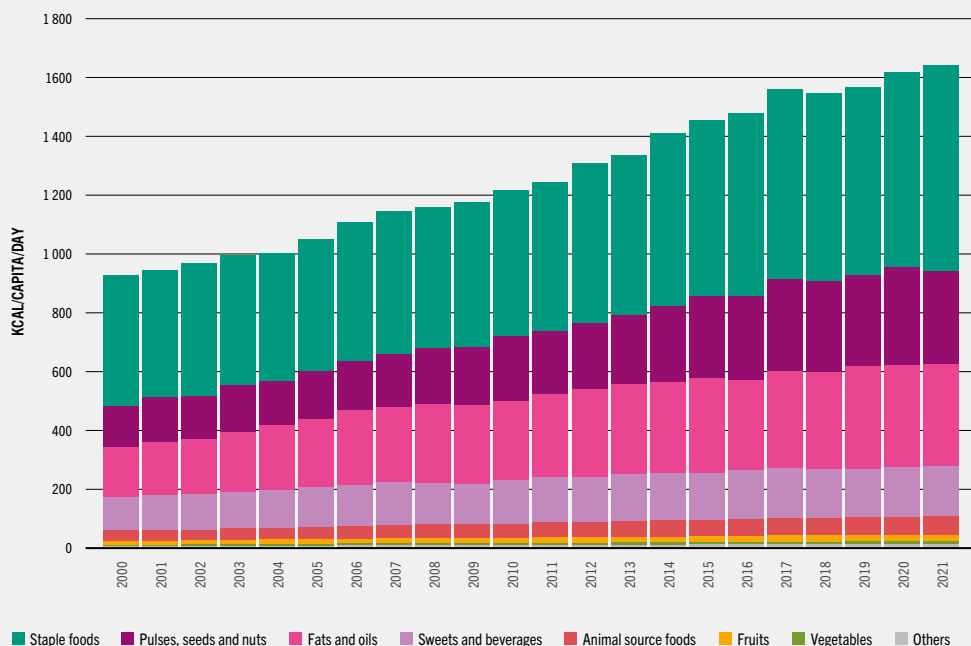
SOURCES: Authors' own elaboration based on FAO. 2024. FAOSTAT: Trade – Crops and livestock products. [Accessed on 15 February 2024]. <https://www.fao.org/faostat/en/#data/TCL>. Licence: CC-BY-4.0; WTO (World Trade Organization). 2024. WTO STATS: International trade statistics. [Accessed on 15 February 2024]. <https://stats.wto.org/>

<https://doi.org/10.4060/cd2144en-Fig2.01> 

the Caribbean, while Europe imports from Africa, Asia, and Latin America and the Caribbean. Asia primarily imports calcium from Europe and Northern America, with significant amounts also coming from Latin America and the Caribbean, and Oceania. Africa sources calcium from all other regions, with the highest shares coming from Europe.

Empirical evidence on the linkages between food trade and nutritional outcomes remains scarce, and, so far, only a handful of studies have explored these linkages more systematically. Food trade can affect nutrition through multiple pathways. Food trade allows for more food imports and thus increases the availability of foods for consumption in a country. With higher

FIGURE 2.3 EVOLUTION OF TRADE BY FOOD CATEGORY (BASED ON DAILY PER CAPITA ENERGY CONTENT), WORLD, 2000–2021



SOURCE: Authors' own elaboration based on FAO. 2024. FAOSTAT: Trade – Crops and livestock products. [Accessed on 15 May 2023]. <https://www.fao.org/faostat/en/#data/TCL>. Licence: CC-BY-4.0.

<https://doi.org/10.4060/cd2144en-Fig2.03>

availability, domestic food prices decline, making food more accessible. Greater openness to food trade also allows for a greater variety of food imports and a more diversified food supply. More indirect channels in which trade affects nutrition are through its effects on the wider

economy. Opening to food trade can spur economic growth in a country, accelerating the process of structural transformation. Trade can also affect eating habits by transferring foods and flavours between countries.

TRADE IN FOOD AND NUTRIENTS: FOOD DIVERSITY, NUTRIENT SUPPLY AND THE COST OF HEALTHY FOOD BASKETS

One of the most direct pathways in which trade affects nutrition is through its effect on the diversity of foods available in a country. The natural resources necessary for agricultural production such as land and water are unevenly distributed across countries and climatic conditions vary widely. As not all foods can be sufficiently produced in all regions of the world and at all times of the year, the diversity of foods a country can produce is often limited. Some countries can produce only a small range of products, while others possess abundant natural resources and produce a large variety of foods. Trade is an important means to promote the availability and accessibility of more diverse foods.

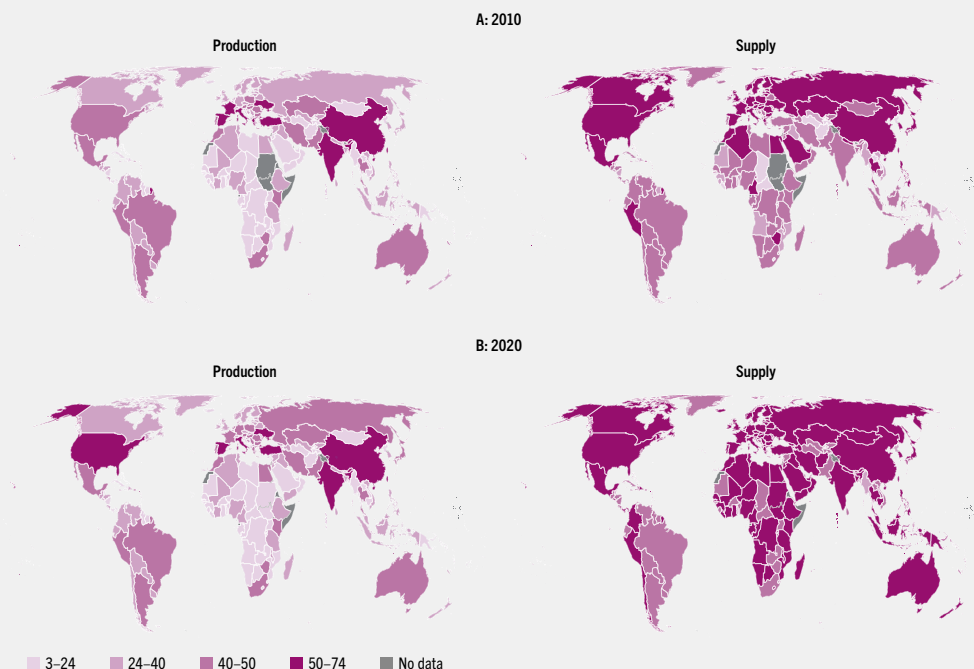
A simple measure such as the number of food items produced and supplied for consumption in a country clearly shows the impact of trade on the diversity of foods available (Figure 3.1). For example, China, one of the largest countries in the world by area, produced around 320 different items in 2020, as compared with Kiribati, a small island developing state, that produced only 15 different terrestrial food items. In 2020, countries produced an average of 120 different food items, while the number of food items available for human consumption amounted to an average of 225 (out of

445 food items considered in this analysis).

In most countries, the diversity of production has not changed significantly over time. However, the average number of different food items available for consumption increased significantly between 2010 and 2020 (Figure 3.1). In 2010, on average, the number of foods available for consumption was almost 60 percent higher than those produced domestically. In 2020, this had risen to almost 90 percent, indicating that trade could, on average and across countries, increase the diversity of foods available for consumption around twofold.

Beyond improving energy availability, trade can contribute to increasing the availability of micronutrients such as vitamins and minerals. Globally, food production provides an adequate supply of most nutrients. Nevertheless, nutrients are not distributed equally, and at population level nutrient gaps have been identified for several micronutrients in many countries as, for example, vitamin A, calcium and zinc. Imports would allow countries to complement domestic food production in a way that all nutrients can be available to meet average nutrient requirements. Nutrient gaps are often observed for countries in sub-Saharan Africa, which are also among the least-integrated in global food markets and, therefore, cannot benefit from trade's effects on nutrient redistribution across the world.

FIGURE 3.1 SHARE OF FOOD ITEMS PRODUCED AND SUPPLIED IN ALL FOOD ITEMS, 2010 AND 2020, PERCENT



NOTE: The figure shows the number of food items produced nationally (expressed as a share of all food items) and the number of food items available for consumption (expressed as a share of all food items) across countries in 2010 and 2020.

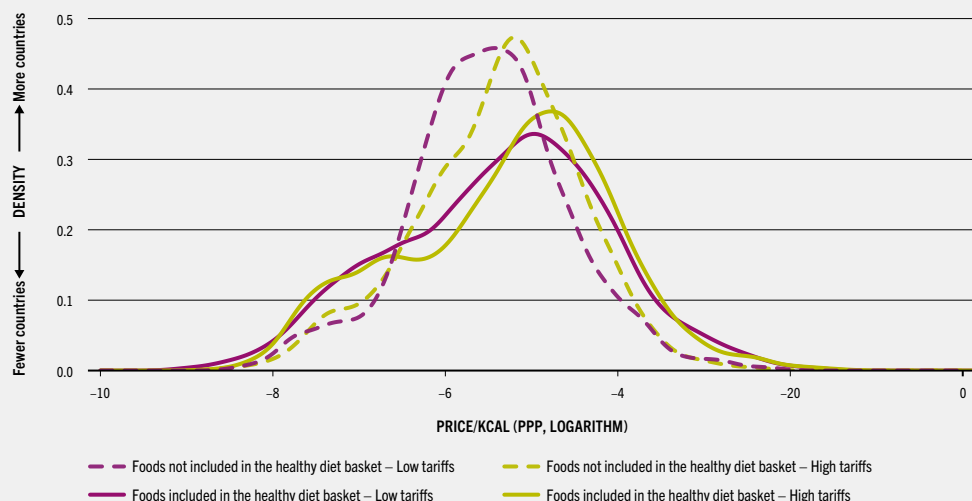
Refer to the disclaimer on the copyright page for the names and boundaries used in this map. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

SOURCE: Authors' own elaboration based on Engemann, H., Jafari, Y. & Zimmermann, A. (forthcoming). *Diversity of food supply across countries and the impact of international trade – Technical note for The State of Agricultural Commodity Markets 2024*. Rome, FAO.

<https://doi.org/10.4060/cd2144en-Fig3.01> 

Statistical analysis suggests that there is a positive relationship between food trade openness and adequacy of nutrient supply across countries. Again, nutrient adequacy is affected by many factors such as natural resource endowments,

climate and population density. Nevertheless, although nutrient adequacy of supply can be high in countries that are relatively less integrated in global markets, it is usually high at elevated levels of trade openness.

FIGURE 3.14 DISTRIBUTION OF PRICES OF FOODS ACCORDING TO THEIR INCLUSION IN HEALTHY DIET BASKETS, BY AVERAGE TARIFF LEVEL, 2017

NOTES: Import tariffs are expressed as the weighted average applied tariff rate on primary agricultural products collected from the World Bank's World Development Indicators (<https://databank.worldbank.org/source/world-development-indicators>). Retail food prices are provided by the World Bank's International Comparison Program (2017 cycle, <https://www.worldbank.org/en/programs/icp>). These have been converted into prices per calorie, adjusted using purchasing power parities (PPP) and transformed into logarithms. Foods within the healthy diet baskets tend to be more expensive than those outside as, in general, they contain fewer calories per kg. Prices tend to be higher in countries with high tariffs and lower in countries with low tariffs regardless of whether foods pertain to the healthy diets basket.

SOURCE: Adapted from Schiavo, S. (forthcoming). *The impact of trade openness on the cost and affordability of a healthy diet – Background paper for The State of Agricultural Commodity Markets 2024*. Rome, FAO.

As with income, food price changes consist of an important pathway through which trade affects nutrition. Trade openness can affect the relative prices of different foods, which, in turn, shape food consumption and dietary patterns, depending on how consumers respond to these price changes. Within a country, imports can increase food availability and can lower domestic food prices. This

can result in gains for consumers for whom access to more diverse foods is improved, but could also result in reduced farm incomes for resource-poor farmers who cannot compete globally.

Trade can help narrow the differences among prices of similar foods across countries, depending on how intensively these foods are traded. In general,

high-income countries appear to import more expensive foods while import prices of low- and middle-income countries are, on average, lower in all food categories and processing levels. Higher prices can reflect quality differences in the foods traded, different food baskets, differences in transportation costs and more stringent product standards. However, depending on trade intensity, prices across countries also diverge systematically due to differences in income. Higher purchasing power results in all goods, especially those that are not traded intensely, being more expensive in these high-productive countries as compared to those in lower-income countries.

Trade liberalization including import tariff reductions would, in general, intensify competition and lower the food price level within the country leveraging the tariff, thus improving access to food. While the average impact of trade barriers on food prices is evident, there are concerns that trade openness may disproportionately lower prices for foods that are less conducive to healthy diets, leading to the displacement of higher-quality local foods with negative implications for nutrition.

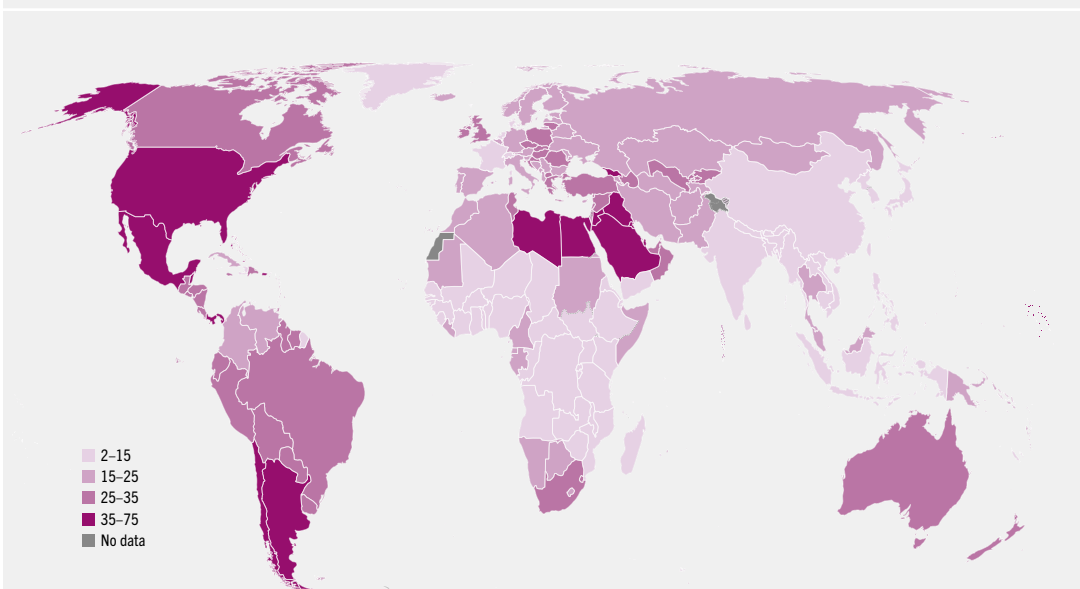
An analysis carried out for this report, classifying foods in line with the cost and affordability of a healthy diet (CoAHD) indicator, assessed whether lower prices observed in countries that apply lower import tariffs are driven by low price levels of foods of high energy density and minimal nutritional value. Differentiating

foods between those included in healthy diet baskets and those that are not, the analysis points out that, along almost the entire price distribution, higher import tariffs are associated with higher food prices, irrespective of whether or not foods are included in the healthy diet basket (Figure 3.14). This suggests that trade liberalization and trade openness do not have a disproportionate effect on foods of high energy density and minimal nutritional value, on average, for all food items considered and across all countries.

FOOD TRADE AND OBESITY

Since the 1990s, the worldwide prevalence of obesity increased from 6.6 percent in 1990 to 15.8 percent in 2022. The prevalence of obesity also grew in every region in the world, and in most countries over the 1990–2022 period. Obesity has now reached epidemic proportions and it is estimated that by 2030 over one billion adults globally will be obese. Once associated with high-income countries, obesity is now also prevalent in low- and middle-income countries (Figure 4.1).

Nutrition experts point to a positive relationship between high consumption of ultra-processed foods of high energy density and, in some instances, low nutrient content and obesity. Ultra-processed foods can contain large amounts of free sugars and saturated fats, which can contribute to a high energy intake. Studies indicate that individuals consuming higher shares of

FIGURE 4.1 PREVALENCE OF OBESITY AMONG ADULTS IN THE WORLD, PERCENT, 2022

NOTE: Prevalence of obesity is defined as the percentage of adults whose body mass index (BMI) is equal to or greater than 30 kg/m². Refer to the disclaimer on the copyright page for the names and boundaries used in this map. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

SOURCES: Adapted from WHO. 2024. The Global Health Observatory: Prevalence of obesity among adults. [Accessed on 27 May 2024]. [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-obesity-among-adults-bmi--30-\(age-standardized-estimate\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/prevalence-of-obesity-among-adults-bmi--30-(age-standardized-estimate)-(-))

ultra-processed foods are more likely to be obese than individuals with low levels of consumption. This pattern also holds for children, indicating that a higher consumption of ultra-processed foods is associated with higher increases in adiposity in both children and youth.

The disproportionately high prevalence of obesity in the Pacific islands could be due to a number of factors. While trade has

contributed to increasing the availability and diversity of foods in the Pacific islands, it has also been cited as an important factor in the rapid increase in obesity and its disproportional high levels. Integration into global food markets has helped accelerate the nutrition transition with significant changes in local diets. Traditional local diets composed of mainly fruits, food staples, locally produced animal foods

and fresh fish, gave way to increasing amounts of imported animal products of high fat content as well as processed and ultra-processed foods.

The debate on whether increased trade initiated by trade liberalization promotes the availability of ultra-processed foods and contributes to a high prevalence of obesity has expanded beyond the Pacific. By reducing barriers to trade and investment between signatories, RTAs in the Americas were found to increase the availability of calories, which could contribute to rising obesity.

Modern RTAs go beyond market access and tariff reductions and aim at deeper trade integration, focusing on harmonizing NTMs and domestic regulations. Deeper trade agreements can reduce trade costs related to compliance with multiple and different standards and facilitate trade among signatories. SPS measures include mandatory standards that focus on additives, contaminants, residues of pesticides or veterinary drugs in foods and beverages, as well as certification and labelling requirements directly related to food safety (for example, food allergens). Technical barriers to trade reflect technical regulations, conformity assessment procedures and standards, such as nutrition labelling addressing risks not expressly referring to food safety (for example, information on nutritional content), packaging, grading and quality requirements. In fact, as both TBT and SPS measures are widespread in food and agriculture,

their effects on food trade can be much stronger than those of tariffs.

A study carried out for this report investigates the impact of RTAs on the composition of food imports, using the NOVA food classification. The analysis indicates that both SPS and TBT provisions have positive effects on food imports. RTAs including a high number of SPS provisions tend to increase imports of processed culinary ingredients and ultra-processed foods, while their impact on processed foods is relatively small and that on unprocessed and minimally processed foods insignificant. RTAs with a high number of TBT provisions have a stronger positive impact on food imports, as compared to SPS provisions, but their impact on food imports does not vary across processing levels.

Income effects on the import demand for foods of different processing levels can conflate with the impact RTAs have on the composition of food imports. Such income effects add to the impact of non-tariff barriers on import demand for foods in the context of RTAs. Indeed, the analysis suggests that the responsiveness of processed and ultra-processed foods to income changes is much higher than that for unprocessed and minimally processed foods. For example, on average, across all countries, food products and RTAs, a 1 percent increase in income can result in a 1.2 percent and a 1.1 percent increase in the demand for processed and ultra-processed food imports, respectively. A 1 percent increase in

income would result in a 0.7 percent and 0.8 percent increase in imports of unprocessed and minimally processed products and of processed culinary ingredients, respectively.

STRENGTHENING POLICY COHERENCE FOR TRADE AND NUTRITION

Agricultural policies address a broad array of issues, but ensuring food security and nutrition sustainably, and maintaining a level of farm income that keeps pace with the income trends in other economic sectors, are key objectives across both developed and developing countries. In a country, agricultural trade policy and domestic support create a set of incentives and disincentives that can affect food production and consumption, food prices and thus farm incomes and consumer expenditure on food.

Trade policies include import tariffs and non-tariff measures (NTMs) as well as export restrictions and export taxes. For example, tariffs can be used to protect local farmers from international competition to promote domestic food production. NTMs include SPS measures that ensure food safety and protect animal or plant health and TBT measures such as labelling that relate to objectives such as nutrient content, environmental protection, labour health and safety, and prevention of deceptive practices.

Countries provide various types of domestic support to farmers, ranging

from direct payments that contribute towards maintaining farm incomes, to subsidies for inputs such as fertilizers, electricity and water. Market price support measures create a gap between domestic market prices and border prices of a specific agricultural product. Other forms of domestic support include the provision of services on research and development, and extension, which often address market failures such as constraints faced by farmers in adopting new technologies.

Food-specific support can result in a misallocation of resources, as farmers may choose to produce supported foods instead of those for which they have a comparative advantage. This may affect the composition of food production towards the foods that are supported, reducing food diversity and impacting relative prices. As distortive support is mainly targeted on food staples, meat and sugar and not on fruits and vegetables, it is often seen as having negative implications for nutrition.

Several recent studies have recommended that “repurposing” agricultural support towards investments and incentives that encourage the sustainable production of more diverse and traditional crops that are rich in nutrients and better adapted to environments can significantly contribute towards the economic, environmental and social dimensions of sustainable development. Similarly, an analysis undertaken by FAO and other international organizations that estimated the impact of repurposing

price incentives through border measures and market price support to promote healthy diets, found that there would be a 0.64 percentage point increase in the proportion of the global population for whom a healthy diet is affordable.

Both domestic support and trade policy instruments are subject to the WTO rules and disciplines. For example, the WTO Agreement on Agriculture (AoA) places a limit on the use of several domestic support measures while regulating import tariffs that are subject to maximum binding levels that cannot be exceeded by applied tariffs. The Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures, many of which apply to food, ensure that while the need to constrain trade may arise, any measures taken should not be applied in an arbitrary or discriminatory manner or act as a disguised restriction on international trade. Central to WTO agreements is the principle of non-discrimination, aimed at ensuring the fair and equitable treatment of all trade partners. This prohibits discrimination between like products of different foreign origins (Article I of the General Agreement on Tariffs and Trade [GATT]), as well as between like products of foreign and domestic origin (Article III of GATT).

Often, WTO rules, and especially the principle of non-discrimination, are seen by many public health experts as constraining the policy space that is available to address nutrition objectives, especially through the use of trade policy

instruments. For instance, in 2007 Samoa implemented a ban on imported turkey tails – an inexpensive fatty meat – in response to concerns regarding high rates of NCDs. As part of the Government of Samoa's WTO accession agreement, implemented in 2011, the ban was removed and replaced with a 300 percent import duty as an interim measure. In 2019, the tariff on frozen turkey tails imports was set at 100 percent.

In the 1990s, Ghana – a WTO member since 1995 – as a response to concerns about the low quality and high fat content of imported meats, particularly turkey tails, introduced food standards mandating maximum percentages for fat in meat cuts, such as poultry, beef, mutton and pork. Such standards do not violate the WTO principle of non-discrimination, as they do not discriminate between imports and domestically produced meats and apply to the main types of meat available. The measure has been reported in WTO Trade Policy Reviews as both a TBT and SPS measure, likely since it employs food standards but with an objective to address NCDs rather than food safety.

Policy instruments such as excise taxes apply to both imported and domestically produced foods and beverages and can be effective in addressing nutrition objectives. Between 2017 and 2019, the percentage of World Health Organization (WHO) members implementing taxes on sugar-sweetened drinks rose from 23 percent to 38 percent.

The impact of NTMs on the food trade is context-dependent. They can either facilitate or impede trade. NTMs can limit food trade through increased trade costs resulting from compliance, affecting diet affordability and diversity. At the same time, they can also expand trade as they strengthen the demand for a product through better information.

Food labelling is one of the primary means of communication between actors along the value chain from the producer to the consumer. Nutrition labelling is used to convey the nutritional characteristics and attributes of food products to consumers, enabling them to make informed food choices. In 2004, WHO first proposed nutrition front-of-package-labelling (FoPL) as a policy measure to improve diets and health. Policies that require simplified FoPL are becoming increasingly common across the globe to contribute to a healthy food environment and enable consumers to make more nutritious food choices.

Food labelling conveys the nutritional characteristics and attributes of food products to consumers and can improve diets and health. Discussion in the WTO Committee on Technical Barriers to Trade can ensure that food labelling promotes healthier food choices and facilitates trade. Between 1995 and 2023, 77 specific trade concerns were raised by 37 WTO members concerning regulations aimed at protecting individuals from the risks associated with food and beverage products.

Understanding the interface between trade and nutrition policies can inform the design of policies that are effective and consistent with WTO rules. At the national level, establishing mechanisms to enable engagement between the health and trade actors in the negotiation and implementation of trade agreements and the design of nutrition measures further supports and fosters policy coherence between trade and nutrition.

In Thailand, efforts to support policy coherence between trade and health has highlighted the importance of building capacities among trade policymakers over time, to strengthen an understanding of the interface between trade and health. For example, in 1998, the Ministry of Public Health established the Ministerial Committee on Health Impact from International Trade, with subcommittees on SPS, TBT and other agreements, to focus on health issues arising from trade negotiations and to increase coordination with the Ministry of Commerce and Ministry of Industry. Similarly, with reference to the Common Agricultural Policy in the European Union, clear communication of nutrition guidelines and a mandate to address nutrition-related health concerns were found to aid policy action for nutrition in the agricultural trade space.

Stakeholder engagement and transparency in negotiating trade agreements are critical to making trade improve nutrition. For deep trade agreements, policy coherence between trade and nutrition objectives, as well as

stakeholder engagement and transparency are critical in making the negotiations more inclusive. Promoting the engagement of all stakeholders, especially those related to nutrition and public health, and increasing transparency in negotiations for deeper trade agreements can ensure that increased trade will address food security, economic and nutrition objectives.

More broadly, there is an opportunity for guidance relevant to agrifood systems and nutrition based on the policy space as this is shaped by WTO rules, with the

objective of presenting good practices and innovative solutions for the trade–nutrition policy nexus. This would strengthen the interface between trade and nutrition and contribute to building agrifood-system approaches towards healthy diets. In this context, the FAO elearning Academy capacity development initiatives and elearning courses can contribute towards building capacity in the trade–nutrition policy nexus, ensuring that new competencies are transferred to policymakers, embedded in national institutions and tailored to country-specific development and nutrition needs. ■



2024 THE STATE OF AGRICULTURAL COMMODITY MARKETS

**TRADE AND NUTRITION:
POLICY COHERENCE
FOR HEALTHY DIETS**

Trade is integral to our agrifood systems as it fulfils the fundamental role of moving food from surplus to deficit regions, thus contributing to food security. Global food markets connect people and countries around the world, shape the availability, diversity and prices of foods and thus can affect diets and nutrition outcomes. These effects can be widely heterogeneous across countries both in direction and magnitude. The 2024 edition of *The State of Agricultural Commodity Markets* explores the complex linkages between food trade and nutrition and generates evidence to show how trade can affect dietary patterns and nutritional outcomes. The report examines the intersection of trade policies and nutrition measures and provides policymakers with an understanding of how to pursue nutrition objectives in the context of trade agreements and within the changing landscape of global agrifood systems.



*The State of Agricultural Commodity
Markets 2024 (full text)*



ISBN 978-92-5-139318-5



CD3094EN/1/11,24